ASSAULT RIFLES

Albanian Assault Rifles
Argentine Assault Rifles
Armenian Assault Rifles
Australian Assault Rifles
Austrian Assault Rifles
Belgian Assault Rifles
Brazilian Assault Rifles
British Assault Rifles
Bulgarian Assault Rifle
Canadian Assault Rifles
Chinese Assault Rifles
Croatian Assault Rifles
Czech Assault Rifles
Dominican Assault Rifles
Egyptian Assault Rifles
Finnish Assault Rifles
French Assault Rifles
German Assault Rifles
Hungarian Assault Rifles
Indian Assault Rifles
Indonesian Assault Rifles
International Assault Rifles
Iranian Assault Rifles
Iraqi Assault Rifles
Israeli Assault Rifles
Italian Assault Rifles
Japanese Assault Rifles
Mexican Assault Rifles
Montenegrin Assault Rifles
Polish Assault Rifles
Romanian Assault Rifles
Russian Assault Rifles
Singapore Assault Rifles
South African Assault Rifles
South Korean Assault Rifles
Spanish Assault Rifles
Swedish Assault Rifles
Swiss Assault Rifles
Taiwanese Assault Rifles
Ukrainian Assault Rifles
US Assault Rifles A
US Assault Rifles B
US Assault Rifles C
US Assault Rifles D

[US Assault Rifles E-F]
[US Assault Rifles G-L]
[US Assault Rifles M-Q]
[US Assault Rifles R]
[US Assault Rifles S]
[US Assault Rifles T-V]
[US Assault Rifles W-Z]
[Yugoslavian Assault Rifles]

Albanian Type 56 Versions

Notes: Albania was never really a part of the Soviet sphere of influence, and early on after World War 2, it isolated itself from the West as well. For a long time, the only country with whom it really maintained friendly relations was China; China, in fact, supplied virtually all of Albania's weapons and even some military training for some 50 years, until Albania decided to "reintroduced herself to the world," so to speak, in 1997.

One of the infantry weapon that Albania received tons of was the Chinese copy of the AKM, the Type 56. At first, the Albanians used the Type 56s as they were, but they gradually made modifications to suit local manufacturing methods and perceived needs, creating essentially a new set of AKM variants. The Albanian military refers to these rifles as the Type I, Type II, and Type III Assault Rifles; however, the troops generally call all three of them AK-47s (and even call the unmodified Type 56s by the name of AK-47 as well).

The Type I is more or less a direct copy of the Type 56, with only a very few modifications to suit local manufacturing conditions, and a different finish to help the rifles cope with the generally abysmal weather conditions in Albania. There is also a slight weight difference, as well as a stock with a longer length of pull to suit the typical somewhat larger-statured Albanian soldier.

Since the Albanians still use a number of the older-style Soviet-type rifle grenades, they came up with the Type II; this is a Type I with a grenade-launcher spigot attached to the end of the muzzle. There is a gas cutoff lever on the right side of the gas port, allowing the Type II to use both older Soviet, Polish, and Chinese-type rifle grenades as well as the newer BTU rifle grenades. The rear sight is moved to central location on the upper receiver cover, and is designed to be used with both the rifle and for firing rifle grenades. The upper receiver cover has had hinges added at the front instead of coming completely off when stripping the weapon. The Type II is not able to mount a bayonet, due to the design of the grenade launcher spigot.

The Type III is also quite similar to the Type 56, but is modified for use as sort of a designated marksman/squad support weapon. It has a grenade launching spigot at the end of a slightly-longer barrel than the standard Type 56, but there is no gas cutoff provision, which means that the use of ballistite cartridges is essential for firing rifle grenades and the choice of rifle grenades for the Type III is much more limited. The front sight block has a special extension with a partial collar, and along with a slight modification in the grenade launcher spigot, this allows the Type III to mount a bayonet. The rear sights are also modified to match the extra range afforded by the longer barrel.

Manufacture of these rifles continued until 1997, when they began to be replaced with more modern rifles of Russian origin; however, Albania is reportedly shopping around for even better rifles, though they are severely limited by the poor condition of the Albanian economy.

Weapon	Ammunition	Weight	Magazines	Price
Type I	7.62mm Kalashnikov	4.22 kg	30	$797
Type II	7.62mm Kalashnikov	4.13 kg	30	$827
Type III	7.62mm Kalashnikov	4.4 kg	30	$870

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Type I	5	4	2-Nil	6	3	8	46
Type II	5	4	2-Nil	7	3	8	46
Type III	5	4	2-3-Nil	7	3	9	62

FARA-83

Notes: Budgetary restrictions led to the cessation of official production in 1984 after a little over 1000 of them had been made. Very few of them have been produced since them, and it is a mystery who those ones were produced for. The weapon is constructed by simple means, only the stock and handguard being made of glass-reinforced plastic. The front sight has a tritium post for low-light operation. An optional bipod is made for this weapon, and the sights have tritium inlays for use in poor lighting conditions.

Twilight 2000 Notes: This weapon was introduced shortly before the Twilight War. Only a little over 1000 were made before the war, and even fewer were produced during the war.

Merc 2000 Notes: Very few of these weapons were produced for the Argentine Army (a little over 1000), but many more were produced and bought by mercenary outfits around the globe.

Weapon	Ammunition	Weight	Magazines	Price
FARA-83	5.56mm NATO	3.95 kg	30	$597

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
FARA-83	5	3	1-Nil	5/6	2	6	47

FSL 5.56mm

Notes: When budgetary difficulties led to the near-cessation of production of the FARA-83, the Rosario factory, (at the time producing the Argentine copy of the FAL, the FSL 7.62mm), was asked to develop a smaller-caliber model of the FAL. They were told to make as little modifications as possible to the FAL design (in order to save money). They came up with the FSL 5.56mm. The only real differences are the barrel, bolt, magazine, and certain feed components. There are also differences in the gas system, but they are very subtle and not noticeable except upon close inspection. The FSL 5.56mm is made in a standard infantry pattern (the *Tipo Infanteria)* and a short-barreled model with a folding stock (the *Tipo Paracudista).*

Twilight 2000 Notes: This comprised about a quarter of the infantry weapons used by the Argentine military during the Twilight War.

Weapon	Ammunition	Weight	Magazines	Price
FSL 5.56mm TI	5.56mm NATO	4.35 kg	30	$616
FSL 5.56mm TP	5.56mm NATO	4.2 kg	30	$650

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
FSL 5.56mm TI	5	3	1-Nil	6	2	5	59
FSL 5.56mm TP	5	3	1-Nil	4/6	2	4	48

K-3

Notes: Though the K-3 (also known as the AK-3, M-3, and Model 3) was first revealed in 1996, by 2000 only about 40 had been built, and the Armenian government had not yet authorized series production. (In fact, little had been heard about the K-3 since it was shown at an arms show in 1996 until late 2016, when upcoming series production was announced; it has apparently been demonstrated to a few "unnamed parties," but mass production for the Armenian military didn't begin until mid-2017.)

Though similar in appearance to the British L-85, the K-3 is based on the tried-and-true Kalashnikov action. As a rather simple bullpup conversion of the AK-74, it is considerably more compact than the standard AK-74, but the rather simple conversion also presents a number of problems. The biggest is perhaps that the K-3 may be fired only by right-handed shooters, as the ejection port would be buried in the shoulder pocket of a left-handed shooter and the K-3 might easily jam. The second is that the selector lever is still the standard AK-74-type selector; this is awkward for a shooter to manipulate from the shoulder. The third is that the charging handle is still connected to the bolt and reciprocates with it during firing, and it can hit the face of the shooter when he fires the K-3. The fourth is that the sights had to be put on top of risers, since the bullpup layout raised the sight line, but the AK-74's sights were still used for the K-3. The fifth is, because of the complicated trigger linkages, trigger pull weight is a bit heavy. The Armenians are apparently willing to put up with these many shortcomings; however, they are using Western technology to lighten the trigger pull weight, and a K-3A1 may be coming soon as a result.

The K-3 may is normally used with iron sights, but may be fitted with the PSO-1 4x sight of the SVD sniper rifle. Like the AK-74, metalwork is largely of stamped steel; the pistol grip, trigger guard and short ribbed fore-end are of dark green plastic. The muzzle brake is different than that of the AK-74; it allows the use of rifle grenades without having to have a special version for rifle grenade launching. The Armenians have also modified the standard AK-74 magazines so that the shell is entirely polymer, instead of the steel magazines within a polymer shell of the AK-74. (The K-3 can also use standard AK-74 magazines, however.)

Twilight 2000 Notes: Seeing the writing on the wall, the Armenian government authorized production of the K-3 in early 1996, though many more resources were placed into domestic AK-74 and AKM production. The K-3 was primarily used by Armenia's fledgling special operations units.

Weapon	Ammunition	Weight	Magazines	Price
K-3	5.45mm Kalashnikov	3.99 kg	30, 40, 45, 60	$541

Weapon	ROF	Damage	Pen	Bulk	Mag	SS	Burst	Range
K-3	5	3	1-Nil	4	30, 40, 45, 60	2	4	41

Leader

Real World Story: The Leader was designed by Charles George, and is a close copy of the AR-18. It was meant to be an assault rifle that was easier and cheaper to manufacture. The biggest differences between the Leader and the AR-18 are the bolt (3 lugs instead of 8), the charging handle (above and to the left of the handguard), and the carrying handle on top. The Leader appears radically different from the AR-18 because of the carrying handle and the plastic furniture, but is really not that different.

There is one other big difference; the Leader is a rather pathetic assault rifle that is close to completely unreliable. The general opinion is that it was simplified too much. Quality control was terrible; the flash suppressor was ineffective, the chamber was undersized, and a magazine could be pushed all the way into the bolt area when the bolt was locked to the rear, which of course led to an instant jam upon firing the first shot. The Leader would also suffer stoppages for seemingly no reason whatsoever.

Though the Leader has been reintroduced of late in a semiautomatic civilian version, its reputation is so poor that almost no one is buying them.

Weapon	Ammunition	Weight	Magazines	Price
Leader	5.56mm NATO	3.49 kg	20, 30, 40	$586

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Leader	5	3	1-Nil	4/6	2	6	40

Thales F-88 AUSteyr

Notes: Manufactured under license from Steyr-Mannlicher of Austria, the F-88 is (as the name suggests) if the Steyr AUG given some extra touches to make it Australian (and it appears, soon to be New Zealander as well), as well as to suit local manufacturing methods. The F-88 is manufactured at Thales' Lithgow Small Arms Facility and is currently Australia's standard individual weapon. Originally, the Australians used what they called the F-88, which is simply an AUG A1 manufactured in Australia. The "plain vanilla" F-88 is primarily now used by rear-area troops and Australian Cadet Corps (for training). It should be noted that units such as the Australian SAS are using a combination of the M-16, M-4, and F-88A1/A2/GLA; the F-88 has showed some increased sensitivity to water and melted snow in Afghanistan, and some of the SAS troopers feel that the F-88 series' bullpup layout is too awkward and lacks natural pointing qualities.

The Australians primarily use a variation of the AUG A1 version; the F-88A1 is topped by a MIL-STD-1913 rail which, while it can use the carrying handle/optical sight tube of the AUG, normally is topped with an integral optical sight of Australian make that is useful both during day conditions and at night using an illuminated reticule. It is also fairly long; a consistent complaint among Australian troops is that the end of the rail is very near the rearward throw of the charging handle, which can lead to knuckle-busting and skinned fingers. It does, however, allow for a large number of accessories to be mounted above the receiver, however. An IR sight is also common during night operations (though not included in the cost below). (The F-88A1 is also called the F-88S.) Unlike the AUG, the bayonet of the F-88A1 is mounted below the barrel. The F-88A2 is a version that can use NATO MIL-SPEC magazines as well as the Steyr-designed translucent polymer magazines, but otherwise conforms to the F-88A1. The F-88GLA is an F-88A1 or F-88A2 with the addition of an interbar assembly allowing it to mount an M-203PI 40mm grenade launcher (also manufactured in Australia under license from the US), and the foregrip assembly removed. The F-88GLA also has a quadrant sight attached to the carrying handle of MIL-STD-1913 rail, and a Firepoint red-dot sight is also attached for quick shots. (For game purposes, it is otherwise identical to the F-88A1 or F-88A2.

Other variants include the F-88C, a carbine version with a 16-inch barrel instead of a 20-inch barrel. This makes for a very compact weapon. It is primarily issued to vehicle crews in reconnaissance regiments and other reconnaissance units. The F-88T is a 22 Long Rifle-firing version of the F-88 designed for low-cost marksmanship training, and is designed to mimic the weight, size, and balance of the standard F-88. The F-88S-A1C is the carbine equivalent of the F-88A2, with the addition of a MIL-STD-1913 rail above the receiver and the ability to use NATO Mil-Spec magazines. A new version, the F-88A4, is being tested; this version has multiple MIL-STD-1913 rails around extended handguards, including a bottom rail stressed for the attachment of an M-203 with a RIS (Rail Interface System, referring to a MIL-STD-1913 rail). This will also allow rapid mounting and dismounting of the grenade launcher as needed. It is possible that the Australians will switch to a version of the US M-320 Grenade Launcher in the same time period.

Weapon	Ammunition	Weight	Magazines	Price
F-88	5.56mm NATO	3.7 kg	30, 42	$735
F-88A1	5.56mm NATO	3.9 kg	30, 42	$743
F-88A2/A4	5.56mm NATO	3.9 kg	10, 20, 30, 42	$743
F-88C	5.56mm NATO	3.53 kg	30, 42	$694
F-88S-A1C	5.56mm NATO	3.73 kg	10, 20, 30, 42	$701
F-88T	.22 Long Rifle	3.6 kg	10, 20, 30	

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
F-88/F-88A1/F-88A2	5	3	1-Nil	5	2	6	50
F-88C/F-88S-A1C	5	3	1-Nil	4	2	6	36
F-88T	SA	1	Nil	5	1	Nil	37

Steyr AUG

Notes: Originally designed as a technology demonstrator, the Steyr AUG (Armee Universal Gewehr, or Army Universal Rifle), became wildly successful, and versions of the weapon ranging from submachineguns to civilian rifles were produced. It was first produced in 1978, and it became one of the few bullpup military rifles used in number by world armies. The AUG is used by Austria (where it is the standard assault rifle, and is known as STG-77), Australia, Ireland, New Zealand, Oman, Malaysia, and Saudi Arabia; in addition, British soldiers stationed in the Falklands also use the AUG. The Australians and the Malaysians license-produce the AUG. (The Australian version of the AUG is different enough from a standard AUG that is has its own entry under Australian Assault Rifles.)

The body and magazines of the AUG are made of high-impact plastic, while the internal workings and the barrel are made of high-quality steel (except for the hammer and certain other parts of the hammer unit, which are unusually made of very-high strength plastic). At the very front of the receiver is a fold-down plastic foregrip which can be used as a handguard when folded. The result is a weapon that is light, handy, yet accurate. The weapon includes a 1.5x battle sight that further improves accuracy; it is on an elevated mount and forms a part of a carrying handle. The AUG's trigger is two-stage: pull it back a certain distance, and you get semi-automatic fire, and pull it back all the way for full automatic fire. This can sometimes lead to "accidental automatic fire." The gas block is also adjustable, for standard fire, a fouled chamber or barrel, and a cutoff for the firing of certain rifle grenades. The gas block adjustor is also used to replace the barrel with barrels of other lengths or otherwise remove the barrel. Barrels can be removed and replaced in seconds (less than one combat phase). There are cutouts on either side for the ejection port and charging handle, and the fire and magazine controls may be switched from one side to the other, making the AUG ambidextrous (unusual for a bullpup weapon, though some soldiers say that the AUG is equally uncomfortable to use with either hand due to its poor ergonomics).

Several interchangeable barrels can be fitted to the AUG, allowing the AUG to perform the roles of submachinegun, carbine, heavy-barreled automatic rifle, or a sharpshooter's rifle. In addition, a barrel exists that allows the AUG to function as a squad automatic rifle, and a parts kit that allows the AUG to be converted to a submachinegun firing 9mm Parabellum ammunition (see Austrian Submachineguns). The standard AUG uses a 20-inch barrel; the AUG Carbine has a 16-inch barrel; the AUG SMG (also called the AUG-P) uses a 13.77-inch barrel; and the HBAR has a 24-inch barrel. In addition, the HBAR (sometimes referred to as the AUG LMG or AUG SAW) is equipped with a bipod. The AUG SMG (also called the AUG-P) is often found with special receiver that better suits the extra parts needed to allow the AUG to properly function with the very short barrel; however, this redesigned receiver is not required to allow the AUG SMG to function properly.

The HBAR-T, an AUG modified for use as a sharpshooter's rifle, is similar in appearance to the HBAR from which it is derived. The barrel, however, is cold hammer-forged, heavier and of better quality than that of the HBAR, and uses a flash suppressor that is somewhat more effective at mitigating muzzle flash. (Barrel length is still 24 inches.) The carrying handle/battle sight has been removed, and in its place is a mount for optics (though it is not a MIL-STD-1913 or Weaver mount, and is rather limited in what sort of optics it can mount). (In the Austrian Army, the standard scope used with the HBAR-T is the same Kahles ZF69 6x scope used on the SSG-2000.)

In 1997, the standard AUG A1 was replaced in production (except in Malaysia) by the AUG A2. The AUG A2's magazine well is modified so that it can use NATO/US magazines as well as magazines designed for the AUG and magazines like Beta's C-Mag. The scope/carrying handle was replaced by a MIL-STD-1913 rail, allowing the rifle to use virtually any sort of optics. However, when the A2 arrived, the 13.77-inch SMG barrel was deleted from the options available to the AUG.

Civilian/police semiautomatic-only versions of the AUG A1 and AUG A2 assault rifles and carbines are available on the civilian market in many countries; these generally have no bayonet lug, and often have their barrels permanently attached instead of being interchangeable with shorter or longer AUG barrels. In some cases, civilian versions of the AUG do not have flash suppressors, if that is necessary to comply with local laws.

Twilight 2000 Story: Similar to the Notes above; however, after the November nuclear exchange, production of the AUG virtually stopped in Austria and Malaysia. For at least 20 years after the Twilight War, the only country who produced the AUG was the Australians. The "A2" version is also a rarity in the Twilight 2000 world, except as produced by the Australians.

Merc 2000 Story: Similar to the Notes above; the AUG is a big hit with mercenary groups worldwide, especially the "A2" version.

Weapon	Ammunition	Weight	Magazines	Price
Steyr AUG A1 Assault Rifle	5.56mm NATO	3.7 kg	30, 42	$735
Steyr AUG A2 Assault Rifle	5.56mm NATO	3.64 kg	20, 30, 42	$591
Steyr AUG A1 Carbine	5.56mm NATO	3.6 kg	30, 42	$694
Steyr AUG A2 Carbine	5.56mm NATO	3.54 kg	20, 30, 42	$550
Steyr AUG A1 SMG	5.56mm NATO	3.52 kg	30, 42	$671
Steyr AUG A1 HBAR	5.56mm NATO	5 kg	30, 42	$1325
Steyr AUG A2 HBAR	5.56mm NATO	4.95 kg	20, 30, 42	$1187
Steyr AUG A1 HBAR-T	5.56mm NATO	5.13 kg	30, 42	$1401
Steyr AUG A2 HBAR-T	5.56mm NATO	5.08 kg	20, 30, 42	$1416

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Steyr AUG A1/A2 Assault Rifle	5	3	1-Nil	5	2	6	50
Steyr AUG A1/A2 Carbine	5	3	1-Nil	4	2	6	36

Steyr AUG A1 SMG	5	3	1-Nil	4	2	6	28
Steyr AUG A1/A2 HBAR	5	3	1-Nil	6	2	5	63
With Bipod	5	3	1-Nil	6	1	3	82
Steyr AUG A1/A2 HBAR-T	SA	3	1-Nil	6	2	Nil	65
With Bipod	SA	3	1-Nil	6	1	Nil	84

FN FNC

Notes: The FNC was first produced in the late 1970s as an improved version of the FN CAL. It was intended to address the problems the CAL suffered from difficult environments, and to keep functioning even when dirty. Like the CAL, it is basically a scaled-down version of the FAL, and has a similar operating system. It is easy to clean, strip, and reassemble. It has been adopted by several countries around the world. In Belgium, it became the standard assault rifle, replacing the FN CAL and FN FAL (for most uses). The rifle is used by Belgium, Indonesia, Latvia, and Nigeria, and several other unnamed countries. The FNC was given stringent tests by NATO in 1976, and it was found wanting; the problems uncovered were corrected by 1979. (This is officially known as the FNC-80.)

Operation is by gas, but the gas system is a piston-driven system modified from the AKM's system. The locking lugs on the rotating bolt fit into tracks on the barrel extension. Most of rest of the operation is as that of the FAL. The area of the CAL that received most of the criticism, the difficult disassembly and reassembly of the CAL, has been greatly simplified in the FNC. THE FNC is made is made from inexpensive steel stampings for most of the working parts, the receiver, and the handguards instead of expensive milled parts, and the RL cost is much less than the CAL.

The folding stock folds to the right, and the FNC uses standard US/NATO magazines. Operation is by gas, and strongly resembles that used by the AK series, though with more advanced technologies and materials, and with many improvements. The FNC has a gas cutoff for use when firing older rifle grenades, and it can also use the newer BTU and pass-through rifle grenades. The receiver is made in two parts for field stripping and servicing; the upper receiver is of stamped steel, while the lower receiver is of aluminum alloy. Sights consist of a protected fixed front post and a two-position flip rear with windage and elevation adjustments; the top of the receiver also has mounts for NATO-type night vision devices and optics. The stock is of tubular steel covered with high-impact plastic, and folds to the right; fixed stocks are of a solid synthetic material. Pistol grip, cocking handle, and fore-end are of high-impact plastic. Standard FNCs are equipped with a 17.68-inch barrel having a 1:7 rifling twist to optimize them for firing SS-109 ammunition, but FNCs with 1:12 rifling twist (appropriate for older 5.56mm NATO ammunition) are available upon request. The barrel is tipped by a flash suppressor that doubles as a muzzle brake, and still allows the use of rifle grenades of an older nature. The FNC can use the US M-7 bayonet or a bayonet designed specifically for the FNC. Feed is from any STANAG-compliant magazine, but the standard magazines are 20-round for training and 30-round for combat.

The FNC Paratroop (also known as simply the "Para" or the FNC Carbine) is a shortened version of the FNC assault rifle, similar in concept to other such short assault rifle designs. it is capable of using a bayonet, rifle grenades, the RAW, or mounting an appropriate grenade launcher. Virtually all of the FNC Paratroop made have a folding stock, but a fixed synthetic stock is available for the FNC Paratroop, which also has a 14.3-inch barrel tipped by a conventional flash suppressor.

The Indonesians produce the standard variants of the FNC in Indonesia under license. They call the FNC the Pindad 1, and the FNC Paratroop the Pindad 2.

Twilight 2000 Notes: This weapon is so ubiquitous that is can be found almost anywhere, though production in Belgium virtually ceased after the French invasion of Belgium, leaving Indonesia as the almost sole producer of FNCs. In the Twilight 2000 world, Latvia is not using the FNC. US Army Special Forces operating in France or French-occupied territory were also often seen carrying FNCs. FNCs taken from captured Belgian troops were often handed out to French militia forces and Belgian or Dutch civilians loyal to France.

Merc 2000 Notes: As the FNC can be found almost in every corner of the globe, it is a common weapon in the hands of mercenary and "unofficial" troops of several governments worldwide.

Weapon	Ammunition	Weight	Magazines	Price
FNC Standard (Fixed Stock)	5.56mm NATO	4.06 kg	20, 30	$784
FNC Standard (Folding Stock)	5.56mm NATO	4.01 kg	20, 30	$804
FNC Paratroop (Fixed Stock)	5.56mm NATO	3.86 kg	20, 30	$706
FNC Paratroop (Folding Stock)	5.56mm NATO	3.81 kg	20, 30	$725

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
FNC Standard (Fixed Butt)	3/5	3	1-Nil	6	2	3/4	45
FNC Standard (Folding Butt)	3/5	3	1-Nil	4/6	2	3/6	46
FNC Paratroop (Fixed Stock)	3/5	3	1-Nil	5	2	3/5	33
FNC Paratroop (Folding Stock)	3/5	3	1-Nil	4/5	2	3/6	33

FN CAL

Notes: The FN CAL is an example of a weapon that was at once ahead of its time, built using ideas that were technologically possible at the time, and suffering from the political whims of the time. The CAL (Carbine, Automatic, Legere) was the first attempt by FN to "shrink" the FAL into a form that would be preferred by countries now using the smaller 5.56mm NATO round. This didn't work at first – the FAL was ill-designed to fire the 5.56mm NATO cartridge, even when scaled down. In 1969, when full production started, orders came in from all over the globe; strangely enough, the Belgian military remained unimpressed by the CAL. In addition, the CAL was often returned by the countries who adopted them or bought them for testing. The CAL was dropped from production in 1975.

Most of my readers know the story behind the NATO adoption of the 5.56mm round – the original candidate was a British-designed .280 caliber round, but the US rammed through the adoption of their own 7.62mm round due to their greater political power at the time. About a decade later, it was realized that the 7.62mm NATO round simply had too much power for a lightweight assault rifle –

and again, the US used its political muscle to make their 5.56mm round the official NATO assault rifle round.

FN had considerable success with its FAL, firing the then-standard 7.62mm NATO round, but they had seen the writing on the wall in the early 1960s, and began designing a smaller version of the FAL to fire what became the new standard NATO round. The result was the FN CAL, first produced in 1966. Externally, the CAL did look like a smaller version of the FAL – but internally, a lot of changes had to be made to make a smaller FAL work with the 5.56mm NATO round. Though the operation is mostly similar to that of the FAL, the CAL uses a cam-operated rotating bolt and carrier system instead of the tilting bolt and bolt carrier of the FAL. The CAL uses a "double interrupted thread" on the bolt carrier instead of the multi-lugged bolt used by most selective-fire rifles of the time. In particular, the FAL's tilting bolt mechanism was unsuitable for the smaller cartridge, so the CAL was designed to use a rotating bolt instead. The charging handle was also moved to the right side, which was desired by many FAL shooters. The charging handle was moved forward, since otherwise it would block the ejection port. The CAL retained most of the FAL's other features, suitably downsized, and externally looks like a smaller FAL.

Well ahead of almost anybody else, FN used a selective-fire system that allowed for 3-round bursts as well as fully automatic fire. (The fire selector therefore has four settings on it.) The rifling was optimized for the 5.56mm NATO round used at the time – the US M-193 and its European equivalents. (Firing SS-109 through the CAL will quickly wear the barrel extension, feed ramp, and bore.) The front sight was a protected post adjustable for elevation and windage, and the rear sight a non-adjustable two-position flip-type. (This sort of adjustable sight setup was a peculiarity of many European-designed rifles of the time.) Construction is of light, stamped sheet steel for the receiver, operating parts of steel forgings, and a very well-made barrel of the best steel available. The barrel length was 18.5 inches (too long to be considered a carbine by modern standards), and tipped by a compact muzzle brake. The stock may be a fixed, solid stock or a folding, tubular stock.

Unfortunately, the CAL suffered from many of the same problems as the M-16: it was sensitive to dirt, and the barrel corroded easily. In addition, the folding stock tended to fall off at the time of its introduction. It was also a very complex weapon, both for unit armorers and the average user field-stripping it. The magazines used with the CAL are proprietary, and cannot be used with other weapons; the CAL also cannot use the magazines of other weapons. Most of these problems were quickly solved (except for the complexity problem and the proprietary magazines), but the damage to its reputation was already done, and few countries actually bought the CAL; even then, they bought them only in small numbers, and there were many cancelled orders. The countries which did buy them tended to quickly withdraw them from service. It does, however, tend to pop up here and there every so often even today, mostly in Central and South America and Africa.

Twilight 2000 Notes: This weapon was very much a reject at the time of the Twilight War; most CALs in use are taken from old stocks in armories and are normally found in the hands of civilian or paramilitary militias.

Weapon	Ammunition	Weight	Magazines	Price
FN CAL (Fixed Stock)	5.56mm NATO	3.35 kg	20, 25, 30	$790
FN CAL (Folding Stock)	5.56mm NATO	3.35 kg	20, 25, 30	$810

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
FN CAL (Fixed Stock)	3/5	3	1-Nil	6	2	3/5	48
FN CAL (Fixed Stock)	3/5	3	1-Nil	4/6	2	3/5	48

FN F2000 IWS

Notes: The F2000 IWS (Integrated Weapon System) is not exactly a simple assault rifle; it is a weapon system consisting of a bullpup assault rifle and a number of snap-on attachments and weapons to suit the F2000 to nearly any sort of tactical situation.

The F2000 assault rifle is unusual for its extraction; it throws the spent case forward up a channel and then ejects it just to the rear of the flash suppresser. This is an added layer of complexity, but means that left and right handed people can easily use it without worrying about spent casings being ejected in their faces or down their shirts. The cases are not ejected into the air violently like most rifles; they fall gently to the ground. This minimizes the chance of detection of the firer by an observant enemy. The F2000 is equipped with an optical sight with 1.6x magnification; there are backup iron sights, and the optic sight is mounted on a MIL-STD-193 (Picatinny) rail. An optional feature is a complete "fire control system;" this module has a sight with a 2.6x magnification, laser rangefinder, ballistic computer, and an IR laser aiming module.

The amount of attachments and weapon accessories that may be fitted to the F2000 is staggering. They include, but are not limited to: a flashlight mount, a laser aiming module, a 12-gauge shotgun, a 40mm grenade launcher, a less-than lethal weapon module (any of these under the barrel), and a variety of aiming modules, scopes, or sights on top of the receiver.

In the Fall of 2007, a civilian/police version of the F2000 was released: the FS2000. Though very similar to the F2000, several key features are changed. Of course, the FS2000 is a semiautomatic-only rifle, with a sear that makes conversion to automatic fire extremely difficult. Since many countries will not allow a civilian rifle to have a barrel as short as that of the F2000 (15.5 inches), the barrel is lengthened to 17.4 inches. The fire selector, difficult to use by a left-handed shooter on the standard F2000, was moved to a position under the trigger. Multiple chamber-loaded indicators were added, both visual and tactile. The FS2000 is not sold with the 1.6x optical sight of the F2000 (though it can be bought separately), and is not compatible with the F2000's computerized fire-control system. (The MIL-STD-1913 rail and the backup iron sights remain.) The FS2000 cannot mount a grenade launcher, nor can it mount

a bayonet or a shotgun module, but other F2000 accessories can still be mounted. The reduc7ed-capacity versions of the magazine are identical to the standard magazine, but they have a molded-in block in them.

Twilight 2000 Notes: This weapon does not exist in the Twilight 2000 timeline.

Merc 2000 Notes: French, US, and British troops have all "unofficially" combat-tested this weapon in various conflicts around the world; they are reportedly quite pleased with them.

Weapon	Ammunition	Weight	Magazines	Price
F2000	5.56mm NATO	3.6 kg	20, 30	$873
with FC System	5.56mm NATO	5.5 kg	20, 30	$3023
FS2000	5.56mm NATO	3.54 kg	10, 20, 30	$591

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
F2000	3/5	3	1-Nil	4	2	4/6	40
with FC System	3/5	3	1-Nil	4	2	3/5	55
FS2000	SA	3	1-Nil	4	2	Nil	42

FN SCAR

Notes: Originally known as the SCAR-L (Light) and SCAR-H (Heavy), this weapon was designed for the US military's SCAR (Special Operations Combat Assault Rifle) competition, though the competition and development of the SCAR is still ongoing; supposedly special ops units have been using small numbers of the SCAR since 2008. The SCAR is essentially a highly-modified FNC, and comes in two base versions: SCAR-16 (firing 5.56mm NATO) and SCAR-17 (firing 7.62mm NATO). A further version is planned for the future, firing 7.62mm Kalashnikov, and will probably also be designated as some variant of the SCAR-17 name; other calibers may be added in the future, and some of these possible chamberings are noted below. 90% of SCAR parts are interchangeable between the different calibers. It is intended as primarily a short to medium-range weapon; its short barrel is especially suited to close assault situations. The SCAR in both iterations includes a MIL-STD-1913 rail atop the receiver and handguards with MIL-STD-1913 rails as 12, 3, 6, and 9 o'clock. The top handguard rail joins seamlessly to the receiver's top rail, presenting one long rail. The weapon has iron sights, but it primarily meant to operate with a variety of NATO optics, laser sights, or other accessories. The barrels are designed to be changed in 5 minutes without needing headspace or timing adjustments, without tools, and not needing an armorer's skills. Standard barrel for the SCAR-16 is 13.9 inches; CQB barrel lengths are 9.9 inches, and the "sniper" barrel uses an 18-inch heavy barrel. The stock folds, and slopes slightly, allowing the user to shoot from behind cover while presenting a lower profile; it also slides, which not only allows for general length adjustments, but for length of pull adjustments. It also has an adjustable cheekpiece. The retainer for the stock doubles as a brass deflector. The SCAR cannot use the M-203, but can use the M-203 PI; however, it is specifically designed to use a variant of the Heckler & Koch AG-36 grenade launcher. The controls are ambidextrous, and the selector lever requires only a 90-degree rotation instead of the 180-degree rotation of the M-16/M-4 to operate all modes of fire. The charging handle is on the side, but may be placed on either side to accommodate both left and right-handed shooters.

As of early 2006, the SCAR-L has been designated the Mk 16 or SCAR-16, and the SCAR-H the Mk 17 or SCAR-17. By far, the primary chamberings have been 5.56mm NATO for the SCAR-16 and 7.62mm NATO for the SCAR-17; in particular, the .50 Beowulf, .300 Winchester Short Magnum, and .300 Short-Action UltraMag chamberings appear to have been experimental only.

In late 2009, FNH USA (FN's US-based facilities) announced the FN SCAR-16S. This is a semiautomatic-only version of the Mk 16 in 5.56mm NATO. The SCAR-16S is virtually identical to the standard SCAR-16, but the controls are almost identical to those of the AR-15 series, and the standard barrel length is 16.25 inches. At the same time, a SCAR-17S version was announced, chambered for 7.62mm NATO; it has just started production as I write this (mid-October 2010).

The SCAR, particularly the SCAR-16, have become popular with US Special Operations and (in its civilian guise) in 3-Gun competitors.

As of October of 2010, US acquisition of the SCAR (whether the SCAR-16 or SCAR-17) has been suspended by the Pentagon, even for special operations units. No reason has been given for this suspension publicly as of yet.

ISSC-Austria plan to have out by November 2011 a clone of the SCAR in .22 Long Rifle. This version has a 16.25-inch barrel and is considerably lighter than the SCAR, but offers less expensive shooting in an otherwise SCAR package. This is the ISSC-Austria MK 22, and is a semiautomatic rifle designed for civilian use. For the most part, it otherwise has the same features as the SCAR-16, including magazines which look like those of the SCAR-16 (but are internally different). In addition, the Mk 22 uses blowback operation, as the .22 Long Rifle cartridge does not have enough oomph to cycle a gas-operated mechanism.

Twilight 2000 Notes: The SCAR does not exist in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
SCAR-16 (CQB Barrel)	5.56mm NATO	3.31 kg	20, 30	$521
SCAR-16 (Standard Barrel)	5.56mm NATO	3.49 kg	20, 30	$562
SCAR-16 (Sniper Barrel)	5.56mm NATO	3.72 kg	20, 30	$610
SCAR-16 (CQB Barrel)	6.5mm Grendel	3.45 kg	16, 25	$591
SCAR-16 (Standard Barrel)	6.5mm Grendel	3.64 kg	16, 25	$633
SCAR-16 (Sniper Barrel)	6.5mm Grendel	3.88 kg	16, 25	$680

SCAR-16 (CQB Barrel)	6.8mm SPC	3.59 kg	16, 25	$660
SCAR-16 (Standard Barrel)	6.8mm SPC	3.79 kg	16, 25	$701
SCAR-16 (Sniper Barrel)	6.8mm SPC	3.91 kg	16, 25	$748
SCAR-16 (CQB Barrel)	.50 Beowulf	3.37 kg	9, 13	$533
SCAR-16 (Standard Barrel)	.50 Beowulf	3.56 kg	9, 13	$574
SCAR-16 (Sniper Barrel)	.50 Beowulf	3.67 kg	9, 13	$623
SCAR-17 (CQB Barrel)	7.62mm Kalashnikov	3.4 kg	30	$768
SCAR-17 (Standard Barrel)	7.62mm Kalashnikov	3.59 kg	30	$810
SCAR-17 (Sniper Barrel)	7.62mm Kalashnikov	3.82 kg	30	$857
SCAR-17 (CQB Barrel)	7.62mm NATO	3.66 kg	20	$949
SCAR-17 (Standard Barrel)	7.62mm NATO	3.86 kg	20	$990
SCAR-17 (Sniper Barrel)	7.62mm NATO	4.11 kg	20	$1038
SCAR-17 (CQB Barrel)	.300 Winchester Short Magnum	3.74 kg	20	$984
SCAR-17 (Standard Barrel)	.300 Winchester Short Magnum	3.94 kg	20	$1026
SCAR-17 (Sniper Barrel)	.300 Winchester Short Magnum	4.2 kg	20	$1074
SCAR-17 (CQB Barrel)	.300 Short-Action UltraMag	3.69 kg	20	$951
SCAR-17 (Standard Barrel)	.300 Short-Action UltraMag	3.89 kg	20	$992
SCAR-17 (Sniper Barrel)	.300 Short-Action UltraMag	4.15 kg	20	$1040
SCAR-16S	5.56mm NATO	3.56 kg	20, 30	$586
SCAR-17S	7.62mm NATO	3.94 kg	20	$1015
Mk 22	.22 Long Rifle	3.37 kg	10, 22	$246

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
SCAR-16 (5.56mm, CQB)	5	2	1-Nil	3/4	2	6	18
SCAR-16 (5.56mm, Standard)	5	3	1-Nil	4/5	2	6	32
SCAR-16 (5.56mm, Sniper)	5	3	1-Nil	5/6	2	6	49
SCAR-16 (6.5mm, CQB)	5	3	1-1-Nil	3/5	2	6	25
SCAR-16 (6.5mm, Standard)	5	3	1-1-Nil	4/5	2	6	43
SCAR-16 (6.5mm, Sniper)	5	3	1-2-Nil	5/6	2	6	66
SCAR-16 (6.8mm, CQB)	5	3	1-1-Nil	3/5	2	6	25
SCAR-16 (6.8mm, Standard)	5	3	1-2-Nil	4/5	2	6	43
SCAR-16 (6.8mm, Sniper)	5	3	1-2-Nil	5/6	2	6	66
SCAR-16 (.50, CQB)	5	4	1-2-Nil	3/5	2	6	25
SCAR-16 (.50, Standard)	5	4	1-2-Nil	4/5	3	6	43
SCAR-16 (.50, Sniper)	5	5	1-2-Nil	5/6	4	9	66
SCAR-17 (7.62mm Kalashnikov, CQB)	5	3	2-Nil	4/5	3	6	21
SCAR-17 (7.62mm Kalashnikov, Standard)	5	3	2-Nil	4/6	4	9	36
SCAR-17 (7.62mm Kalashnikov, Sniper)	5	4	2-Nil	5/7	4	9	55
SCAR-17 (7.62mm NATO, CQB)	5	3	2-Nil	4/5	4	9	20
SCAR-17 (7.62mm NATO, Standard)	5	4	2-3-Nil	5/6	4	9	36
SCAR-17 (7.62mm NATO, Sniper)	5	4	2-3-Nil	6/7	4	9	55
SCAR-17 (.300 WSM, CQB)	5	4	1-2-Nil	4/5	4	9	23
SCAR-17 (.300 WSM, Standard)	5	5	1-2-3	5/6	4	9	43
SCAR-17 (.300 WSM, Sniper)	5	5	1-2-3	6/7	4	9	66
SCAR-17 (.300 SAUM, CQB)	5	4	1-2-Nil	4/5	4	9	24
SCAR-17 (.300 SAUM, Standard)	5	5	1-2-3	5/6	4	9	43
SCAR-17 (.300 SAUM, Sniper)	5	5	1-2-3	6/7	4	9	66
SCAR-16S	SA	3	1-Nil	4/6	2	Nil	41
SCAR-17S	SA	4	2-3-Nil	5/7	4	Nil	45
MK 22	SA	1	Nil	5/6	1	Nil	33

IMBEL MD-2/3

Notes: These assault rifles were accepted into the Brazilian military when the LAPA's exotic looks and construction were not readily accepted by the Brazilian soldiers. It was also easier and cheaper to simply produce a scaled-down version of the Light Automatic Rifle (the Brazilian name for the FN FAL) than a new, exotic rifle that required extensive retooling of the weapons factories and retraining or troops. The MD-2 and MD-3 (originally collectively known as the FZ-961) are to some extent standard-pattern assault rifles that bear some resemblance to the FNC, but are in fact a local design.

The original idea for the MD-2 was to simply rebarrel the Brazilian version of the FAL for 5.56mm NATO, but this required more work than the designers thought, and they also wanted to incorporate some new ideas. As stated above, they ended up with a rifle externally similar to the FNC, but internally quite different. Internally, in fact, the MD-2 and MD-3 resemble a mix of the FAL and the M-16A3. They use M-16 and M-16-compatible magazines, and 40% of the parts of the MD-2 and MD-3 are interchangeable with those of the LAR/FN FAL. The MD-3 has a fixed stock, and the MD-2 has a side-folding metal stock. Like many modern assault rifles, the lower receiver is of light alloy, the upper is stamped steel, and parts like the handguard, pistol grip, and suchlike are of high-impact plastic or composites. This weapon is used by both military and police forces, and a civilian semiautomatic-only version is produced. (In civilian guise, the weapons are known as the MD-2A1 and MD-3A1, respectively.) Most LARs in Brazilian service had been replaced by the MD-2 and MD-3 by 2002.

The Model L and LC are basically updated versions of the MD-2 or 3, differing from those weapons primarily in ergonomics and the use of lighter materials such as high-impact plastics. The Models L and LC are also capable of mounting a variety of NATO-compatible 40mm grenade launchers, something the MD-2 and MD-3 aren't designed for. Though the Brazilians are planning to produce many of these rifles, the Brazilian Army made an early decision to equip its jungle and mountain units with the new rifle first, and since it was felt that they would get more use out of the lighter Model LC, perhaps only a third as many Model Ls are to be produced as Model LC's. In addition to normal US/NATO-style magazines, the L and LC can use special transparent plastic magazines that allow the user to readily see how much ammunition is left. Model L and LC production has only started recently, and only a few units (for the most part, the units the Brazilian Army regards as their best) have thusfar received the Model L and LC.

The MD-97 is a further development of the MD-2 and MD-3. Two models of the MD-97 are produced – the Military model, the MD-97L, and the Police model, the MD-97LC. Both would take more than a cursory examination to distinguish them from the MD-2 and MD-3; both have essentially the same features and construction as the MD-2 and 3, though some parts of the MD-97 are not compatible with the MD-2 and 3 and workmanship is in general better than that of the MD-2 and 3. The MD-97 also uses a gas piston operation instead of direct gas impingement. The MD-97 thus looks very much as a version of the FAL reduced for use with 5.56mm NATO ammunition.

The MD-97L is slightly longer than a carbine, with automatic fire capability and a 17.2-inch barrel and the same flash suppressor as the MD-2 and MD-3 (which is itself a modified form of the flash suppressor of the M-16A2). The stock folds to the right and has a padded buttplate, and the ejection port has an integral deflector for left-handed shooters. The pistol grip is simple hollow polymer which has an unusually-sharp angle to the rear. The rest of the controls are a bit more ergonomic than those of the MD-2 and 3. The handguards are ventilated and of polymer, and the lower receiver is of light alloy. The sights are better calibrated to 5.56mm NATO ammunition and more finely adjustable. Magazine use is the same as for earlier rifles. The MD-97L is also available in a semiautomatic-only form for export to civilians and interested law-enforcement agencies.

The MD-97LC is the same except for the barrel which is just a smidge under 13 inches. The selector lever allows only for semiautomatic fire in its police form, but the military uses the same weapon with automatic fire components, calling it the MD-97LM. The MD-97LC also cannot be fitted with an underbarrel grenade launcher, while the MD-97L can do so. The MD-97LC may be fitted with a folding stock or a fixed, polymer stock.

It should be noted that all of these rifles have a serious defect – their barrels are poorly made, and wear out quickly, needing replacement in about 6000 rounds. While the Brazilians say this is a reflection of local conditions that would make barrels wear out quickly anyway (due to corrosion), this fact would seriously limit export sales.

Twilight 2000 Notes: Though these weapons were first issued in 1983 to Brazilian forces, only about half of the LARs had been replaced with them by the time of the Twilight War due to budget constraints. The Model L and LC were virtually unknown in Twilight War Brazil; the few examples of the L and LC were distributed not to elite, mountain, and jungle units, but to the bodyguards of the president and his advisors and family. The MD-97 does not exist in the Twilight 2000 timeline.

Merc 2000 Notes: Due to budget constraints, the L and LC were not produced in nearly the numbers that the Brazilian Army hoped for; however, the Brazilians jumped to the MD-97 series.

Weapon	Ammunition	Weight	Magazines	Price
MD-2	5.56mm NATO	4.4 kg	20, 30	$603
MD-3	5.56mm NATO	4.57 kg	20, 30	$583
Model L	5.56mm NATO	3.7 kg	20, 30	$602
Model LC	5.56mm NATO	2.9 kg	20, 30	$522
MD-97L	5.56mm NATO	3.71 kg	20, 30	$672
MD-97LC (Fixed Stock)	5.56mm NATO	3.33 kg	20, 30	$604
MD-97LC (Folding Stock)	5.56mm NATO	3.33 kg	20, 30	$624
MD-97LM	5.56mm NATO	3.33 kg	20, 30	$629

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
MD-2	5	3	1-Nil	4/6	2	5	47
MD-3	5	3	1-Nil	6	2	5	47
Model L	5	3	1-Nil	5/6	2	6	47
Model LC	5	2	1-Nil	4/5	2	6	19
MD-97L	5	3	1-Nil	4/6	2	5	44
MD-97LC (Fixed)	SA	3	1-Nil	5	2	Nil	29
MD-97LC (Folding)	SA	3	1-Nil	4/5	2	Nil	29
MD-97LM	5	3	1-Nil	4/5	2	5	29

Enfield L-85

Notes: This weapon was initially conceived during the British Government's Small Arms 80 competition to design a new weapon to replace the L-1A1 version of the FN FAL then used by the British Army. (The weapon is thus often called the SA-80.) It became one of the first bullpup-design weapons to be used by any army in large numbers. The L-85A1's predecessors were initially designed to use a 6.25x43mm cartridge, then a 4.85x49mm round, but this was changed to the NATO standard 5.56x45mm round. Also known as the IW (Individual Weapon), the L-85A1 is made from mostly steel using modern machining and pressing processes, and was also one of the first weapons designed using a CAD program. The weapon can be issued with a conventional sight in a carrying handle; however, combat arms and special operations troops are normally issued the L-85A1 with a robust 4x sight known as the SUSAT (Small Unit Small Arms Trilux) L-9A1. This sight allows for better range and more precise sighting. The SUSAT's base can also accommodate other NATO-standard optical equipment. The standard barrel length is 21.4 inches. The IW is simple to strip and clean --- and that is good, since it is very finicky about dirt failing in dirty environments with distressing regularity. In addition, the L-85A1 tends to just sort of fall apart, without provocation, and tends to jam even more if it is not fed with Royal Ordnance-made ammunition. The L-85A1 uses standard US/NATO magazines; it can use the 100-round C-Mag and the 90-round MWG, though the MWG makes the weapon very clumsy. The L-85 includes a special gas bleed cutoff setting for the firing of rifle grenades. The bayonet designed for the L-85 is unusual; the handle is hollow, and the handle fits around the barrel with the rifle firing down the axis of the bayonet when it is mounted. (In practice, this has resulted in the handle in some cases getting too hot to handle when a lot of shooting is done while the bayonet is mounted; a solution has yet to be found to this problem.)

As stated above, the SUSAT is not issued to all troops; rear-area troops, in particular, have L-85s with a carrying handle attached in place of the SUSAT. These versions are for the most part identical to standard L-85s, but subtract $200 from the price and 0.4 kg from the weight.

The SUSAT is also used on the L-86 LSW, and modified forms are used on some L-1A1s and L-7A1 (MAG) machineguns.

The L-85A2 addresses the faults of the L-85A1; the weapon does not fall apart spontaneously, like the L-85A1, and is said to have acquired a reputation for reliability, as well as being more tolerant of ammunition of other makes. I say "said to" because reviews are mixed on the L-85A2; some say that it is utterly reliable, while others claim it is just as much a dog, reliability-wise, as the L-85A1. Only time will tell. Apart from addressing these problems, it is basically the same weapon as the L-85A1 and is not given a line in the tables below.

The L-85 Carbine is a short-barreled version of the L-85 assault rifle, roughly equivalent in performance and purpose to the US M-4 Carbine. The L-85 Carbine also has a foregrip to help control the greater barrel climb. It can still fire rifle grenades. This weapon is largely unknown; production stopped in 1994 when the problems with the standard L-85A1 rifle came to light, and production was not picked up again until 2001. At any rate, only very small numbers of the weapon were produced, primarily for British special operations troops, with two barrel lengths. Normal issue does not include the SUSAT, but the SUSAT can be fitted to the L-85 Carbine.

The L-98A1 Cadet GP is a version of the L-85A1 designed for training new troops. It fires 5.56mm NATO ammunition, but it is not designed for repeating fire – the charging handle must be cycled by hand between shots. Though it is not technically a bolt-action rifle, for game purposes the L-98A1 effectively has the same fire rate as a bolt-action rifle, which is why under ROF below it is listed as "BA." However, the shooter may also use a trick in which he keeps the trigger held down, and cycles the bolt repeatedly; this essentially means that the L-98A1 fires a shot every time the charging handle is cycled. In this case, the shooter may fire up to three shots per round – but accuracy is seriously degraded, with the range being reduced to 38. In addition, aimed fire is not possible when using this technique, and if the L-98A1 is equipped with a SUSAT, that sight will also be impossible to use. (The L-98A1 is not normally equipped with a SUSAT, and this is reflected in the stats below.

The L-98A1 can otherwise use the same accessories as the L-85. It can be converted to semiautomatic fire, or even into a full L-85A1, by adding the appropriate parts, such as in the gas system and the cocking handle. (Note that the weight below is estimated.) There is a newer version of this rifle, the L-98A2; this version is basically a semiautomatic version of the L-85A2, and for game purposes may be treated as a semiautomatic-only version of the standard L-85A2. It too is typically not equipped with a SUSAT, and like the non-SUSAT version listed above, costs $200 less and is 0.4 kg lighter than the L-85A1/A2.

The newest iteration of the L-85 is the L-85A2E. This version has a fore-end with MIL-STD-1913 rails at 3, 9, and 6-o'clock; online British Army friends of mine this was done primarily to allow the addition of a vertical foregrip under the handguard and the use of items like laser pointing devices. A MIL-STD-1913 rail is not normally included above the receiver, but the L-85 does have a STANAG optics mount above the receiver, and a STANAG-to-MIL-STD-1913 rail adapter kit does exist which allows the L-85A2E (or any other L-85) to mount a rail above the receiver. This does, however, appear to be little-used. The L-85A2E modifications are done by Daniel Defense and are applied to already existing L-85A2s, as they primarily consist of replacing the handguards. The L-85A2E is identical to the L-85A2, but the weapon weighs 0.05 kg more and costs 1% more.

Law Enforcement International (LEI) makes a rimfire-firing variant of the L-85 called the LEI SA-80. It is virtually identical to the L-85A1, except that it is semiautomatic-only, chambered for the .22 Long Rifle cartridge and feeds from curved magazines or various capacities. The magazine well is externally nearly identical to that of a standard L-85A1, but is adapted for the much smaller-width .22 Long Rifle magazines. The barrel and internal parts are likewise altered to suit the new chambering.

Twilight 2000 Notes: Many of these weapons have been ditched by 2000 by British troops in favor of both allied and enemy weapons that are more reliable and don't fall apart. Except for a very small number in the hands of British special operations troops, the L-85A2 is unknown in the Twilight 2000 world. Very small numbers of the L-85 Carbine were produced, mostly in the 290mm barrel version. They have most of the same problems as the L-85A1. The L-85A2 does not exist in the Twilight 2000 timeline, nor does the L-98A2. Most L-98A1's have been converted into L-85A1's or to semiautomatic fire, and issued to home-defense troops.

Merc 2000 Notes: British special operations prefer the M-16 series and its variants to the L-85A1; other than that, most British troops are still using the IW. It is almost unknown anywhere else in the world, except with the Gurkhas and Jamaican armed forces. There are about equal numbers of both versions of the L-85 Carbine; numbers of both versions are small. The short-barreled versions have the same problems as the L-85A1, while longer-barreled versions are more similar to the L-85A2.

Weapon	Ammunition	Weight	Magazines	Price
L-85A1/A2	5.56mm NATO	3.8 kg	20, 30	$800
L-85 Carbine (290mm Barrel)	5.56mm NATO	2.99 kg	20, 30	$498
L-85 Carbine (442mm Barrel)	5.56mm NATO	3.71 kg	20, 30	$559
L-98A1 GP Cadet	5.56mm NATO	3.68 kg	20, 30	$568
LEI SA-80	.22 Long Rifle	3.6 kg	10, 20, 25	$256

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
L-85A1/A2	5	3	1-Nil	5	2	6	55
L-85 Carbine (290mm)	5	2	1-Nil	3	2	6	21
L-85 Carbine (442mm)	5	3	1-Nil	4	2	6	41
L-98A1 GP Cadet	BA*	3	1-Nil	5	2	Nil	55
LEI SA-80	SA	1	Nil	5	1	Nil	39

*See Notes above for a “firing trick” which may be done with the L-98A1 to increase the rate of fire.

Royal Ordnance MC-51

Notes: The MC-51 was designed from the G-3 but scaled down along the same lines that a HK-54 is a scaled down HK-33. This model was first designed by H&K itself (after the Royal Ordinance buyout) in the early 1990s. It has since been manufactured by Class III dealers in the US using stock G-3 rifles. In both versions, the weapon is equipped with a muzzle brake on the end of the barrel, which helps reduce recoil and flash from the weapon when fired.

Twilight 2000 Notes: Very few factory-made examples of this weapon exist, but a similar weapon is easily made by cutting down a G-3, and some were made in such a fashion.

Merc 2000 Notes: Though handy for special operations needing a weapon with high power and small size, there are weapons with less muzzle blast and recoil that also fit the bill. The MC-51 is thus more a curiosity than anything else.

Weapon	Ammunition	Weight	Magazines	Price
MC-51	7.62mm NATO	4.4 kg	20	$983

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
MC-51	5	3	2-Nil	2/4	2	6	17

SAR-87

Notes: Originally designed for the SA-80 competition, this design eventually fell to the wayside. It was re-introduced in the late 1980s using new construction materials, but still had no success on the military market. A semiautomatic civilian version was also sold, but withdrawn from production shortly after it was introduced in the early 1990s. With a barrel, bolt, and magazine change, it can fire 9mm Parabellum ammunition, though the normal caliber is 5.56N. The operating controls are ambidextrous, which is unusual for an assault rifle. It is largely built of light alloy, and it can fire rifle grenades. The prices listed below are if the weapon is issued/bought in that caliber; if a SAR-87 is bought with a conversion kit, use the 9mm Parabellum price, then add the cost of a conversion kit.

Twilight 2000 Notes: During the Twilight War, one of its largest users was British postwar militia forces; the British government sometimes issued the SAR-87 in the same manner that militia forces in the US were issued the M-16EZ (though the SAR-87 is a decidedly better weapon).

Merc 2000 Notes: This is one of those odd sorts of weapons that, though never officially adopted by any country’s military or police forces, nor sold on the civilian market, nevertheless showed up on a regular basis, in some of the strangest places, in the hands of regular military, special operations, and police forces.

Weapon	Ammunition	Weight	Magazines	Price
SAR-87	5.56mm NATO	3.08 kg	20, 30	$585
SAR-87	9mm Parabellum	3.08 kg	20, 30, 40	$302
Conversion Kit	NA	1.285 kg	NA	$270

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
SAR-87 (5.56N)	5	3	1-Nil	5	2	6	47
SAR-87 (9mmP)	5	2	1-Nil	5	1	3	41

Arsenal AK-47M1

Notes: This is a modified AK-47 used by Bulgaria, mostly by reserve and police forces since it had been largely supplanted by a Bulgarian-built version of the AK-74. (Instead of using the AKM, the Bulgarians decided to go with their own, improved version of the AK-47.) The AK-47M1 differs from the original AK-47 primarily in using plastics or compressed resin where the AK-47 used wood, and has a mount on top of the receiver for a telescopic, laser, or night sight. This makes the AK-47M1 considerably lighter than the original AK-47. In addition, the underside of the handguard has a clip-on mount for the GP-25 grenade launcher. Internally, the AK-47's mechanism is retained, but many of the parts are made of light alloy instead of stamped steel. The muzzle of the AK-47M1 is also equipped with a flash suppressor. The magazines normally issued with the AK-47M1 are also plastic, but it can still take the old steel magazines. As the typical Bulgarian soldier is smaller than his Russian counterpart, the butt of the AK-47M1 is shorter. An AKS-47M1 is also made, which is a folding-stock version (this is a metal stock, but not the same kind as used on the Russian AKMS). Finally, a version of the AK-47M1 modified to fire .22 Long Rifle ammunition is made, for training purposes.

The RKKS is an AK-47M1 with a longer, heavier barrel; it can be used as an automatic rifle or as a platoon sharpshooter's weapon, and can mount any sort of Russian, Chinese, or Warsaw Pact optical sights. The RKKS is equipped with a bipod, and can use the 40-round extended magazines or 75-round drums of the RPK (or Bulgarian plastic equivalent magazines).

The AKS-47S is similar in concept to the Russian AKS-74U, being an AK-74M1 with a chopped barrel and a folding stock. They were produced in small numbers until the fall of the Iron Curtain, when production was ramped up for export (using the name Hobo). Though the AKS-47S has a beefy muzzle brake, it still suffers the problems of a powerful cartridge in a short-barreled weapon: high muzzle blast, sharp recoil, and a greatly-reduced range.

Twilight 2000 Notes: The existence of the AKS-47S was virtually unknown in the West until the Twilight War, when examples were captured and found to not be AKS-74U variants as previously thought. The AKS-47S was never produced in large numbers, though. The name "Hobo" was never applied to the AKS-47S in the Twilight 2000 world.

Merc 2000 Notes: The AKS-74S became a favorite among many special operations units, as well as criminals and terrorists, so much so that stray examples of the Hobo could often not have their origin positively identified.

Weapon	Ammunition	Weight	Magazines	Price
AK-47M1	7.62mm Kalashnikov	3.3 kg	30	$811
AKS-47M1	7.62mm Kalashnikov	3.15 kg	30	$823
AK-47M1 Trainer	.22 Long Rifle	3.12 kg	10	$224
RKKS	7.62mm Kalashnikov	5.74 kg	30, 40, 75D	$1419
AKS-47S	7.62mm Kalashnikov	3.06 kg	30	$794

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AK-47M1	5	4	2-Nil	6	4	9	46
AKS-47M1	5	4	2-Nil	5/6	4	10	46
AK-47M1 Trainer	SA	1	Nil	6	1	Nil	34
RKKS	5	4	2-3-Nil	7	3	8	71
RKKS (With Bipod)	5	4	2-3-Nil	7	2	4	92
AKS-74S	5	3	2-Nil	3/4	2	5	15

Arsenal AK-74M1

Notes: In the early 1980s, Bulgaria decided to switch to a locally-produced version of the AK-74 assault rifle that was at that time being adopted by the rest of the Warsaw Pact nations. The AK-74M1 generally conforms to late-production standards of the AK-74, but uses different plastics and production methods better suited to Bulgarian manufacturing methods. It is otherwise virtually identical to its Russian counterpart. In the late 1990s, the Bulgarians began producing a version of the AK-74M1 in 5.56mm NATO caliber, both for export to other countries and in anticipation of joining NATO. The rumor mill has said that large numbers of these 5.56mm-firing versions have been bought by the US to equip some units of new Iraqi military and police forces. Folding-stock AKS-74M1 models are also built in both calibers.

The Arsenal AKS-74U is basically a Bulgarian equivalent of the Russian AKS-74U short assault rifle. It does have a slightly longer barrel than the AKS-74U, though the overall dimensions are in fact slightly smaller. The main difference between the AK-74U and the AKS-74U is that most AK-74Us have been produced in 5.56mm NATO caliber, due to the late introduction of the weapon (late 1990s). It should be noted that the Bulgarian military refers to this weapon as a submachinegun instead of a "short assault rifle" or carbine.

In mid-2009, Arsenal's US facility began to manufacture and sell a civilian equivalent of the AK-74M1, called the SGL-31. It is essentially an AK-75M1 with semiautomatic fire-only capability. It is otherwise identical to the AK-74M1.

Twilight 2000 Notes: The 5.56mm NATO version was never produced in the Twilight 2000 timeline (since Bulgaria never had a chance to join NATO). Very few AK-74Us were produced, and most of these were built shortly before the start of the Twilight War. They are exclusively in 5.45mm caliber. The SGL-31 does not exist in the Twilight 2000 timeline.

Merc 2000 Notes: Bulgaria would probably also not joined NATO in the Merc 2000 world; however, the 5.56mm NATO versions were still produced as export products, though in smaller numbers. Arsenal USA does not exist in the Merc 2000 timeline, nor does the SGL-31.

Weapon	Ammunition	Weight	Magazines	Price
AK-74M1	5.45mm Kalashnikov	3.18 kg	30	$560
AKS-74M1	5.45mm Kalashnikov	3.18 kg	30	$580
AK-74M1	5.56mm NATO	3.18 kg	30	$610
AKS-74M1	5.56mm NATO	3.18 kg	30	$630
AK-74U	5.45mm Kalashnikov	2.7 kg	30	$498
AK-74U	5.56mm NATO	2.7 kg	30	$548

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AK-74M1 (5.45mm)	5	3	1-Nil	5	2	5	46
AKS-74M1 (5.45mm)	5	3	1-Nil	4/5	2	5	46
AK-74M1 (5.56mm)	5	3	1-Nil	5	2	5	41
AKS-74M1 (5.56mm)	5	3	1-Nil	4/5	2	5	41
AK-74U (5.45mm)	5	2	1-Nil	3/4	2	5	15
AK-74U (5.56mm)	5	2	1-Nil	3/4	2	5	13

Arsenal AR

Notes: This family of assault rifles is basically improved versions of the AK-74/AKM, a la the AK-100 series. They were designed with Bulgaria's inclusion into NATO in mind, and most are chambered exclusively in 5.56mm NATO. The basic rifle, the AR-M1, looks externally almost identical to the AK-100; internally, parts have closer tolerances and the receiver is milled using hot die forging. There is a mount for NATO or former Warsaw Pact night vision devices, optical sights, or laser aiming modules available, but this is not a standard feature. The AR-M1F is the same weapon with a folding wire stock. The AR-M2F is an abbreviated AR-M1F with a much shorter barrel and a muzzle brake to cut what would otherwise be high recoil and massive muzzle blast. The AR-SF is an even shorter-barreled version of the AR-M1F; it is designed for close assault situations and is basically an assault rifle cut down to submachinegun size, similar to the AKSU. An attachment point for a laser aiming module is an option, though not standard equipment.

The AR-M4SF is basically a tricked-out AR-SF. The AR-M4SF features a laser aiming module as standard equipment; also standard is a sleeve with a flashlight inside (near the muzzle). Both of these can be turned on without moving the shooter's hands from their places on the rifle. Unlike other folding-stock members of the AR family, the folding stock on the AR-M4SF is stronger, more substantial, and folds to the right instead of under the weapon. An attachment point for a night vision sight (NATO or former Warsaw Pact) is also included, though the device is not. A special sling is included which allows the AR-M4SF to be placed quickly into action, yet carried without interfering with other activities. The muzzle brake can be easily detached, allowing a silencer or suppressor to be attached instead.

The AR-M7F is basically an AR-M1 in which the plastic stock folds to the side instead of being fixed. Unlike the AR-M1, the AR-M7F also comes in a version chambered for 7.62mm Kalashnikov. A mount for night vision devices, optics, or laser aiming modules is standard on this model. The AR-M9 and AR-M9F are basically heavier versions of the AR-M1 and AR-M1F; they also have the mount for optics, night vision devices, and laser aiming modules standard instead of options. The stock on the AR-M9 is made of stronger plastic; the stock of the AR-M9F is also stronger and folds to the side instead of underneath (similar to that of the AR-M4SF). The magazines are transparent, and come in two sizes.

Twilight 2000 Notes: None of these rifles exist in the Twilight 2000 timeline.

Merc 2000 Notes: These rifles are unlikely to exist in Merc 2000, since in that timeline Bulgaria never joined NATO.

Weapon	Ammunition	Weight	Magazines	Price
AR-M1	5.56mm NATO	3.62 kg	30	$565
AR-M1	7.62mm Kalashnikov	3.62 kg	30	$812
AR-M1F	5.56mm NATO	3.67 kg	30	$585
AR-M1F	7.62mm Kalashnikov	3.67 kg	30	$832
AR-M2F	5.56mm NATO	3.55 kg	30	$576
AR-M2F	7.62mm Kalashnikov	3.5 kg	30	$835
AR-SF	5.56mm NATO	3 kg	30	$534
AR-SF	7.62mm Kalashnikov	3.38 kg	30	$771
AR-M4SF	5.56mm NATO	3.38 kg	30	$934
AR-M4SF	7.62mm Kalashnikov	3.38 kg	30	$793
AR-M7F	5.56mm NATO	3.84 kg	30	$585
AR-M7F	7.62mm Kalashnikov	3.84 kg	30	$832
AR-M9	5.56mm NATO	3.85 kg	20, 30	$565
AR-M9F	5.56mm NATO	3.85 kg	20, 30	$585

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AR-M1 (5.56mm)	5	3	1-Nil	6	2	6	40

AR-M1 (7.62mm)	5	4	2-Nil	6	4	9	46
AR-M1F (5.56mm)	5	3	1-Nil	4/6	2	6	40
AR-M1F (7.62mm)	5	4	2-Nil	5/6	4	9	46
AR-M2F (5.56mm)	5	2	1-Nil	3/5	2	4	27
AR-M2F (7.62mm)	5	3	2-Nil	4/5	3	7	31
AR-SF (5.56mm)	5	2	1-Nil	3/4	2	4	14
AR-SF (7.62mm)	5	3	2-Nil	3/5	2	5	16
AR-M4SF (5.56mm)	5	2	1-Nil	3/4	2	4	14
AR-M4SF (7.62mm)	5	3	2-Nil	3/5	2	5	16
AR-M7F (5.56mm)	5	3	1-Nil	4/6	2	6	41
AR-M7F (7.62mm)	5	4	2-Nil	5/6	3	8	46
AR-M9	5	3	1-Nil	6	2	6	41
AR-M9F	5	3	1-Nil	4/6	2	6	41

Arsenal Civilianzed AKs

The SAM-7F is a version of the AK designed for export sales, especially to the US. It is actually the latest civilian AK design from Arsenal; some 20 civilian designs have been made and exported since 2000, including in Arsenal's US facility. (The SAM-7F is actually manufactured in Las Vegas.) The SAM-7F basically follows the AR-M1 design, but cannot mount a bayonet and has a beefy but compact muzzle brake at the end of the 16.3-inch barrel. The barrel is also cold-hammer forged. The SAM-7R uses a milled receiver and receiver cover, but modern manufacturing methods have made this receiver much lighter than the milled receiver of the AK-47. It is still heavier than most export AK clones, and the barrel is also heavier. A milled receiver, however, is more rigid and robust than a stamped receiver. Due to the heavier barrel used, the handguards cannot be used on most AKs, export or service models. The stock, pistol grip, and handguards are polymer, and the handguards are ribbed for a better grip. The buttplate is also ribbed and made of rubber. Sights are the same as those of the AR-M1, which are basically standard AK sights. The SAM-7F-84 is virtually the same, but has a folding stock and comes in a variety of colors – desert sand, plum, OD green, and black.

The SAM-7R-66 was designed to have (at the time) features not found in imported rifles to America. The SAM-7R-66 receiver is milled from a hot die blank using a 5-ton press. The furniture is largely polymer, including the stock, which also has a trapdoor in the butt for a cleaning kit and batteries. A cleaning rod is also provided in the usual place up front. This, according to Arsenal, produces a better-quality and lighter receiver than a standard milled receiver. The handguards are equipped with a PR-01 Picatinny Quad-Rail. The entire rifle is designed to exceed Mil-Spec standards. The magazine provided with the rifle is a 10-round magazine, but the SAM-7R-66 can take any AK/RPK-type magazines. The 16.3-inch barrel is cold-hammer forged and is tipped with a compact muzzle brake.

The SLR-104-52 is called the "Krinkov," despite it's 16-inch barrel and lack of a muzzle device. This is perhaps due to it's short-stroke gas piston system and AK-74U-length handguards, but the long exposed barrel looks strange and makes the barrel susceptible to bending and warping due to heating. The SLR-104-52 has a side-folding full polymer stock and polymer furniture colored to look like dark wood, though it isn't. The handguards are ribbed for a better grip, though the pistol grip is of standard AK form and measurements. The lower handguard features a stainless steel heat shield. The sights are standard AK-74M1. It has a two-stage trigger and has a 16-inch cold-hammer forged barrel which has a chromed bore. Note that Arsenal's website says that the SLR-104-52 has a muzzle brake, but I have yet to see a picture of the SLR-104-52 where there is any sort of muzzle device mounted; I have therefore not included one in the stats below. The SLR-104-52 is equipped with the standard AK-type left-hand scope rail. The SLR-104-32 is essentially the same, but has standard-length handguards, a medium-stroke gas piston, and a 16.3-inch barrel tipped with a standard gas block and an AK-74M1-type muzzle brake. This rifle is also known as the SLR-104FR.

The SLR-107-31, also known as the SLR-107FR, is basically an AK built with modern features, construction, and manufacturing methods in Arsenal's facilities in Las Vegas, Nevada. It is basically a SAM-7-series rifle built to Mil-Spec standards and with a stamped receiver stamped in some placed to a width as little as 1 millimeter; it is the only component made in Bulgaria. The 16.25-inch barrel is cold-hammer forged and the bore is chrome-lined, and has an AK-74-type muzzle brake. (The muzzle brake is removable and other muzzle devices may be mounted except for a silencer.) It uses a two-stage trigger group, a right-folding polymer stock similar to the AK-100 series in shape, a polymer handguard, and polymer pistol grip; in addition, the magazines sold with the rifle are polymer. The SLR-107-31 can, however, take any AK/RPK-compatible magazine, except for Romanian and Yugoslavian magazines, which will not seat and lock properly in an SLR-107-31's magazine well. Other features include a stainless steel heat shield inside the handguards, sights taken from the AK-47M1, with a left-side sight rail and a Picatinny rail above the receiver. The stock has a trapdoor compartment for a cleaning kit and batteries, and the rifle also has a cleaning rod in the usual AK place. The SLR-107-31 has bayonet lugs. Finish is in black or Desert Sand. The SLR-107-34 has a folding skeletonized metal stock, but is identical to the SLR-107-31 for game purposes.

It should be noted that due to high-quality of Arsenal's civilian rifles and their generally reasonable price, there is (as of the time I write this in July 2017) a shortage of Arsenal civilian rifles in the US and other Western countries, and neither their Bulgarian nor their US facilities can keep up with the demand. Waiting lists are long, and dealer stocks are running out or have already run out.

Weapon	Ammunition	Weight	Magazines	Price
SAM-7F	7.62mm Kalashnikov	3.63 kg	10, 20, 30, 40, 75D	$860
SAM-7F-84	7.62mm Kalashnikov	3.63 kg	10, 20, 30, 40, 75D	$880

SAM-7R-66	7.62mm Kalashnikov	3.63 kg	10, 20, 30, 40, 75D	$857
SLR-104-52	5.45mm Kalashnikov	2.79 kg	10, 20, 30, 40, 90D	$530
SLR-104-32	5.45mm Kalashnikov	3.31 kg	10, 20, 30, 40, 90D	$583
SLR-107-31	7.62mm Kalashnikov	3.31 kg	5, 10, 20, 30, 40, 75D	$877

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
SAM-7F	SA	4	2-Nil	6	3	Nil	47
SAM-7F-84	SA	4	2-Nil	5/6	3	Nil	47
SAM-7R-66	SA	4	2-Nil	6	3	Nil	46
SLR-104-52	SA	3	1-Nil	4/5	3	Nil	45
SLR-104-32	SA	3	1-Nil	4/5	2	Nil	46
SLR-107-31	SA	4	2-Nil	5/6	3	Nil	46

Diemaco C-7

Notes: The C-7 started life as a license-produced version of the M-16A2; but the engineers at Diemaco (now called Colt Canada) tinkered with the base design, correcting many of the shortcomings of the M-16A2, such as sensitivity to dirt, and the problem that often occurs with case ejection on the M-16A2. They also managed to lighten it somewhat by using more modern materials that are also tougher, and the barrel is cold-forged to give it added strength and durability. The result is basically a product-improved M-16A2, and the Canadians began to issue it to their troops in 1984. In the late 1980s, the Danish and Dutch issued it to their troops, and it is rumored that the special operations units of several other European countries are also using the C-8A1 and C-8A2 versions of this rifle. Colt USA has also quietly incorporated most of the improvements into their production M-16-series rifles.

The basic C-7 is in fact a product-improved version of the basic M-16A2 and depending on the customer, may be had with a 3-round burst setting or a full-automatic fire setting. The C-7A2 is basically the Canadian equivalent of the M-16A3/A4, being a C-7 with the top of the receiver redesigned. In place of the carrying handle/rear sight combination, the C-7A1 has a raised rear sight and a MIL-STD-1913 rail to allow the mounting of a large variety of optics. The rear sight is removed and stored in the stock if some sort of optical or night sight is mounted. As an option, the MIL-STD-1913 rail may be removed and replaced with a Weaver or RARDE rail if older optics are going to be used. The C-7A1 is normally issued with a light optical sight made by Elcan; this is included in the cost listed below. Like the M-16A2, they have barrels which are 20 inches long.

The C-7A2 is the mid-life upgrade for the C-7 and C-7A1; it features a telescoping stock like that of the C-8. This stock also has a butt pad which acts as a shock absorber and an anti-slip device. The buffer was modified by replacing one of the steel weights in the buffer mass tube with a tungsten weight; this slight additional mass prevents light strikes on the bolt carrier group which might otherwise cause a misfire. The cyclic rate is somewhat reduced (but has no practical effect in game terms) to increase reliability, controllability, and wear and tear. The C-7A2 has an ambidextrous magazine catch, ambidextrous charging handle release, and ambidextrous selector lever.

The C-7CT (Custom Tactical) is meant for designated marksmen and other such “non-sniper” sharpshooters. The C-7CT is basically similar to other members of the C-7 series, but has numerous special features to suit its role. The barrel is heavy and target-quality (though still 20 inches in length), free-floated, cold hammer-forged, and equipped with a muzzle with threads allowing the C-7CT to use anything from target crowns to silencers. Atop the receiver is a MIL-STD-1913 rail, and atop the gas block is another small rail, allowing the C-7CT to use any sort of optics. The round aluminum handguards have a sling swivel as well as a light adjustable bipod mounted beneath the front of the handguard. The stock includes a handgrip on the bottom and also has a space to insert counterweights as necessary. The pistol grip is ergonomic with a hand stop/weight at the bottom. The trigger mechanism is replaced with a two-stage trigger that has no capability for automatic or burst fire.

Twilight 2000 Notes: In the Twilight 2000 world, supplies of the C-7 have probably been supplemented with older stocks of standard M-16A2 s and M-16A1s (both from Canada and the US), particularly among those troops called late in the Twilight War. This would be even truer among Dutch soldiers. Danish soldiers were supplied with the C-7 primarily for interoperability reasons while working in Bosnia and Kosovo, and would most likely never have been issued the C-7 in the Twilight 2000 world. This version of the C-7 would still appear, but would be lesser in number. Again, Danish troops would probably never have been issued the C-7A1. First appearing in 2003, the C-7A2 would not appear in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
C-7	5.56mm NATO	3.3 kg	20, 30	$609
C-7A1	5.56mm NATO	3.9 kg	20, 30	$759
C-7A2	5.56mm NATO	4.1 kg	20, 30	$787
C-7CT	5.56mm NATO	4.3 kg	20, 30	$1316

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
C-7	5 (3)	3	1-Nil	6	2	6 (4)	56
C-7A1	5 (3)	3	1-Nil	6	2	6 (3)	56
C-7A2	5 (3)	3	1-Nil	5/6	2	6 (3)	56
C-7CT	SA	3	1-Nil	6	2	Nil	59
With Bipod	SA	3	1-Nil	6	1	Nil	77

Diemaco C-8

Notes: This is the same thing to the C-7 that the M-4 Carbine is to the M-16A2: a shorter version of the C-7, with a collapsible stock and shorter 14.2-inch barrel and appropriate handguards. The Danish also bought a quantity of the C-8 and C-8A1. The Dutch Marines and Special Forces also use the C-8, but they use the C-8A1 version (which they call the M-96 Karbine). The Dutch have actually been using the C-8A1 for some time, but the Canadian military has not adopted it until recently. The British SAS is also known to make some use of the C-8A1; theirs are typically fitted with a Heckler & Koch AG-36 grenade launcher under the barrel. Like the C-7 series, most versions can be had with 3-round burst settings or full-automatic settings.

In the C-8A1, the carrying handle is replaced with a MIL-STD-1913 rail, and the standard sight is the same Elcan sight used by the C-7A1. The barrel used is heavier than that of the C-7 and C-7A1, but is still cold-forged. The C-8A2 is essentially a C-8A1, but it has an even heavier barrel to allow sustained automatic fire, and short 4-position MIL-STD-1913 rails are added to the handguard. Though a version of the C-8A2 is available with a 3-round burst setting, the Canadians use only the full-automatic version. It is

unknown whether any other countries are using the C-8A2. The C-8FTHB is a development of the C-8A2; it differs from the C-8A2 primarily in having an extra-heavy bull barrel and standard handguards.

The C-8CT is sort of a "marksman's carbine," equipped with a 15.75-inch extra-heavy barrel tipped by a target crown. The handguards are replaced with aluminum tube-type handguards that allow the barrel to float. The C-8CT does have a MIL-STD-1913 rail atop the receiver, but the rail is about twice as long as that of the other C-8 versions. The pistol grip is ergonomic with a hand stop/weight at the bottom. The modified sliding stock includes a space for counterweights, a recoil pad on the butt, and has generally heavier construction that is more adjustable in length; this stock is also adjustable for swivel, cant and height in addition to length. The C-8CT is equipped with a two-stage trigger mechanism. The C-8CT has a lightweight, adjustable bipod under the front of the handguard.

The C-8CQB (Close Quarters Battle) is designed for special operations forces and police SRT-type units for use in urban combat and house-to-house-type fighting. The barrel is abbreviated to 10 inches, and the muzzle is equipped with a Vortex muzzle brake to reduce recoil and muzzle flash. This muzzle brake may also be easily removed and replaced by either a silencer or suppressor if necessary. The weapon does have a MIL-STD-1913 rail atop the receiver, but the standard Elcan sight is replaced by an EOTech low-magnification optical sight which is much more useful in close-range combat. The extractor is also strengthened in concession to the lower gas pressures delivered by the shorter barrel.

The SFW (Special Forces Weapon) was designed at the behest of the British MoD for use by its special operations forces. British SOF units have long been dissatisfied by the L-85 series, including the L-85A2; they used the US-made M-16 series as well as the M-4 series, and later the C-7 and C-8 series, but were looking for a weapon more tailored for their special needs. They also didn't want to buy from any company that had been in bankruptcy within the past ten years, as Colt had been. The C-8SFW is basically a highly modified and tailored version of the C-8A1, with a 16.1-inch heavy barrel instead of the 14.5-inch heavy barrel of the C-8 series; this increases accuracy at long ranges without unduly increasing the length and bulk of the weapon. The forward sections of the handguards are equipped with MIL-STD-1913 rails (actually a KAC RAS system) which allow the use of a wide variety of accessories such as handgrips, flashlights, laser aiming modules, bipods, etc. The top of the receiver also has a MIL-STD-1913 rail for the mounting of optics; standard is the same Elcan sight used on the C-8A1 and C-7A1. Provision has also been made for the mounting of the HK AG-36 grenade launcher or the HK-79 grenade launcher. The iron sights were redesigned to give them more strength and stability. The C-8SFW is equipped with a sliding stock. The C-8SFW is capable of using virtually types of 5.56mm NATO ammunition, including armor-piercing types, heavy bullets, rubber bullets, etc.

Twilight 2000 Notes: The C-8 would still be in use, but in lesser numbers. The Danish would not have been issued the C-8A1, but the Canadians would have been, in even smaller number than the basic C-8. The C-8CQB is a very rare weapon virtually exclusive to Canadian special operations units. The C-8A2, C-8FTHB, C-8CT and C-8SFW do not exist in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
C-8	5.56mm NATO	2.67 kg	20, 30	$568
C-8A1	5.56mm NATO	2.77 kg	20, 30	$718
C-8A2	5.56mm NATO	2.77 kg	20, 30	$728
C-8FTHB	5.56mm NATO	2.8 kg	20, 30	$722
C-8CT	5.56mm NATO	4.2 kg	20, 30	$1197
C-8CQB	5.56mm NATO	2.63 kg	20, 30	$653
C-8SFW	5.56mm NATO	3.35 kg	20, 30	$745

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
C-8	5 (3)	3	1-Nil	4/5	3	7	34
C-8A1	5 (3)	3	1-Nil	4/5	3	7 (4)	34
C-8A2	5 (3)	3	1-Nil	4/5	3	7 (4)	34
C-8FTHB	5 (3)	3	1-Nil	4/5	3	7 (4)	35
C-8CT	SA	3	1-Nil	4/6	2	Nil	41
With Bipod	SA	3	1-Nil	4/6	1	Nil	54
C-8CQB	5	2	1-Nil	3/4	2	5	19
C-8SFW	5	3	1-Nil	4/6	2	6	41

Para-Ordnance TTR

Notes: The TTR (Tactical Target Rifle) is an AR variant that uses a unique variant of the Stoner direct gas impingement system. Called DIGS (Delayed-Impingement Gas System), it uses a lengthened gas block that slows the cycle time of the operation, keeping the rifle cleaner longer without the use of a piston. (I'm skeptical.) This is combined with the Manifold Injector System (MIS) which channels gasses through the bolt carrier and vents them out of the ejection port, which helps to keep the bolt carrier group itself cleaner. The TTR has a shortened carrier along with a recoil spring above the barrel, which means that the traditional buffer tube assembly is not necessary and that the TTR can have a traditional side-folding stock. The stock also slides, with five positions available. The lack of the normal buffer tube assembly also means that the TTR is somewhat quieter than a traditional AR, particularly in the shooter's ear; it also gives the TTR even more of a straight-line recoil, cutting barrel climb and making the aim of follow-up shots quicker (unfortunately, not measurable in *Twilight 2000 v2.2* terms). The 16.5-inch barrel is tipped by a Para-designed flash

suppressor which is slightly longer than a standard AR flash suppressor, and has longer slots. The upper receiver is topped with a MIL-STD-1913 rail which joins the upper rail of the handguards, and the sides and bottom of the handguards have shorter rails which are about one-third the length of the handguards and positioned at the front of them. Removable AR-type rear iron sights are included, though the rear sight is a bit more finely-adjustable than a standard AR sight. The front sight is a hooded post which is also removable and folds down. The handguards themselves are made of aluminum instead of polymer.

Weapon	Ammunition	Weight	Magazines	Price
TTR	5.56mm NATO	3.36 kg	10, 20, 30	$589

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
TTR	SA	3	1-Nil	4/6	2	Nil	42

COIC Type 63

Notes: At first thought to be a modification of the SKS, it now appears that the Type 63 is an original, though rather strange design. The Type 63 was designed in the early 1960s specifically to give the People's Militia forces a bit more firepower without having to make a lot more (and more expensive, in real-life terms at the time) Type 56 series assault rifles, and also to give them a design which was simple enough that they could make it themselves in backyard machine shops if necessary. The Type 63 is therefore a rather simple weapon with a rather crude appearance and questionable quality.

The Type 63 is semiautomatic and gas-operated; the gas system is simple, not quite like that of the SKS, and not quite like that of the Type 56 assault rifle; but not exactly a blend of the two, either. The Type 63 (as standard) is fed by 15-round steel magazines which are proprietary and will not fit into AK-series weapons despite having the same dimensions and holding the same ammunition. The magazines may also be topped off by loading them using stripper clips through the top of the receiver. The Type 63 has a knife-type bayonet which folds back underneath the barrel, and is otherwise permanently attached. Construction of the Type 63 is normally heavy (though there was considerable variation sometimes), with heavy steel metalwork and rather crude hardwood furniture. Sights normally consisted of a hooded front post and a tangent leaf adjustable rear. The 20.45-inch barrel's bore is almost always unchromed, as is the chamber. Though the Type 63 was not built with selective-fire capability, Chinese soldiers quickly found out that if you grind down the sear in just the right way, you can gain automatic fire capability in the Type 63. (The side effect of this modification is that the bolt catch no longer works.)

Though the Type 63 was meant to be fed only by that special 15-round box magazine, crafty militiamen quickly discovered that if the bolt catch is ground down, removed, or modified, the Type 63 can in fact accept AK and RPK-type magazines and drums.

The Type 68 is sort of an "AKM version" of the Type 63; it uses a stamped steel receiver, has a few other minor modifications, and is in general less crude in its construction. Many were in fact factory-built, and most actually have a plastic handguard. The Type 68 also has selective-fire capability designed into it. The Type 68 has an adjustable gas regulator with two positions, allowing the shooter to keep the weapon functioning when conditions do not allow him to clean the weapon often enough or when he has to fire lots of ammunition in a short period of time. The gas regulator does not eliminate the need for cleaning; it merely keeps the Type 68 going a bit longer.

The Type 73 updated the pattern further; the Type 73 can accept AK and RPK-type magazines and drums as standard.

Twilight 2000 World: As the Twilight War wore on, more and more of these weapons were modified to use AK magazines.

Weapon	Ammunition	Weight	Magazines	Price
Type 63	7.62mm Kalashnikov	3.49 kg	15 (Possibly More)	$839
Type 68	7.62mm Kalashnikov	3.26 kg	15 (Possibly More)	$839
Type 73	7.62mm Kalashnikov	3.26 kg	15, 30, 40, 75 Drum	$844

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Type 63	SA	4	2-3-Nil	7	4	Nil	62
Type 68	5	4	2-3-Nil	6	4	10	62
Type 73	5	4	2-3-Nil	6	4	10	62

Chiyou Group ZH-05

Notes: Now, after its military acceptance, the ZH-05 has been redesignated the QTS-11, and then the Type 11. Watching the "progress" the US was making on the XM-29, Chinese Arms Scientists wanted their own version, complete with airbursting ammunition and an attached assault rifle. Of course, the XM29 went bust, and the grenade launcher module went on to become the M25 Punisher, a weapon that was much lauded by special operations and the 101st Air Assault Division in Afghanistan, but was withdrawn from general issue citing some problems with the sighting module. (The US military intends eventually to re-introduce the M25 at some time in the future.) Meanwhile, the ROK made the grenade launcher/assault rifle work, and it is currently being issued to ROK troops and Marines. I say all this prelude because the ZH-05 is verry similar to the ROK K11, with some components of the XM29 and even some, like the sighting module, of the K11.

The grenade sighting system of ZH-05 is inferior to that of the M29 and K11. Both have a Thermal Viewer and a device that locks on to a target, with the grenade curving to compensate for shooter's error. The ZH-05 aiming module appears to be little more than a telescopic sight, with a 2x and 4x setting, with the sight able to allow for airbursting grenades, though the grenades have no guidance package. However, the Chinese have been experimenting with an electronic day/night sight, which increases the grenade's accuracy as well as the assault rifle's accuracy. This electronic sight can also transmit video of what it is seeing to the soldier, who wears a special eyepiece wirelessly connected to a digital camera in the 4x scope. This allows him to fire from under cover. (I have provisionally called this version the ZH-6.)

The ZH-05 is essentially a single-shot weapon; when the weapon is fired, the soldier must reload the chamber manually before he can fire it again.

The rifle is based on the QBZ-03, and firing the 5.8mm Chinese round.

The general opinion in the West is that the 20mm grenades are too weak, even in airburst mode. Much of their body is taken up with the guidance package, leaving less room than usual for a 20mm round for explosive filler or fragments. The assault rifle's barrel is a short 21.5 inches, while the grenade launcher barrel is above the rifle barrel is above the rifle barrel and set back, but it is a lengthy 26.4 inches long. Construction is primarily of CrMoV steel; the barrels, however are blued, and the stock is a metal plate

finished in black.

Weapon	Ammunition	Weight	Magazine	Price
ZH-05	20mm ZH-05 HV	5 kg	1 Internal	$680

Weapon	ROF	Round	SS	Burst	Range	IFR
ZH-05	1	HVCC	1x20	3	170	Nil
	1	HVHE	C1 B6	3	200	1950
	1	HVHEDP	C1 B6	3	200	1950
	1	Airburst HE	C1 B6	3	220	1970

Weapon	Ammunition	Weight	Magazines	Price
ZH-05	5.8mm Chinese	5	5, 10, 20, 30	$1480
ZH-06	5.8mm Chinese	5	5, 10, 20, 30	$3930

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
ZH-05	5	3	1-Nil	6	2	5	65
ZH-06	5	3	1-Nil	6	2	5	65

Norinco CQ

Notes: Sometimes called the Type CQ, M-311, or Type 311, this is a rather crude Chinese copy of the M-16A1. It differs from that rifle only in minor details, such as the handguards and the more rounded appearance of the furniture of the weapon. This weapon has been seen in the hands of Muhajedin fighters in Afghanistan (though virtually all of them seem to have disappeared by the time of the December 2002 US invasion), but appears to have been initially designed for export to western nations. However, the CQ's largest customer to date has been Iran, who have issued it to some of their troops and have also used it as the base for their two new assault rifles.

The CQ-A is a copy of the M-4A1 carbine, again rumored to be manufactured without a license. The planform is virtually identical to a "real" M-4A1, and quality is said to be much better than that of the CQ rifle. The rifling twist is such that is can stabilize both M-193 and SS-109 cartridges. It can accept handguards with MIL-STD-1913 rails, and one is atop the carbine, with a carrying handle attached to it. With or without the rails, the CQ-A can accept several underbarrel grenade launchers (the Paraguayans use a Chinese copy of the M-203). The CQ-A is known to be used by the DECEI special ops unit of the Paraguayan Army.

The Chinese have been selling this rifle on the international civilian and police market; their real-life price is less than a comparable AR-15A1 or A2. This version is known as the CQ 311-1 or CQ M-311-1. Importation of the CQ 311-1 into the US has been prohibited since 1989; however, the US company of DPMS Panther Arms manufactures them for sale in Europe, sold through the Italian company of Nuova Jager. A semiautomatic version of the CQ-A is also sold by Norinco, and it too cannot be imported into the US.

Twilight 2000 Notes: In addition to an occasional sighting in Afghanistan, the CQ was often seen in the hands of North Korean infiltrators, as well as being used by Thai troops.

Merc 2000 Notes: In a weapons market glutted by real M-16s, the CQ is mostly a curiosity rather than a commonly-seen weapon.

Weapon	Ammunition	Weight	Magazines	Price
CQ	5.56mm NATO	3.2 kg	20, 30	$605
CQ-A	5.56mm NATO	2.52 kg	10, 20, 30	$571

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
CQ	5	3	1-Nil	6	3	7	55
CQ-A	5	3	1-Nil	4/5	3	7	34

Norinco QBZ-03 (Type 03)

Notes: For reasons that the Chinese have yet to state, Chinese troops are apparently less than happy with the QBZ-95. For this reason, a new rifle has been developed, the QBZ-03. It still fires the 5.8mm Chinese round, but has a more conventional layout instead of being a bullpup like the QBZ-95; in fact, it looks very much like the earlier Type 87. The QBZ-03 is not yet in widespread issue and is still regarded as being in the advanced testing phases by the Chinese, and it is not yet known whether it will replace or supplement the QBZ-95.

The operation of the QBZ-03 appears to be based upon that of the Type 81, somewhat updated for reliability and appropriately modified for the 5.8mm cartridge. The gas block has a 2-position gas regulator; one position is for normal use, and the other is a gas cutoff for use with non-bullet trap rifle grenades. The selector allows only for semiautomatic or automatic fire, but the cyclic rate is low enough (650 RPM) that short bursts can be squeezed off with practice. Unlike the Type 81, the QBZ-03 has a two-piece receiver, with push pins allowing it to be opened and field-stripped. Construction of the metalwork is largely of stamped steel, with the stock, pistol grip and handguards being made of polymer. The skeletonized stock is hinged and folds to the right. The rear sight is a flip type adjustable for windage and elevation and is protected; the front sight is a simple hooded post. Forward of the rear sight is a short proprietary rail which will accept any optic the Chinese use, as well as several other Eastern and Western types.

QTS-11 Integrated Combat System

Though reported by the West as early as 2012 and incorrectly designated by the West the ZH-05 at that time, the QTS-11 did not come into issue to PLA special operations units until late 2017 (at first, only the Sky Wolf Commando Team). It has since been issued to PLAN Marines, who were the first to use it in combat – in an anti-piracy operation in the South China Sea. It is intended in the future to be issues to more PLA and PLAN special operations units, and perhaps in the early 2020s, to some PLA regular force units.

In concept, the QTS-11 in similar to weapons like the US OICW and the South Korean K-11. However, it instead uses the QBZ-03 assault rifle as a base, with the addition of several Picatinny and specialist equipment rails, and other modifications such as a compartment inside the pistol grip (usually for batteries), and compartments in the stock for batteries and other components of the QTS-11 system. Above the barrel, in a modified handguard, is a 20mm airburst-capable medium-velocity grenade launcher. The grenade launcher is single shot, with a round being loaded before each shot; The PLA felt that this would make the launcher more versatile as the specific type of round needed could be loaded for each engagement. (PLA special ops troops and Marines reportedly don't agree,) The lack of a magazine also makes the system lighter. Grenades were designed for this launcher and come in five types, all of which are programmable via the electronic sight's optics.

The electronic sight is mounted above the rifle on another Picatinny Rail, and programs the round via radio for range, airburst height or direct fire, type of round, and type of protection for the target and whether they are moving. The electronic module also has a feature that allows the user to look and shoot by pointing his rifle/grenade launcher around a corner or cover and remaining under cover; this is done with a small monocular which clips to his helmet and is connected to the electronic sight via a fiberoptic cable about 400 centimeters long. One short equipment rail has a laser rangefinder attached to it; this may be used with the grenade launcher or assault rifle. The sight also includes an HD CCD day/night camera. If desired, the user can turn off his electronic sight and fire by eyeball, though this does not allow for use of the laser rangefinder and airbursting mode of munitions.

The assault rifle component of the QTS-11 is essentially identical to the QBZ-03, except for the modified handguards and a "step" above the receiver due to the inclusion of the grenade launcher. The launcher feeds at the rear the receiver on the left side, using a bolt-action mechanism. The barrel is 12.2 inches long and runs above the rifle's receiver and part of the barrel. The finish of most of the system is matte black, though the grenade launcher, barrel of the assault rifle, most of the internal parts, and parts of the electronic sight are matte silver.

The Chinese appear to be learning what the US learned with the OICW – a 20mm grenade does not pack enough punch, with a 25mm grenade performing much better. The US also learned that a full OICW is simply heavy, unwieldly, and bulky, which part of the PLA's reasoning for a 20mm grenade and single-shot launcher. Then again, electronics and technology in general have improved, and the new Chinese 20mm grenades do seem to pack more punch than their OICW counterparts, and the Electronic sight is also much lighter and in some ways more capable. Though the electronic sight has a 2x and 5l for magnification, this is of limited help at light (it does have a small degree of NV image intensification at the 5x level), it does not have an actual NV channel. Only time will tell.

The bonuses for the sight apply to both the rifle and grenade launcher. On 2x magnification, the visual angle is 45 degrees, and functions as an optical sight in Twilight 2000 2.2 rules. The 5x sight functions as a telescopic sight, but has a visual angle of only 7 degrees.

Twilight 2000 Notes: QBZ-03 does not exist in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
QBZ-03	5.8mm Chinese	3.5 kg	30	$591

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
QBZ-03	5	3	1-Nil	4/6	2	6	64

Weapon	Ammunition	Weight	Magazines	Price
QTS-11 Assault Rifle (w/GLM)	5.8mm Chinese	7 kg	30	$3258

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
QTS-11 Assault Rifle	5	3	1-Nil	7	2	4	64

Weapon	Ammunition	Weight	Magazine	Price
QTS-11 GLM	20mm Chinese Medium Velocity	2.5 kg	1 Internal	$660

Weapon	ROF	Round	SS	Burst	Range	IFR
QTS-11 GLM	SS	Airburst	1	Nil	140	830
	SS	Antipersonnel	1	Nil	90	Nil
	SS	Armor Piercing	1	Nil	140	830
	SS	Impact Detonation	1	Nil	140	830

	SS	Improved Fragmentation	1	Nil	140	830

Norinco QBZ-95 (Type 95)

Notes: This is a new Chinese weapon, based on a new round (5.8x42mm Chinese). This bullpup design was seen in 1996 during the turnover of Hong Kong to the Chinese PLA. Since then, it has been the subject of much conjecture from military and firearm sources. It has rarely been seen outside of China, and is believed to be currently under testing for adoption into the mainstay of the Chinese Peoples' Liberation Army. It is known that the weapon is quite capable of mounting the US-manufactured M-203 grenade launcher, leading to speculation that China is also developing a copy of that design. It is also reported that the QBZ-95 is capable of firing rifle grenades as well. The QBZ-95 is part of a family of weapons that include an assault rifle, a carbine, a squad automatic weapon, and a sniper rifle. As of 2002, the QBZ-95 is usually only seen in the hands of Chinese troops in Hong Kong, or special operations troops. The QBZ-97 is the same weapon chambered for 5.56mm NATO ammunition; there have been no large-scale sales of the weapon, though Thailand is supposedly very interested, and Burma/Myanmar has bought small numbers of them. The QBZ-95 uses an 18.2-inch barrel; both the QBZ-95 and QBZ-97 Carbines have a 14.5-inch barrel. The QBZ-97 has a 19.3-inch barrel.

Recently, Norinco has begun marketing the QBZ-97A version of the original QBZ-97, though this version has found no takers as of yet. The QBZ-97A has a bolt hold-open feature (something lacking on other versions), and uses a 3-round burst mode instead of having a full auto mode.

Twilight 2000 Notes: The QBZ-95 is an extremely rare weapon; it is seen only in the hands of a very few Chinese special operations forces. The QBZ-97 does not exist in the Twilight 2000 world.

Merc 2000 Notes: Though rarer than it is in the Notes, the QBZ-95 and QBZ-97 both exist, again mostly in the hands of special ops troops. (It is simply cheaper to keep build and maintain parts for more traditional weapons than a novel new weapon with proprietary ammunition.) The Thais are using a surprising amount of QBZ-97s, and the Filipinos are also using them in small numbers. The Myanmars did not have the money to replace most of their stocks of existing weapons.

Weapon	Ammunition	Weight	Magazines	Price
QBZ-95 Assault Rifle	5.8mm Chinese	3.4 kg	30	$559
QBZ-97 Assault Rifle	5.56mm NATO	3.35 kg	30	$579
QBZ-95 Carbine	5.8mm Chinese	2.86 kg	30	$520
QBZ-97 Carbine	5.56mm NATO	3.15 kg	30	$529
QBZ-97A	5.56mm NATO	3.35 kg	30	$579

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
QBZ-95 Assault Rifle	5	3	1-Nil	5	3	6	47
QBZ-97 Assault Rifle	5	3	1-Nil	5	3	6	47
QBZ-95 Carbine	5	3	1-Nil	4	3	6	35
QBZ-97 Carbine	5	3	1-Nil	4	3	6	32
QBZ-97A Assault Rifle	3	3	1-Nil	5	3	4	47

Norinco Type 56

Notes: The Type 56 is essentially the Chinese equivalent of the AK-47, modified to suit local manufacturing methods, with slightly looser tolerances for its parts (mostly from being built sometimes in crude shops early in its Chinese manufacturing history), and designed to work with parts made from a lesser quality of steel (again, only at first). The original versions of the Type 56 were essentially almost exact copies of the AK-47, but with a permanently-mounted spike-type bayonet which folds under the barrel, instead of the cleaning rod normally carried under the barrel of the AK-47. Later versions were built with better manufacturing methods and were even closer copies of the AKM, though they still had the folding bayonet instead of the cleaning rod. (These versions were still referred to by the Chinese as "Type 56," though the West sometimes called them "Type 56-1," and that is how I will refer to it to avoid confusion.) The furniture of both was always rather poor-quality wood; a version referred to in the West as "Type 56-2" is the Chinese equivalent of the AKMS, with a folding metal stock what folds sideways instead of under the weapon as does the folding stock of the AKMS. (Some Type 56-2s built in the late-1970s have a folding stock similar to that of the Belgian FNC, however.) A short version was also designed in the late 1980s, known as the Type 56C; what the West referred to as the "Type 56C" used a plastic stock and fore-end and a wooden pistol grip, while what the West referred to as the "Type 56C-1" has the same folding stock as the Type 56-2 (though not the FNC-type folding stock of later Type 56-2s). Both have a much shorter 13.65-inch barrel (as opposed to the 16.3-inch barrel of a standard Type 56), tipped with a small muzzle brake. A version designed only for semiautomatic fire and normally sold only on the export market (most commonly in the US) are sometimes called the "Type 56-5." And just to add even more to the confusion, the entire series (particularly those built after 1973) are called by some the "M-22," due to some of the markings on the weapons. Beginning in the mid-1980s, the Chinese also began flooding the world civilian market with a semiautomatic version of the Type 56-2, called the Type 56S by the Chinese (and about a zillion different names in the different countries to which it is exported); this version is available with the folding stock of the Type 56-2 or the wood stock of the Type 56, and can also be found with a plethora of Chinese-made and aftermarket modifications. The Type 56S has, especially in the US, become the scourge of police forces, since it is cheap, easily found both on the black market and legally, and is easily converted to automatic fire.

Though quality got better over the years, the Type 56 was always worse than the AK-47/AKM. In particular, chroming of the bore and chamber was nonexistent in early manufacture and often poorly-applied later on, leading to rapid corrosion. The gas system was

also often poorly-built, leading to quick fouling. Albanian examples are usually better than Chinese ones, though those made in Vietnam during the Vietnam War were even worse than Chinese-built ones. The only other license-producer is Bangladesh.

The Type 56 Assault Rifle series is no longer used by regular Chinese forces, though they have been kept for reserve forces. In addition, they are some of the most commonly found variants of the AK series in the world, and can be found in almost any country. Albania still manufactures the Type 56, though they call theirs the AK-47. The Type 56C saw almost no use by Chinese troops, because it was designed in the late 1980s largely for export. None of these rifles should be confused with the Chinese version of the SKS, which the Chinese called the Type 56 Carbine.

For many Chinese troops and export customers, the AKM/Type 56 has a great deal of muscle memory behind it, given its 51 years of use by the Chinese. However, many export customers want a modernized AK, but firing a more up-to-date round like the 5,56mm NATO. To this end, Norinco developed the Type 06, which is essentially a Type 56 which has been modernized and manufactured without most of the lumpish features and poor manufacturing methods of the Type 57 construction. The Type 06 uses largely light alloy in its receiver and polymer in its handguards and pistol grip and buttplate (coated with rubber in this case). It is an altogether better version of the Type 56. So far, no country's military has bought the Type 06, and Chinese troops are simply conducting small scale tests of it. One of the big differences between the Type 56 is the 20-inch barrel of the Type 06.

Weapon	Ammunition	Weight	Magazines	Price
Type 56	7.62mm Kalashnikov	3.8 kg	30	$797
Type 56-1	7.62mm Kalashnikov	3.3 kg	30	$797
Type 56-2	7.62mm Kalashnikov	3.3 kg	30	$822
Type 56C	7.62mm Kalashnikov	3.5 kg	30	$825
Type 56C-1	7.62mm Kalashnikov	3.5 kg	30	$845
Type 06	5.56mm NATO	4.03 kg	10, 20, 30	$597

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Type 56	5	4	2-Nil	6	3	9	46
Type 56-1	5	4	2-Nil	6	3	9	46
Type 56-2	5	4	2-Nil	4/6	3	9	46
Type 56C	5	3	2-Nil	5	3	7	35
Type 56C-1	5	3	2-Nil	4/5	3	7	35
Type 06	5	3	1-Nil	6	2	6	55

Norinco Type 81

Notes: The Type 81 was originally designed specifically for export, but was later produced in large numbers to become the Chinese Army's primary assault rifle, replacing their aging Type 56 assault rifles. Though appearing to be a modification and modernization of the Type 56-1, the Type 81 in fact bears a closer relationship to the Type 63 series of rifles.

The gas operating system is essentially an updated version of that used in the Type 73 above; however, a cover now protects the formerly open part of the rear of the operating mechanism. The fire selector switch is on most of the Type 81 series on the left side of the receiver above the pistol grip, though the late production Type 81S also has a secondary safety in the same place as the safety would be found on the SKS, just behind the trigger; this automatically disengages when the trigger is pulled back fully and prevents the Type 81S from being accidentally fired if dropped or bumped. Very early production Type 81s could not accept the AKM/AK-47 magazines of any other country, due to a radically different feed mechanism; however this was corrected early in production and most Type 81s can Kalashnikov-type magazines and drums of virtually any origin, as well as the 15-round magazines of the Type 63 series. Very early production models also had a three-round burst mechanism in addition to a full automatic setting, but this was also quickly deleted. The sights are standard Type 56-type sights, though modified for use with the longer barrel. The Type 81 uses high-impact plastic furniture and steel construction, and has a mount for a knife-type detachable bayonet. The 17.52-inch barrel is tipped by a flash suppressor which is of the right size for the launching of Chinese, Russian, former Warsaw Pact, or Pakistani rifle grenades. The Type 81-1 is a Type 81 with a folding plastic stock instead of a fixed one. Note that for game purposes, the Type 81, Type 81-1, Type 81S, and Type 81S-1 are identical.

Twilight 2000 Notes: The Type 81 was not initially intended to replace the Type 56, but as millions of troops were raised to fight off the Russian invasion, most Type 81 production was diverted to native Chinese use. It is still not nearly as prevalent as the Type 56 series.

Merc 2000 story: In addition to Chinese use, the Type 81 has been sold in most corners of the world, usually in small lots. The two large foreign sales has been to Thailand and North Korea.

Weapon	Ammunition	Weight	Magazines	Price
Type 81 (Early Production)	7.62mm Kalashnikov	3.5 kg	15, 30, 40, 75 Drum	$1128
Type 81	7.62mm Kalashnikov	3.4 kg	15, 30, 40, 75 Drum	$825
Type 81-1	7.62mm Kalashnikov	3.5 kg	15, 30, 40, 75 Drum	$845

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range

Type 81 (Early)	3/5	4	2-Nil	6	4	5/9	51
Type 81	5	4	2-Nil	6	4	9	51
Type 81-1	5	4	2-Nil	5/6	4	9	51

Norinco Type 87

Notes: After the introduction of smaller-caliber rifles by the US, NATO, and then the Soviet Union and some of her satellite states, the Chinese began research into their own version of a small-caliber-firing military rifle. They were, however not totally convinced as to the effectiveness of the small-caliber military cartridge concept, and not impressed by either the 5.56mm NATO or 5.45mm Kalashnikov cartridges. The Chinese there decided to develop their own small-caliber military cartridge, eventually resulting in the 5.8mm Chinese cartridge.

However, the QBZ-95 series was not the first weapon to be chambered for the new round; before the QBZ-95, there was the Type 87. The initial Type 87 was essentially a Type 81 with just enough modifications to enable it to fire the 5.8mm Chinese cartridge. In addition, the Type 87 was built only in a folding stock version, but not the same type of folding stock as the Type 81. In addition, the muzzle of the Type 87 has a different flash suppressor.

The Type 87 underwent extensive manufacturer and military evaluation; in addition, it also underwent limited field training with Chinese troops. Its reliability was found wanting; this is most likely because the gas system was not modified sufficiently to handle the new cartridge. It was also considered to be too heavy for a small-caliber-firing military rifle (especially since the Type 87 was *supposed* to have been much lighter than the Type 81). The Type 87 was therefore quickly withdrawn, without achieving any sort of operational status.

In the late 1980s, the Chinese were still working on the Type 87 and had made a number of improvements to the rifle. These improvements let to the Type 87A. It was a much lighter rifle due to the extensive use of high-impact plastics and light alloys, and with a modified gas system, it was also much more reliable. A small production run of Type 87A rifles was ordered by the PLA – about enough to equip one battalion of Chinese Airborne troops, who conducted the field tests. Though reportedly quite pleased with the Type 87A, they were trumped by higher command – the PLA brass didn't feel that the Type 87A was enough of a technological advance over the Type 81. The Type 87A was therefore withdrawn from service, and again never reached any sort of operational status. The ultimate fate of the small production run of Type 87As actually built is unknown, but much of the technology and lessons learned from the Type 87 and Type 87A later went into developing the QBZ-95 and improving the 5.8mm Chinese cartridge.

Weapon	Ammunition	Weight	Magazines	Price
Type 87	5.8mm Chinese	3.95 kg	30	$598
Type 87A	5.8mm Chinese	3.33 kg	30	$600

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Type 87	5	3	1-Nil	5/6	2	6	53
Type 87A	5	3	1-Nil	5/6	2	6	53

HS VHS

Notes: In the process of being adopted for Croatia's elite units, the VHS is a bullpup assault rifle based to an extent on Heckler & Koch's G-36, though it looks more reminiscent of the French FA-MAS, especially in its large carrying handle/sights and the bulbous butt. (This similarity in appearance, however, is merely coincidental.) The internal operation in particular, seems to be highly derivative of the G-36's operation, though it is simplified, and it uses a direct gas impingement system which is novel. The gas system is used to partially keep recoil down; patented by HS, it uses some of the vented gas as a sort of pneumatic buffer to cushion the bolt during its rearward travel, allowing the bolt to softly strike the rear of the action instead of making hard contact. The same gas, now compressed, pushes the bolt back to return it forward. A conventional recoil spring or hydraulic or mass buffer is therefore not needed. Though never used in small arms, this system was used on the Russian Afanasev-Makarov 23mm aircraft autocannon in the early 1950s. External furniture of the VHS is a polymer shell; the VHS uses standard military and commercial 5.56mm/.223 magazines. The VHS comes in two versions: The standard VHS-D assault rifle uses a barrel of 19.7 inches, and the VHS-K carbine has a 15.7-inch barrel. The charging handle is more of s charging slide, and is located above the receiver under the carrying handle. As with the APS-95, the VHS-D can use BTU rifle grenades of NATO or Israeli origin, though the barrel of the VHS-K is too short to allow this. The VHS-D can use the same add-on bipod designed for the APS-95, though again the barrel of the VHS-K is too short to allow this.

The VHS is being considered by HS for possible release in a civilian version, though it is still too early to tell whether this will take place.

Twilight 2000 Notes: The VHS does not appear in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
VHS-D	5.56mm NATO	2.99 kg	10, 20, 30	$582
VHS-K	5.56mm NATO	2.86 kg	10, 20, 30	$541

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
VHS-D	5	3	1-Nil	5	3	7	49
VHS-K	5	3	1-Nil	4	3	6	35

RH-Alan APS-95

Notes: The APS-95 was designed shortly after the breakup of the former Yugoslavia, and first issue began in 1995. Though a very small amount were used in the various post-breakup conflicts between Croatia and Serbia, but these were largely over by 1995 and therefore the APS-95 has actually seen little real battle use. Nonetheless, the APS-95 appears to have acquitted itself quite well (perhaps because of its ancestry), and is well-liked by Croatian troops. Unfortunately, adoption of the APS-95 has been very slow due to financial restrictions, but the Croatian military expects it to eventually become its standard assault rifle.

Despite looking unrecognizably different, the APS-95 is a heavily redesigned version of a licensed Israeli Galil AR or South African R-4 (the story is still not clear). It is nonetheless the cousin of one of those weapons, with basically the same operation and internal guts, along with the inherent reliability of those weapons. One of the things that makes the APS-95 an unrecognizable cousin is that the APS-95's shape is essentially nothing like the Galil or R-4; it is far more streamlined in appearance. The standard magazine issues with the APS-95 is a synthetic or light alloy 35-round box, but the APS-95 can also use magazines designed for the Galil or R-4. The APS-95 has a large carrying handle atop the receiver; this also contains the primary sight, which has 1.5x magnification and a mil-dot-type aiming reticule. Backup iron sights are also available, of course. Construction of the metalwork is partially steel and partially light alloy, with a plastic M-16A2-style pistol grip and a synthetic handguard. The skeletonized stock folds to the right and is steel covered with a plastic coating, along with a buttplate with a thin rubber butt. The 17.72-inch barrel is tipped with a Galil/R-4-type flash suppressor. A bipod is not standard issue with the APS-95, but it can use a bipod which has been specifically-designed for the APS-95, and it can also use US, NATO, Israeli, or South African-designed clip-on scissors bipods. (They are not included in the cost below.) The muzzle may use BTU rifle grenades of NATO or Israeli origin; standard former pact, Russian, or former Yugoslavian rifle grenades may also be used, but a ballistite cartridge must be used, and a gas cutoff valve must be switched.

Twilight 2000 Notes: The APS-95 is extremely rare in the Twilight 2000 timeline, with perhaps 40 examples being produced, and almost all of them being used by special troops. These were primarily built in the short interval between the beginning of the fragmentation of Yugoslavia near the start of the Twilight War and its overrun by both Warsaw Pact and NATO forces.

Merc 2000 Notes: This would eventually, by 2005, become the standard weapon of Croatian armed forces. It is also quite popular among mercenary forces and other troops who are trying to hide their national ties (as are many weapons from the former Yugoslavian republics. There are even rumors of some members of the Iraqi Republican Guard being armed with the APS-95.

Weapon	Ammunition	Weight	Magazines	Price
APS-95	5.56mm NATO	3.8 kg	12, 20, 35, 50	$752

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
APS-95	5	3	1-Nil	4/6	2	6	46

CZ-2000

Notes: The CZ-2000 is a Czech assault designed to replace older Czech and Slovakian assault rifles in the wake of those two countries joining NATO and needing an assault rifle that matched the standard NATO assault rifle cartridge (5.56mm NATO). Attention was also paid to export sales, and versions of the CZ-2000 were also developed to fire the 5.45mm Kalashnikov cartridge. Though it appears to be just another cousin of the AK, the CZ-2000 is internally more similar to the VZ-58 and FNC than the AK. The 5.45mm Kalashnikov version did not prove to be popular, and no CZ-2000s were built in that caliber after 1999 except for special orders. Both versions of the rifle can use the 75-round drums used by the CZ-2000 squad automatic weapon (see Czech automatic rifles), and the 5.56mm NATO version can use M-16 magazines. The 5.45mm Kalashnikov version may use AK-74 magazines. The bipod from the CZ-2000 SAW may also be attached to the CZ-2000 rifle, and the CZ-2000 also readily accepts a variety of optical sights and laser sights. The CZ-2000 Short Assault Rifle is basically the same idea as the M-4 Carbine or AKS-74U, being a short-barreled model of the basic CZ-2000. While it appears almost certain that the CZ-2000 will eventually replace the VZ-58 as the Czech Republic's standard assault rifle, the production of the CZ-2000 family has been snail-slow due to the economic problems that have beset most of Eastern Europe after the fall of the Iron Curtain.

Twilight 2000 Notes: Czechoslovakian special forces operating deep behind NATO lines began using the CZ-2000 so that they could utilize captured enemy ammunition, and regular Czech forces began using the 5.45mm Kalashnikov version in limited numbers in 1997 to supplement their AK-74 rifles. Neither version is very common, but the 5.45mm Kalashnikov model was made in larger numbers.

Merc 2000 Notes: Without the Czech and Slovakian introduction into NATO, and the worsening economic climate, the impetus for the design of this weapon was greatly reduced. Any CZ-2000s found in action are rare indeed, and probably means your enemy's sponsor has some money and an eye for novelties; beware of what he might also have issued his troops!

Weapon	Ammunition	Weight	Magazines	Price
CZ-2000	5.56mm NATO	3 kg	20, 30, 75	$757
CZ-2000	5.45mm Kalashnikov	3 kg	30, 40, 45, 60, 75	$681
CZ-2000 Short Assault Rifle	5.56mm NATO	2.6 kg	20, 30, 75	$677
CZ-2000 Short Assault Rifle	5.45 Kalashnikov	2.6 kg	30, 40, 45, 60, 75	$601

Weapon	ROF	Damage	Pen	Bulk	Mag	SS	Burst	Range
CZ-2000 (5.56mm NATO)	3/5	3	1-Nil	4/5	20, 30, 75	3	4/6	36
CZ-2000 (5.45mm Kalashnikov)	3/5	2	1-Nil	4/5	30, 40, 45, 60, 75	3	4/6	40
CZ-2000 Short Assault Rifle (5.56mm NATO)	3/5	2	1-Nil	3/4	20, 30, 75	3	4/6	10
CZ-2000 Short Assault Rifle (5.45mm NATO)	3/5	2	1-Nil	3/4	30, 40, 45, 60, 75	3	4/6	12

CZ-805 Bren

Notes: CZ's entry into the SBR NATO-Calibered market, both police, and military, the only connection between the Bren LMG and the Bren A2 is the name. It is currently designed to allow easy switches between 5.56mm NATO and 7.62mm Kalashnikov; other calibers are up for the future. One removes the barrel/piston system and the bolt-face. Standard M-16/AR-15 and AK/RPK magazines can be used. Atop the rifle is a monolithic MIL-STD-1913 rail. The rails extend down the handguards on the sides and bottom of the handguard. Barrels are the A1's 11-inch barrel and the A2's 14-inch barrel. The action is piston-driven gas; the gas system is user-adjustable allowing rifle grenades or blanks to be fired. The stock is sliding, with a recoil pad on the butt. Currently, only police (semiautomatic, mostly), and military concerns are the only ones who can buy the CZ-805.

Weapon	Ammunition	Weight	Magazines	Price
CZ-805 Bren A1	5.56mm NATO	3.41 kg	5, 10, 20, 30	$534
CZ-805 Bren A2	5.56mm NATO	3.49 kg	5, 10, 20, 30	$564
CZ-805 Bren A1	7.62mm Kalashnikov	4.1 kg	5, 10, 20, 30, 40	$781
CZ-805 Bren A2	7.62mm Kalashnikov	4.2 kg	5, 10, 20, 30, 40	$829

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
CZ-805 Bren A1 (5.56mm)	5	2	1-Nil	3/5	2	6	22
CZ-805 Bren A2 (5.56mm)	5	3	1-Nil	4/5	2	6	32
CZ-805 Bren A1 (7.62mm)	5	3	2-Nil	4/5	2	6	25
CZ-805 Bren A2 (7.62mm)	5	3	2-Nil	5/6	3	8	43

VZ-52

Notes: The VZ-52 managed to get developed in that short time between the end of World War 2 and the beginning of Soviet occupation of Czechoslovakia. The operation is adapted from the Nazi MKb42(W), with the tilting bolt design of the Swedish AG-42, and the trigger owes much to the M-1 Garand rifle. The bolt locking system seems to be one that works only on this rifle; other attempts to use the same system have been unsatisfactory. The magazine can be clip-loaded while still in the weapon. The 20.47-inch barrel has no flash suppressor, but a muzzle cap can be removed, revealing threads that are used to attach a blank-firing adapter. The VZ-52 was not made in large numbers, but many that were built were later converted to fire the standard Soviet 7.62mm

Kalashnikov cartridge, and these were called the VZ-52/57. Some 7.62mm Czech versions did make it into combat – in Cuba, during Castro's revolution, and later in Vietnam, Angola, Nicaragua, and some countries in Africa; most of these uses were in small numbers, and always with irregular forces. The Czech Presidential Guard (primarily a ceremonial unit) still uses the VZ-52/57, since it's length and form make it easier to conduct drill movements with; some other Czech honor guard-type units also use them. (Czech Presidential Guard versions can produce can be identified because the stocks are of brown plastic, the external metal parts are chrome-plated, and the bayonet is 6.5 centimeters longer. Both versions have a permanently-attached side-folding sword bayonet.

Weapon	Ammunition	Weight	Magazines	Price
VZ-52	7.62mm Czech	4.08 kg	10	$927
VZ-52/57	7.62mm Kalashnikov	4.08 kg	10	$844

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
VZ-52	SA	4	2-3-Nil	6	4	Nil	64
VZ-52/57	SA	4	2-3-Nil	6	4	Nil	62

VZ-58

Notes: Though externally, the VZ-58 appears to be just another AK-47/AKM clone, the VZ-58 is internally a very different weapon from the AK. Though it too is gas-operated, the operating system is very different, and apart from the magazines, almost no VZ-58 parts are interchangeable with AK parts. In addition, the VZ-58 is a more robust design than the AK-47, and at the time of its introduction, was about 10 years ahead of its AK-47 counterpart. (Unfortunately, it is also much more mechanically complex than the AK.)

The earliest production examples of the VZ-58 used wooden stocks, pistol grips, and fore-ends, and were chambered for the 7.62mm Czech round. Under Soviet pressure, the chambering was quickly changed to 7.62mm Kalashnikov, and a short time later, the VZ-58 switched to stocks, pistol grips, and fore-ends made using a hard plastic shell filled with wood fiber, which lightened the VZ-58 considerably. There were three standard military versions of the VZ-58: the VZ-58P, with a fixed stock, the VZ-58V, with a folding tubular steel stock (with an ergonomic buttplate), and the VZ-58Pi, equipped with a long dovetail bracket on the left side of the receiver to allow the use of any Russian, Chinese, or former Warsaw Pact-type night vision scope. The VZ-58Pi is also equipped with a light bipod and a large conical flash suppressor (so that the shooter and his night vision scope are not blinded by the muzzle flash).

The VZ-58 was the standard Czech and Slovakian assault rifle for nearly a half a century, but was in 2000 starting to be replaced by the CZ-2000. (The replacement of the VZ-58 has been agonizingly slow however, and most Czech and Slovakian troops still use the VZ-58 as of 2006.) It is no longer being manufactured by Ceska Zbrojovka, but limited production is still being done by Caliber Prague. These newer versions of the VZ-58 generally are updated with synthetic furniture, sight mounts for use with equipment from all over the world, mounts under the fore-end for laser aiming modules or tactical lights, or even MIL-STD-1913 rails. In addition, several companies in Europe and the US are building or selling semiautomatic versions of the VZ-58. The VZ-58 can be found in nearly every corner of the globe, from Vietnam to Cuba, in addition to the Czech Republic and Slovakia.

It should be noted that the magazines of the VZ-58 and the AK series are *not* interchangeable. The magazine wells and the method of fitting the magazines in place are very different. In addition, VZ-58 magazines are made from light alloy, while AK magazines are steel.

After the fall of the Iron Curtain, CZ opened a branch in the US, called CZ-USA. One of the items they produce at CZ-USA is the VZ-58 Military Sporter, a civilian version of the VZ-58 designed for sale in the US, complying with US laws. For the most part, the VZ-58 Military Sporter is identical to the VZ-58P, but the barrel has been extended to 16 inches. The receiver is milled instead of stamped and the metalwork is better finished than the standard VZ-58P. Other than being deliberately designed to be extremely difficult to convert to automatic fire, the mechanism is identical to that of the standard VZ-58 series.

Weapon	Ammunition	Weight	Magazines	Price
VZ-58 (Original)	7.62mm Czech	3.26 kg	30	$877
VZ-58P	7.62mm Kalashnikov	3.13 kg	30	$797
VZ-58V	7.62mm Kalashnikov	3.13 kg	30	$817
VZ-58Pi	7.62mm Kalashnikov	3.44 kg	30	$1163
VZ-58 Military Sporter	7.62mm Kalashnikov	3.32 kg	30	$799

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
VZ-58 (Original)	5	4	2-Nil	6	4	9	45
VZ-58P	5	4	2-Nil	6	4	9	44
VZ-58V	5	4	2-Nil	4/6	4	9	44
VZ-58Pi	5	4	2-Nil	6	4	9	44
(With Bipod)	5	4	2-Nil	6	2	5	57
VZ-58 Military Sporter	SA	4	2-Nil	6	4	Nil	44

Cristobal Model 2

Notes: One of the few home-grown weapons of the Dominican arms industry, the Cristobal was designed in 1948 by a Hungarian immigrant to the Dominican Republic named Pal Kiraly. He based it on a submachinegun he had designed before World War 2 called the M39M (which was itself based on the Beretta M1938), rebarreled for the .30 caliber Carbine cartridge and fitted with a longer barrel and stock. This weapon was subsequently supplied to Cuba before the revolution, and many of them can still be found in the hands of Cuban farmers and hunters, usually modified for semiautomatic-only fire. It could likewise still be found in the hands of Dominican farmers and hunters, and occasionally police and rebel forces. Production of new Cristobals stopped in 1957; by then, some 200,000 had been built, with only 19,000 employed by the Dominicans themselves – most had been exported to the aforementioned Cuba, Columbia, sold to civilians, or sold to other Latin American countries. (Che Guevara was a noted user of the Cristobal Model 2.) By 2003, the remaining Cristobals are generally in poor repair, but any weapon can be dangerous in the right hands. The Model 2 is more commonly called the "San Cristobal Carbine."

The first version, the Model 1, was essentially a test weapon and regarded as a failure; it was never issued out to troops. It was essentially a submachinegun and not an assault rifle. The Model 1 was initially chambered in 9mm Parabellum, making the submachinegun designation more apt; however, only a few were chambered in this caliber and the rest chambered in .30 Carbine in an attempt to increase the power of the weapon. The Model 1 has a slender perforated handguard/heat shield, and has an under-folding wire stock, with a pistol grip behind the trigger. The barrel is 16.14 inches. Mechanical difficulties not quite ironed out became the Model 1's bane; the Model 1 could be accidentally discharged with a sharp blow to the buttstock or pistol grip. The improved Model 1 became the Model 2.

The Model 2 was the successful version; it had a wooden stock with a pistol grip-wrist and an action encased in the wooden furniture; the stock, receiver housing and fore-end are one piece. The receiver is of tubular metal, and is closed on the rear end by a screw-on end cap. Case ejection is almost straight upward, preventing the mounting of most optics. The charging handle on the right side includes a shield that moves with the handle and helps keep dirt out of the mechanism. The selector does not include a semiautomatic setting, allowing for automatic fire and safe settings only. However, a second trigger inside the trigger guard allows the shooter semiautomatic fire; for this, the selector lever is set to automatic, but that second trigger is used instead. The safe setting locks both triggers. The Model 2 has a 16.2-inch barrel. The initial version of the Model 2 was chambered for the 9mm Parabellum cartridge, but only a few were chambered for that caliber.

A slightly improved and more compact version, the M1962, was produced from 1962 to 1970. This version differs primarily in a slightly slower cyclic rate of fire (unimportant in game terms), and in having a shorter 12.2-inch barrel. The M1962 has a short perforated metal handguard; a swivel band and sling swivel is attached to the end of this handguard, and the rest of the furniture is almost identical to that of the M2. A second version of the M1962 has a folding tubular metal stock with a rubber sleeve at the butt to prevent the stock from slipping from the shooter's shoulder. The folding-stock version has a true pistol grip instead of a pistol grip-wrist. The M1962 is, in essence, a submachinegun rather than an assault rifle, but is included here for completeness. (It is also arguable whether the M1962 is a submachinegun or a short assault rifle.)

Twilight 2000 Notes: These weapons were largely replaced by M16A1s from the US and L1A1s from Great Britain shortly before the Twilight War, mostly to provide a better-armed military force as a bulwark against Cuban and Russian troops. The remaining Cristobals were then handed down to folks who were normally not found with weapons in peacetime, such as the elderly, women, and children than were not yet even in their teens.

Weapon	Ammunition	Weight	Magazines	Price
Cristobal Model 1	.30 Carbine	3.51 kg	15, 30	$322
Cristobal Model 1	9mm Parabellum	3.4 kg	30	$300
Cristobal Model 2	.30 Carbine	3.51 kg	15, 25, 30	$298
Cristobal M1962 (Fixed Stock)	.30 Carbine	3.5 kg	15, 25, 30	$257
Cristobal M1962 (Folding Stock)	.30 Carbine	3.5 kg	15, 25, 30	$282

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Cristobal Model 1 (.30)	5	2	1-Nil	3/5	1	3	44
Cristobal Model 1 (9mm)	5	2	1-Nil	3/5	1	2	36
Cristobal Model 2	5	2	1-Nil	5	1	3	45
Cristobal M1962 (Fixed)	5	2	1-Nil	4	1	2	30
Cristobal M1962 (Folding)	5	2	1-Nil	3/4	1	2	30

Misr

Notes: The Misr began life as an almost-identical, domestically-produced Egyptian copy of the Russian AKMS. The Misr was quickly changed to suit Egyptian production methods, with the folding stock being of a simpler (but more fragile) design; a little later, the wooden handguard and pistol grip were replaced with plastic ones. After turning away from the Russian sphere of influence, the upper receiver was modified so the Mist could mount most US/NATO standard optics. This weapon was still the primary personal weapon of the Egyptian military as of 2006, and was also used by several allied Middle Eastern militaries, and the army of Rwanda. A civilian/police version of the Misr, called the ARM, went on the market in the late 1990s; it was introduced in between different phases of the various anti-gun bills introduced in the US during that time, and while it uses the ugly thumbhole wooden stock, cannot be modified for automatic fire, and cannot mount a bayonet, it can still use standard AKM and AK-47 magazines, as well as the 5-round magazines normally sold with the ARM. (The ARM is also known as the Maadi, particularly in the US.)

Twilight 2000 Notes: The changes that allowed the Misr to mount Western-style optics came rather late in the game, and most Misrs can still use only Bloc-style optics. The ARM came so late that there was almost no time to export them, and most of them were used to equip domestic militia and police forces.

Merc 2000 Notes: As in the Notes above, the Misr is the primary assault rifle of Egypt, and generally conforms to what is mentioned in the Notes. The ARM did not sell well in a world already glutted with AK variants and clones.

Weapon	Ammunition	Weight	Magazines	Price
Misr	7.62mm Kalashnikov	2.95 kg	30	$827

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Misr	5	4	2-Nil	4/5	4	10	46

Rashid

Notes: When Egypt came under the Soviet sphere of influence, they largely converted to the AK-47 and AKM assault rifles. However, the supply of AKs they were given and could make themselves was not enough to equip reserve forces and paramilitary police forces, so they decided to make a version of the Hakim battle rifle chambered for the 7.62mm Kalashnikov cartridge. The Rashid retained the direct gas impingement system of the Hakim, but the charging handle was attached to the bolt and the bayonet lug was removed to accept an SKS-type folding bayonet. The sights were also changed to reflect the new chambering.

These weapons have been turning up on the civilian market in increasing numbers the past 20 years or so. They are typically cheap, and in decent, if not sterling condition.

Twilight 2000 Notes: When the Twilight War picked up, the Egyptians began issuing Rashids to their Home Defense Militia units.

Weapon	Ammunition	Weight	Magazines	Price
Rashid	7.62mm Kalashnikov	3.74 kg	10	$860

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Rashid	SA	4	2-3-Nil	7	4	Nil	68

Sako M-90

Notes: While the M-76 replaced the M-62, the M-90 replaced the M-76. It is also an evolutionary update of the two previous designs, using stronger materials, new plastic magazines, a stronger folding butt (which folds to the side), a full muzzle brake instead of a flash suppressor, and sights that withstand more abuse and are both easier to adjust and can be more finely adjusted, as well as having tritium inlays. The M-90 is built in 7.62mm Kalashnikov and 5.56mm NATO calibers, with the 7.62mm Kalashnikov version being used by Finnish armed forces. The M-90 can launch both rifle grenades that require a muzzle adapter and more modern bullet-trap designs. The 5.56mm version can also fire the RAW. Both models can mount the M-203 or BG-25/30 grenade launchers or grenade launchers that use similar weapon mounts. Though the M-90 was offered for export, the Finnish government is mum on who they sold any to, if anyone.

Twilight 2000 Notes: By the time of Finnish entry into hostilities, Finland had not managed to quite replace half of its stock of M-76s.

Merc 2000 Notes: Oddly enough, both calibers of this weapon were common sights in the hands of both Israeli and American special operations forces, and the M-90 was known as a weapon that could turn up in the oddest places.

Weapon	Ammunition	Weight	Magazines	Price
M-90	7.62mm Kalashnikov	3.85 kg	30	$876
M-90	5.56mm NATO	3.85 kg	30	$633

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
M-90 (7.62mm)	5	4	2-Nil	4/6	3	7	46
M-90 (5.56mm)	5	3	1-Nil	4/6	2	4	41

Sako M-95 (Rk.95)

Notes: This is a further development of the M-90, enhanced primarily in the areas of structural strength, and a few other improvements. Some of these improvements include an enlarged trigger guard to allow the wearing of arctic gloves, a slight relocation of the selector lever to make sure the stock is not in the way when it is folded, flip sights which include a special position for CQB, a fixed rear sight, with adjustments being done from the front sight, and a slightly lengthened barrel. The 7.62mm version is also capable of using a silencer along with subsonic ammunition (though automatic fire through the silencer is not recommended). It is otherwise virtually identical to the M-90. The Finnish government ordered one small batch of these weapons in 1997 (designating them the RK-95TP), and then abruptly cancelled the order due to budgetary reasons. By 2000, production of the M-95 had virtually ceased, though Sako was still had the weapon in its catalog as available for sale.

Twilight 2000 Notes: In 1996, with the outbreak of the Twilight War, Finland rushed into production of the Model 95 rifles for use by their military forces; the primary reason for this choice was the capability to use both NATO and Warsaw Pact ammunition, both of which Finland had in quantity. However, the Model 95 had not reached full production by the 1997 nuclear exchange, and so the M-90 rifle is still the predominant rifle to be encountered. It is estimated that only 9000 M-95 rifles had been produced by the time of the nuclear exchanges.

Merc 2000 Notes: This weapon has the same sort of status as the M-90, but in lesser numbers.

Weapon	Ammunition	Weight	Magazines	Price
M-95	7.62mm Kalashnikov	3.76 kg	30	$879
M-95 (Silenced)	7.62mm Kalashnikov Subsonic	4.34 kg	30	$1394
M-95	5.56mm NATO	3.76 kg	30	$635

Weapon	ROF	Damage	Pen	Bulk	Mag	SS	Burst	Range
M-95 (7.62mm)	5	4	2-Nil	5/6	30	3	7	47
M-95 (7.62mm w/Silencer)	5	3	1-Nil	8/9	30	2	6	34
M-95 (5.56mm)	5	3	1-Nil	4/6	30	2	4	42

Valmet M-60 (Rk.60)

Notes: The M-60 was the first of the Finnish “improved Kalashnikovs.” Though internally almost identical to the AKM, the M-60 is externally very different, with a plastic handguard that does not cover the gas tube, a plastic pistol grip, tubular steel stock, and a different-shaped receiver designed to take a better rear sight and optional optical sights or night vision equipment. The 16.55-inch barrel was tipped with a large three-prong flash suppressor.

There were two basic models of the M-60. The M-60A had no trigger guard (in order to allow its use with fingerless mittens), and the receiver was a carefully machined forging (stronger, but more expensive and difficult to produce). The M-60B had a rubber coating for the tubular steel butt, a trigger guard which could hinge away from the trigger, and the ability to use several different bayonet types (including detachable folding bayonets). About 200 of each were made (though most M-60As were later modified to the M-60B standard and called FM-60s), and they are essentially identical for game purposes.

The M-62 started life as an experimental improvement of the M-60B, but quickly became a service weapon, with Qatar and Indonesia as well as Finland. The M-62 uses a simplified receiver cover, the handguard was ribbed, and the pistol grip shaped

differently; in addition, the stock folds. The plastic parts were originally dark green, but the color was changed to black for most production rifles. At first, the gas tube of the M-62 was partially enclosed in a stamped steel liner, but most have their gas tubes totally enclosed. Variants of the M-62 include the M-62PT, introduced in 1972 and adding some refinements such as better protection for the iron sights, tritium inlays for the iron sights, and a return to the stronger machined-steel receiver. The M-62S was a semiautomatic civilian/police version (produced primarily for export); this version often had wooden furniture when sold in the US, but other versions had the M-62s standard layout or a folding stock.

The short-lived M-71 variant used a stamped steel receiver and a front sight almost identical to that of the AKM. The stock was folding and synthetic, and apparently a modification of that of the FN CAL. The handguard completely surrounded the gas tube, and though synthetic, basically looked like that of the AKM. Unlike the AKM, the bolt has a hold-open device and a bolt catch. A variant is the M-71S, was chambered in 5.56mm NATO and intended for export, with a semiautomatic-only civilian/police version also available. The M-71S apparently did not do well; and the M-71 did not either, being produced only from 1971-73, though they were carefully placed into storage.

The M-76 returned to a modified M-62 pattern, though it had a stamped steel receiver rather than the machined receiver of the M-62. The M-76 was produced in two calibers, with the 5.56mm NATO version mostly being exported (though 7.62mm versions were also exported), in both automatic and semiautomatic forms. These were known as the M-76F. 5.56mm models replaced the M-62s in Quatar and Indonesia, but in Finland, the troops apparently preferred the more robust M-62B. In 1976, this led to the M-62/76, which, though it had a modified fire selection mechanism internally, used a machined steel receiver. The plastic furniture, however, is lighter and stronger, and the rubber coating on the stock is also slightly slighter and more durable. The barrel is a bit shorter at 16.3 inches, and the flash suppressor is reduced in size. An M-62/76T version was also produced with a folding stock. The M-76W has a fixed wooden stock, the M-76P has a fixed plastic stock, the M-76T has a folding stock similar to that of the M-62, and the M-76F has a folding plastic butt.

The M-82 was a rare variant of the M-76 (and is also referred to as the M-76B). The change in the design is easily apparent – the M-82 has a bullpup construction, enclosed in an almost one-piece synthetic shell. (Pre-production versions were actually enclosed in a wooden shell, which had to be carved in an expensive, time-consuming, and laborious process.) The barrel is tipped by an M-16-type birdcage flash suppressor, and is capable of launching most rifle grenades in the world today. The trigger guard is larger than the rest of the M-76 series, allowing for the use of bulky gloves, and can be hinged away from the trigger as well. The M-82 was designed for airborne troops and special operations troops, both for domestic use and for export. However, during field trials and early in the short deployment of the M-82, Finnish Paratroopers discovered a problem with the M-82: the position of the sights. While the front sight remained near the muzzle (a protected post upon a large raised triangular mount), the rear sights were moved to a position near the center of the weapon. Since Finnish paratroopers parachuted with the M-82 uncased atop their reserve chute, a bad PLF often led to facial injuries, sometimes to the point of broken noses or teeth. A fall atop the M-82 could do the same thing. Such dislike of the weapon by the troops using it may have led to the very short production run of the M-82.

Twilight 2000 Notes: Placed into storage in Finland and Qatar, M-62s were eventually taken back out storage and issued to territorial, paramilitary, and militia units. Some of the former Finnish M-62s eventually ended up in the hands Swedish partisans fighting the Russians. Indonesian M-62s had largely disappeared by the Twilight War (officially, they were listed as destroyed), but for the next 40 years, they could be found in the hands of scattered partisans, rebel groups, and even pirates in Southeast Asia and the South Pacific. M-71s were taken out of storage and quickly issued to newly-raised forces. The M-62/76 was, for the most part, the assault rifle that Finland went to war with. Indonesia did too, but it was just a part of the hodgepodge that they used, much to the chagrin of Indonesian armorers and supply personnel. Though an emergency production order for 1200 M-82s was authorized by the Finnish government in 1997, only 776 examples were actually produced. These mostly went to security troops and certain bodyguard details.

A further version, the M-78, is both a designated marksman version, with a heavy, 24.5-inch barrel and a bipod. The only stock is a wooden stock, and the M-78 fires only on semiautomatic. The side of the receiver has a bracket for mounting optics. (Note: This weapon should not be confused with the M-78 automatic rifle, though they are very similar and both based on the M-76.)

Merc 2000 Notes: Similar to the Notes, except that Indonesian M-62s eventually found their way into the hands of various insurgent groups in Southeast Asia, mostly under mysterious circumstances. The M-82 is just one of those weapons normally found only as curiosities among weapon collectors or in museums.

Weapon	Ammunition	Weight	Magazines	Price
M-60	7.62mm Kalashnikov	3.71 kg	30	$804
M-62	7.62mm Kalashnikov	4.08 kg	15, 20, 30	$805
M-62S (Wood Stock)	7.62mm Kalashnikov	3.99 kg	15, 20, 30	$809
M-71	7.62mm Kalashnikov	3.63 kg	15, 20, 30	$834
M-71S	5.56mm NATO	3.33 kg	15, 20, 30	$587
M-76W	7.62mm Kalashnikov	3.6 kg	15, 20, 30	$792
M-76P	7.62mm Kalashnikov	3.4 kg	15, 20, 30	$802
M-76T	7.62mm Kalashnikov	3.4 kg	15, 20, 30	$822
M-76F	7.62mm Kalashnikov	3.3 kg	15, 20, 30	$834
M-76W	5.56mm NATO	3.6 kg	15, 20, 30	$580
M-76P	5.56mm NATO	3.4 kg	15, 20, 30	$590
M-76T	5.56mm NATO	3.4 kg	15, 20, 30	$610

M-76F	5.56mm NATO	3.3 kg	15, 20, 30	$565
M-62/76	7.62mm Kalashnikov	3.73 kg	15, 20, 30	$822
M-62/76T	7.62mm Kalashnikov	3.52 kg	15, 20, 30	$822
M-82	7.62mm Kalashnikov	3.31 kg	15, 20, 30	$797
M-82	5.56mm NATO	3.31 kg	15, 20, 30	$549
M-78	7.62mm NATO	5.09 kg	5, 10, 20	$1664
M-78	7.62mm Kalashnikov	4.73 kg	15, 20, 30	$1479
M-78	5.56mm NATO	4.17 kg	15, 20, 30	$1227

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
M-60	5	4	2-Nil	6	4	9	47
M-62	5	4	2-Nil	6	4	9	47
M-62S (Wood)	SA	4	2-Nil	6	3	Nil	47
M-71	5	4	2-Nil	5/6	3	9	47
M-71S	5	3	1-Nil	4/6	2	6	42
M-76W/M-76P (7.62mm)	5	4	2-Nil	6	4	9	46
M-76T/M-76F (7.62mm)	5	4	2-Nil	5/6	4	9	46
M-76W/M-76P (5.56mm)	5	3	1-Nil	6	2	6	41
M-76T/M-76F (5.56mm)	5	3	1-Nil	4/6	2	6	41
M-62/76	5	4	2-Nil	6	3	9	46
M-62/76T	5	4	2-Nil	5/6	4	9	46
M-82 (7.62mm)	5	4	2-Nil	5	4	9	42
M-82 (5.56mm)	5	3	1-Nil	4	2	6	38
M-78 (7.62mm NATO)	SA	4	2-3-Nil	8	3	Nil	84
With Bipod	SA	4	2-3-Nil	8	2	Nil	109
M-78 (7.62mm Kalashnikov)	SA	4	2-3-Nil	7	3	Nil	75
With Bipod	SA	4	2-3-Nil	7	2	Nil	97
M-78 (5.56mm NATO)	SA	3	1-Nil	7	2	Nil	71
With Bipod	SA	3	1-Nil	7	1	Nil	92

St. Etienne FA-MAS

Notes: The FA-MAS F1 (or FAMAS F1) was one of the first bullpup-design rifles issued in large numbers to any army. It was designed in the 1970s because the French military was then equipped with a combination of MAS-49 rifles (a post-World War 2 weapon) and a hodgepodge of foreign weapons, and the French wanted a thoroughly modern weapon that could replace both their rifles and submachineguns.

The magazine of the F1 was designed specifically for it; it is steel with holes drilled in the sides at intervals so that the user can easily determine how much ammunition is left. The barrel is designed to easily use NATO rifle grenades, whether of the BTU variety or requiring a special adapter. The standard FA-MAS F1 is for right-handed shooters, but the extractor and case ejector are reversible, and the receiver is already designed for left or right-handed operation. The barrel of the FA-MAS F1 is of steel, while the receiver is light alloy. The stock itself is of polymer, and is equipped with a rubber recoil pad; early models of the F1 used a neoprene-covered cheekpiece, but late-production F1s (and the newer G2 model) use a removable molded polymer cheekpiece. The cheekpiece is reversible, and covers the unused ejection port (depending whether the FA-MAS is set up for a left- or right-handed shooter). The carrying handle is of high-impact plastic and protects both the sights and the charging handle underneath it. The standard-issue sling is designed to be highly-adjustable, with two sling swivels on the stock and two sling swivels on the front attached to the swivel pins holding the bipod on the rifle. The 19.21-inch barrel is contained for the most part within the foregrip and stock. The exposed section of barrel has a set of raised rings behind the flash suppressor; this aids in securing rifle grenades to the end of the barrel, as the FA-MAS was designed from the start to use a wide variety of rifle grenades. (The FA-MAS is issued with special one-round magazines designed to contain a ballistite cartridge, when one is required for firing older rifle grenades.)

There are several variants of the F1, including an export/police version that fires only on semiautomatic, a civilian model with a longer barrel and chambered for .222 Remington ammunition to comply with French law, a training model that fires .22 Long Rifle ammunition, and a short-barreled Commando version (see below). In addition to French use, the F1 is used by Djibouti, Gabon, the United Arab Emirates, and Senegal. The most common nickname given to the FA-MAS by its soldiers is “Le Clarion” (the Bugle), due to its unusual shape.

One of the most unusual versions of the FA-MAS F1 is the Commando; this variant was designed in the early 1980s for use by special operations units. The main difference between it and the standard F1 is the barrel, shortened by 83mm to 405mm. The Commando was not produced or adopted in large numbers; the standard F1 is already so compact as to render a smaller version rather superfluous, and the Commando also loses the ability to fire rifle grenades. Whether it was actually produced, issued, or used is unknown.

The FA-MAS G2 was originally designed for the export market, but it was adopted by the French military as its new assault rifle was adopted in the summer of 1997. Mechanically, the G2 is the same as the earlier F1, but the barrel’s rifling is optimized to strike a balance between what is needed for the newer 5.56mm NATO SS-109 ammunition and older M-193 ammunition. In addition, the G2 uses standard US/NATO magazines instead of the proprietary 25-round magazines of the earlier version; it cannot even accept the F1’s 25-round magazine. The trigger guard is redesigned to allow even fingerless mittens, and the selector lever is inside this trigger guard in front of the trigger. The carrying handle can mount all NATO/US optics. The G2 can mount a bayonet either on top of or below the barrel, so that it can be used whether or not a grenade launcher is fitted. The ability to use most 40mm grenade launchers is also new; the F1 could only use rifle grenades. (Before the G2, there was a G1, which was an intermediate design that was essentially an F1 with the large trigger guard of the G2.)

The G2 also has, in the same manner as the F1, a short version; in fact, there are two short versions, the G2 Commando with a 15.94-inch barrel and the G2 Submachinegun with a 12.6-inch barrel. As with the F1 Commando, the G2 Commando cannot fire rifle grenades, and also does not have a bipod or a bayonet lug. The G2 Submachinegun also loses those features, but gains a compact muzzle brake/flash suppressor. A further variant of the G2 is the G2 Sniper, with a 24.41-inch heavy barrel, the carrying handle moved to the side of the receiver (and reversible) and replaced with a MIL-STD-1913 rail, and a more robust folding bipod. It is intended more as a designated marksman weapon rather than as an actual sniper rifle, and the cost of any scope is not included below. All three of these versions are in quite limited issue, generally used only by special operations units.

An experimental enhanced version called the FELIN was in limited production starting in 2000. The FELIN is used primarily to test new optics or other devices. The most notable differences between the FELIN and the standard G2 is that the carrying handle is replaced with a flat Picatinny rail optics mount, the weapon has electronics to feed information to a helmet-mounted sight, and an experimental IFF device is included. As of 2006, the FELIN is still being used only in weapons trials and it is not intended to ever be an issue weapon. (The FELIN will be covered in an entry to be added in the future, when I can acquire more information.)

Two other limited-production versions of FA-MAS G2 were introduced in 2000, though they too are officially considered testbed weapons, and it is unknown if any have seen operational or combat testing. They are, however, considered more likely to see service, either as the weapons they are as newer versions of the FA-MAS incorporating their improvements. The first of these versions is the Low-Profile FA-MAS; this is very much like the standard G2, but incorporates numerous improvements including a new bipod which is not only lighter (it actually looks rather spindly, but is said to be stronger than a standard F1/G2 bipod),but can be adjusted to a limited extent for height and cant. What gives the rifle its “Low-Profile” moniker is its redesigned carrying handle and upper receiver; it is less than half the height of a standard FA-MAS carrying handle, and topped with a MIL-STD-1913 rail for the primary optics and is also equipped with folding backup sights. The Low-Profile FA-MAS also has folding grenade sights on the side of the carrying handle (these sights may be moved for left- or right-handed shooters), for use when rifle grenades are being fired or a grenade launcher is mounted.

The Upgraded FA-MAS builds on the Low-Profile FA-MAS. The carrying handle is eliminated completely, with a MIL-STD-1913 rail being mounted directly on a slow raised block atop the receiver. The Upgraded FA-MAS is equipped with an optical sight that gives the shooter 4x magnification with an illuminated reticule, a small reflex-type sight, and a laser aiming module able to function in IR or visible beam mode. Along with these are the same backup iron sights and grenade sights as the Low-Profile FA-MAS. (Weight stats below for the Low-Profile FA-MAS and Upgraded FA-MAS are estimates only.)

Twilight 2000 Notes: For the most part, this was the weapon that the forces of the above countries' militaries went to war with. In addition, an emergency order was made by Luxembourg shortly after the Twilight War started (though given the size of Luxembourg's military, this was still a very small order); when the French made their unsuccessful invasion of Luxembourg, those F1s were used against French troops. In addition, examples of the F1 were sometimes found in the hands of captured or killed troops of Iraq's Republican Guard, though when or if the French sold those weapons to the Iraqis is unknown. The FA-MAS Commando was used exclusively by French special operations units, including the Foreign Legion's 2nd REP. The G2 was issued to units of the French armed forces in the summer of 1997. Most of the G2s that were issued were given to units that were headed for the "Dead Zone" on the Franco-German border. The FELIN does not exist in the Twilight 2000 world.

Merc 2000 Notes: As France became more and more involved in world politics and peacekeeping missions, the FA-MAS became familiar all over the globe. In particular, the interests of US civilians was piqued by the unusual look of the FA-MAS, and bought many of the Civilian or Export/Police versions. The FELIN is found in larger numbers and is undergoing extensive field and combat testing by French special ops units.

Weapon	Ammunition	Weight	Magazines	Price
FA-MAS F1	5.56mm NATO	3.61 kg	25	$1210
FA-MAS Export/Police	5.56mm NATO	3.61 kg	10, 25	$638
FA-MAS Civil	.222 Remington	3.72 kg	10, 25	$599
FA-MAS Trainer	.22 Long Rifle	3.61 kg	25	$697
FA-MAS F1 Commando	5.56mm NATO	3.43 kg	25	$727
FA-MAS G2	5.56mm NATO	3.59 kg	20, 30	$1210
FA-MAS G2 Commando	5.56mm NATO	3.28 kg	20, 30	$725
FA-MAS G2 Submachinegun	5.56mm NATO	3.12 kg	20, 30	$736
FA-MAS G2 Sniper	5.56mm NATO	3.88 kg	20, 30	$1217
Low-Profile FA-MAS	5.56mm NATO	3.49 kg	20, 30	$1224
Upgraded FA-MAS	5.56mm NATO	3.6 kg	20, 30	$1830

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
FA-MAS F1	3/10	3	1-Nil	5	2	4/12	47
(With Bipod)	3/10	3	1-Nil	5	1	2/6	61
FA-MAS Export/Police	SA	3	1-Nil	5	2	Nil	47
(With Bipod)	SA	3	1-Nil	5	1	Nil	61
FA-MAS Civil	SA	3	1-Nil	5	2	Nil	59
FA-MAS Trainer	3/10	1	Nil	5	1	1/3	36
(With Bipod)	3/10	1	Nil	5	1	1/1	46
FA-MAS F1 Commando	3/10	3	1-Nil	4	2	3/11	36
FA-MAS G2	3/10	3	1-Nil	5	2	4/12	47
(With Bipod)	3/10	3	1-Nil	5	1	2/6	61
FA-MAS G2 Commando	3/10	3	1-Nil	4	2	4/12	36
FA-MAS G2 Submachinegun	3/10	3	1-Nil	4	2	3/9	25
FA-MAS G2 Sniper	SA	3	1-Nil	6	2	Nil	65
(With Bipod)	SA	3	1-Nil	6	1	Nil	85
Low-Profile FA-MAS	3/10	3	1-Nil	5	2	4/12	47
(With Bipod)	3/10	3	1-Nil	5	1	2/6	61
Upgraded FA-MAS	3/10	3	1-Nil	5	2	4/12	47
(With Bipod)	3/10	3	1-Nil	5	1	2/6	61

PAPOP Weapon System

Notes: Similar in concept to the American OICW, the PAPOP is a two-part weapon system consisting of a 5.56N rifle unit and a 35mm grenade launcher. The grenade launcher feeds through a three-round tubular magazine, and grenades can be set to either a standard burst or proximity fused lateral burst pattern, allowing limited capability against targets in foxholes and the like. A special gas ventilation system prevents injury to the user when firing the grenade launcher. In addition, the weapon has a video sight mounted on the business end with a small adjustable LCD screen on the back, allowing a soldier to look around corners and even firing the rifle without exposing himself. Note that the PAPOP does not have the advanced optics that the OICW has. As of 2003, this weapon was still in testing, and is probably not yet in its final form. Like US soldiers and the OICW, French troops tend to the find the PAPOP

awkward and clumsy.

Twilight 2000 Notes: Though a few PAPOPs may be floating around here and there, it is largely a nonexistent weapon in the Twilight 2000 World. If any are around at all, the grenade launcher ammunition may be difficult or impossible to find.

Merc 2000 Notes: Though a few of these were combat tested as early as the Second Persian Gulf War, and more in other, less-known conflicts or actions, the PAPOP is still mostly an experimental weapon instead of an issue weapon. Even the French government finds the PAPOP's price almost prohibitive.

Weapon	Ammunition	Weight	Magazines	Price
PAPOP	5.56mm NATO	7 kg	(Rifle) 20, 25, 30; (GL) 3-I	$1625

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
PAPOP (Rifle)	3/10	3	1-Nil	5	1	2/7	35
PAPOP (GL, HE)	SA	C3 B12	Nil	5	2	Nil	(DF) 120, (IF) 730
PAPOP (GL, HEDP)	SA	C3 B12	4C	5	2	Nil	(DF) 120, (IF) 730
PAPOP (GL, HEAT)	SA	C2 B10	35C	5	2	Nil	(DF) 120, (IF) 730

GSG Omni Hybrid MAXX

Notes: This AR clone differs primarily in its receivers – They are made of steel-reinforced carbon fiber. This makes them lighter, yet stronger, than either full metal or full carbon fiber receivers. The rifle is finished in all-black, and with mostly otherwise Milspec parts. The trigger guard is molded into the lower.

The Omni Hybrid uses direct gas impingement, with a carbine-length gas system. This goes with its 16-inch barrel, which is tipped with an A2 flash suppressor. It is free-floating. Above the receiver is a Picatinny rail; this is the only rail on the carbine other than a short one on the gas block for a BUIS. The Omni Hybrid uses a Magpul MOE 6-position sliding stock. The MAXX also has an over-molded plastic insert in the recoil tube, increasing strength and retention, as well as strengthening the area where the lower meets the upper as the rear of the receivers.

Some shooters find the trigger pull to be "a bit mushy like a Glock trigger," non-consistently breaking from 5.5 to 6 pounds of pressure. Some find that boat-tailed rounds tend to keyhole when fired from the carbine. Some find that the upper and lower "does not match up in the least," and that the general fit and finish is hit-and-miss. Parts can be bottom-shelf parts, not the best but not the worst. Others say the carbine is just not comfortable to shoot at any stock setting.

Extra Uppers are available for different calibers. As of this writing (Nov 16), the .22 LR and 6.8mm are not available, but they are scheduled to be in early 2017. Essentially, however, there is nothing special about the Omni Hybrid except the receivers. It is sold only through American Tactical Imports, though it is made by German Sport Guns.

Weapon	Ammunition	Weight	Magazines	Price
Omni Hybrid MAXX	5.56mm NATO	2.83 kg	5, 10, 20, 30	$571
Omni Hybrid MAXX	.22 Long Rifle	2.83 kg	10, 17, 27	$245
Omni Hybrid MAXX	6.8mm SPC	2.83 kg	5, 10, 20, 30	$751
Omni Hybrid MAXX	.300 Blackout	2.83 kg	5, 10, 20, 30	$766

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Omni Hybrid MAXX (5.56mm)	SA	3	1-Nil	4/6	3	Nil	40
Omni Hybrid MAXX (.22)	SA	1	Nil	3/4	1	Nil	34
Omni Hybrid MAXX (6.8mm)	SA	3	1-2-Nil	5/6	3	Nil	56
Omni Hybrid MAXX (.300)	SA	3	2-Nil	5/6	4	Nil	46

Haenel MKb42(H)/MP43/MP44 (StG44)

Notes: This weapon was the world's first true assault rifle to go into active service. Though Haenel (and Walther) had been their contracts to develop the new rifles in 1940, the prototype version of the Haenel (the MKb42(H) was not first used in July 1943 in Russia. The MKb-43(H) is largely the work of Hugo Schmeisser.

The MKb42(H) looked essentially like a modern assault rifle – in fact, similar to the AK-47. (It's never been proven whether the MKb42(H) and its successors had any influence on Kalashnikov, but rumors abound.) The MKb42(H) was gas operated by direct impingement. The MKb42(H) fired from an open bolt in both automatic and semiautomatic modes. The barrel was quite short for the time at 14.35 inches, and the MKb42(H) was a trifle heavy. Cyclic rate of fire was rather slow at 575 rpm. The MKb42(H) at first had no bayonet lug or provisions for rifle grenades, but they were demanded by the Army, even before production could get into gear. Army interference only grew after that. As a result, only 116 had been built by December of 1942, and the first batch of rifles for combat testing were not delivered until January of 1943 (200 rifles short of the target figure).

The MKb42(H), though heavier and a bit less balanced than the competing Walther design, used a simpler operation and could be built cheaper and easier; therefore, it won the competition. The actual production version was the MP43 – given the designation of a submachinegun to disguise it's true nature from Hitler, who fancied himself a military expert and thought he knew exactly what sort of rifle the troops needed. A few modifications were made; the Walter-type hammer-firing mechanism replaced the Haenel striker, and operation was changed so that the MP43 fired from a closed bolt. The tangent rear sight was located above the location of the magazine, and the front sight post was hooded. Due to the growing chaos and damage in Germany, production was subcontracted to about a dozen manufacturers, and slight differences between manufacturing methods meant that MP43s often had to have their parts hand-fitted and that the parts sometimes would not interchange between MP43s. The barrel length remained at 14.35 inches, but the grenade launcher was not a standard feature – instead, a version designated the MP43/I was built in smaller numbers which had a grenade launcher attachment at the muzzle. Most MP43/Is (and some MP44s) also had a mount on the left side of the receiver for a Zf.4 telescopic sight or the new (and rare) Zg.1229 Vampir active infrared night scope. (It should be noted that in 1944, night scopes were giant, clumsy affairs that often weighed as much as the rifle they were mounted upon.) To mark the official start of mass

production, the designation of the weapon was changed to the MP44; shortly thereafter, it was re-christened the StG44 (*Sturmgewehr* 44, or "assault rifle") to denote it's true nature (an apocryphal story says this was done by Hitler himself during a visit to the Russian Front.)

Perhaps the strangest modification of the StG44 was the Krummlauf Attachment. The idea of the Krummlauf Attachment was to allow the StG44 to fire around corners. It was basically a curved barrel extension with an attached mirror. There were 3 variants of the Krummlauf: the STG44(P) curved 30 degrees, the STG44(K) curved 90 degrees, and the STG44(V) curved 40 degrees. Only the STG44(P) was mass-produced, with about 10,000 examples being made. The Krummlauf has perforations that slow the bullet to allow it to make the turn; unfortunately, they slow the bullet so dramatically that the bullet has a greatly reduced effectiveness. Of course, the weapon is useless in close combat, except when firing around corners (unless the shooter is **really** good at applying Kentucky Windage).

In the late 2000s, a company named German Sport Guns (a German company, whose products are sold only through American Tactical Imports) began offering the GSG-StG44. This is a version of the StG44 that is chambered for .22 Long Rifle, but is otherwise a faithful reproduction of the original assault rifle. Differences include a 16.5-inch barrel and American Walnut for the stock and pistol grip, as well as a Cerekote finish for the external metal parts. (Interior metal parts are phosphated, and the bore is chromed.) Trigger pull weight is about like the original – 5.5 pounds. Empty weight is somewhat less, but due to the low recoil of the .22 rounds, this is not important for recoil purposes. The GSG-StG44 is designed specifically for semiautomatic fire, and company literature states that converting it to automatic fire is virtually impossible. Finishes include carbon steel, sand, OD Green, and desert tan/pink.

Weapon	Ammunition	Weight	Magazines	Price
MKb42(H)	8mm Kurz	4.87 kg	30	$729
MP44/StG44	8mm Kurz	4.92 kg	30	$729
StG44(P/K/V)	8mm Kurz	5.22 kg	30	$802
GSG-StG44	.22 Long Rifle	4.5 kg	10, 25	$215

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
MKb42(H)	5	3	2-Nil	6	3	8	38
MP44/StG44	5	4	2-Nil	6	3	8	38
StG44(P)	5	2	1-Nil	7	2	7	27
StG44(K)	5	2	1-Nil	7	2	7	23
StG44(V)	5	2	1-Nil	7	2	7	25
GSG-StG44	SA	1	Nil	6	1	Nil	34

Heckler & Koch G36

Notes: In 1996, with the G-11 becoming expensive and the ammunition even more scarce and expensive, the Bundeswehr asked Heckler & Koch to produce an assault rifle family that would fire standard NATO 5.56mm NATO ammunition. The result was the HK-50, which was type standardized as the G36. Deliveries began in the third quarter of 1996 to the Bundeswehr's NATO rapid reaction forces and special operations units, and it eventually became the standard assault rifle for German armed forces. In 1998, the Spanish military started replacing their troublesome CETME-L and LC rifles with G36s.

The G36 has a folding buttstock for use in tight spaces; light and easy to fold and unfold, the stock is also the G36s biggest fault, since it tends to crack or just fall off. Much of the G36 is constructed of high-impact plastic reinforced with carbon-fiber polymer, and the carrying handle incorporates a 3x sight, with iron sights available if the optical sights become damaged. In addition, a red-dot collimating sight is provided above the 3x sight on German G36s for quick shots. The charging handle is under the carrying handle, and the firing levers are ambidextrous (although case ejection is always to the right). The G36 uses an AK-74 pattern bayonet, and can use Pact or NATO rifle grenades. Magazines designed for the G36 have lugs to allow up to five magazines to be clipped together for speedy reloading. The G36 may also use M-16 magazines. The G36 marks the first time that Heckler & Koch abandoned their well-tried roller-locking system in a production rifle, opting for a simpler gas system instead; with rounds being fired through a 18.9-inch barrel tipped by a flash suppressor similar in appearance to that used on Colt's M-16A2. The export variant of the G36 is the G36E; this weapon uses a 1.5x sight instead of the 3x sight of the German model, and dispenses with the red-dot collimating sight.

The G36K is a carbine variant of the G36 assault rifle, meant for special operations forces. It has a shorter 12.52-inch barrel and handguard than the standard G36, and a larger prong-type flash suppressor. It is not normally equipped with the 3x sight (though it can use it), using the 1.5x sight instead, but does have the collimator sight. German special ops units almost always use the G36K (and the G36) loaded with 100-round Beta C-Mags. An export version of the G36K, called the G-35KE, is also produced; it differs from the G36K primarily in the deletion of the collimator sight.

The G36C (the *C* formerly stood for Commando, but now stands for Compact, due to a trademark by Colt) is a very-abbreviated length version of the G36 assault rifle. It has a stubby 11.02-inch barrel, and the carrying handle has a STANAG-compatible MIL-STD-1913 rail to mount any sort of scope or sighting aid. The handguard, though short, is equipped with 6-point MIL-STD-1913 rails; the bottom rail is normally seen with a foregrip mounted, though it can mount pretty much anything else. Like the G36K, the G36C typically uses the 1.5x sight/collimator sight combination; the 3x sight is rather superfluous in a weapon designed primarily for CQB. The G36C is characterized as a "limited-issue weapon," typically issued only to special operations units.

An interesting note about the G36: the G36's predecessor, the HK-50, was originally conceived to be a modular family of weapons,

able to be easily changed between different configurations. These different configurations were designed to range from a 9mm Parabellum-firing submachinegun to a 7.62mm NATO-firing light machinegun. Though the G36 has yet to be produced in all of these versions, it still retains the capability to do so – assuming the demand is there and Heckler & Koch produces the parts required as a result.

Twilight 2000 Notes: When it became obvious that the G-11 was too expensive and complicated to produce, and that ammunition availability would become a major stumbling block, the G41 was brought into full production instead and the plans for the G36 accelerated greatly. However, general issue of the G36 still did not start until the winter of 1995, and adoption of the G36 largely came to an abrupt halt during the November nuclear exchanges. Though examples of the G36K were built at the same time as the standard G36, many more were made by German special operations armorers using plans furnished by Heckler & Koch. The G36C does not exist in the Twilight 2000 timeline.

Merc 2000 Notes: As German peacekeepers became a more common sight in the world, their G36 rifles also became a more common sight. The problem with the stock had been largely solved by the end of 2003.

Weapon	Ammunition	Weight	Magazines	Price
G36	5.56mm NATO	3.6 kg	30	$814
G36E	5.56mm NATO	3.6 kg	30	$764
G36K	5.56mm NATO	3.3 kg	30	$698
G36C	5.56mm NATO	2.8 kg	20, 30	$683

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
G36/G36E	5	3	1-Nil	5/6	2	6	51
G36K	5	3	1-Nil	4/5	3	6	27
G36C	5	2	1-Nil	3/5	3	6	22

Heckler & Koch G41

Notes: This weapon was introduced in 1983 to replace the HK33 on the export market, and was issued to German troops in 1987 in small numbers as an interim weapon to replace their G-3s until the G-11 (which never came to fruition) could be brought into full production. It is basically an updated and upgraded HK33 assault rifle, made with more modern materials, and having the ability to use standard US/NATO magazines. As such, it was an interim design, never meant for general issue to the entire German Army, nor any of the other countries that were considering it. By the early 1990s, it was obvious that the G-11 was not going to ever be adopted, and the G41 also became a casualty. In addition, the worldwide glut of assault rifles (ranging to the ubiquitous M-16 and AK to the new designs coming out the former Soviet Union, China, and Eastern Europe) meant that there were already lots of assault rifles available at a much lower price than the G41. The German Army went with the then-new G36, and by 1996, Heckler & Koch was no longer including either the G41 (or the G-11) in its military weapons catalogs. There are rumors that Mexico and India bought small numbers of G41s, but I have not been able to confirm this; however, the San Marcos Marines and some special operations units (such as the Italian COMSUBIN, Israeli Col Moschin, and the Spanish NOCS) have small stocks of G41s and G41Ks. No country seems to be using them in large numbers. (In the US, in particular, the G41 is an extreme rarity – there reportedly only 3 of them in the US.)

In appearance, the G41 is quite reminiscent of the HK33 series (recognizably so), and yet also has enough differences that the two cannot be mistaken except at a glance. Internal differences between the G41 and HK33 series include bolt hold-open device after the last shot is fired, as well as a bolt catch (similar to that of the M-16A1). The ejection also has a hinged dust cover (the same idea as that on the M-16, but of course much different in appearance and design) and a forward assist which also acts as a brass deflector for left-handed shooters. Though the G41 can use older HK33 magazines, the primary magazines are meant to be STANAG-compatible magazines. The sights are essentially the same as those on the HK33, but have tritium inserts for night use. The G41 has a side-folding carrying handle at the center of balance (for the standard-length version). The G41 may be fitted with a MIL-STD-1913 rail, a carrying handle, ladder-type sights or a radial drum sight for use if the G41 is fitted with an underbarrel grenade launcher, or any number of other mounts for optics. The lower receiver is of light alloy, but most of the rest of the metalwork is steel; the stock is either synthetic or a standard Heckler & Koch sliding stock. The barrel is 17.72 inches long and is tipped with a flash suppressor. The pistol grip is of high-impact plastic and is hollow. In 1986, the G41 series was further modified; a strengthening sub-frame was added to the synthetic stock and pistol grip, and newer, stronger synthetics were used. The fire controls became ambidextrous, and the markings were slightly changed.

Variants of the G41 include the G41A2, with the sliding stock mentioned above. The G41K was also available; this is a short-barreled version (with a 14.96-inch barrel), normally with the sliding stock, but also available with a fixed synthetic stock. The G41K cannot take a bayonet, but can fire rifle grenades and mount underbarrel grenade launchers. The G41 INKAS and G41K INKAS are identical to their standard brethren, but have a standard IR laser aiming module mounted internally inside the charging handle tube.

Twilight 2000 Notes: The Heckler & Koch G41 was rushed into production in late 1994 when the G-11 became to expensive to produce and the G36 was not yet ready. It was realized that the G41 would serve as a stopgap measure to modernize the German military's assault rifles to meet modern standards (including STANAG magazines and optical sight mounts). With the outbreak of the Twilight War, the G41 saw service and proved to be an effective and reliable weapon. With the advent of the G36 design, the days of the G41 seemed to be short-lived; only the use of nuclear weapons forestalled its replacement by the newer design. The G41K, though not uncommon, is also not common. It was popular in the hands of rear-area troops as well as special ops types.

Merc 2000 Notes: The only large-scale customers of the G41 seem to be the military forces of El Salvador and Belize. This was

not enough to keep the productions lines for the G41 open, though spare parts are still being manufactured. As with the G41, the only large-scale customers of the G41K seem to be El Salvador and Belize. Their smaller-statured troops seemed to prefer this shorter version.

Weapon	Ammunition	Weight	Magazines	Price
G41	5.56mm NATO	4.1 kg	20, 25, 30, 40	$772
G41A2	5.56mm NATO	4.35 kg	20, 25. 30, 40	$792
G41K	5.56mm NATO	4.25 kg	20, 25, 30, 40	$751
G41KA2	5.56mm NATO	4.01 kg	20, 25, 30, 40	$771
G41 INKAS	5.56mm NATO	4.2 kg	20, 25, 30, 40	$1172
G41A2 INKAS	5.56mm NATO	4.45 kg	20, 25, 30, 40	$1192
G41K INKAS	5.56mm NATO	4.35 kg	20, 25, 30, 40	$1151
G41KA2 INKAS	5.56mm NATO	4.11 kg	20, 25, 30, 40	$1171

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
G41	3/5	3	1-Nil	6	2	3/5	46
G41A2	3/5	3	1-Nil	4/6	2	3/5	46
G41K	3/5	3	1-Nil	5	2	3/5	36
G41KA2	3/5	3	1-Nil	4/5	2	3/5	36

Heckler & Koch HK33

Notes: Introduced in 1965, the HK33 is essentially a G-3 7.62mm rifle scaled down to 5.56mm NATO dimensions. As the HK33 was never intended for large-scale use by German forces, it is normally heard referred to as the HK33E ("E" for export). The only official large-scale military sales were made to the Thai and Mexican armed forces, but the HK33 is one of those weapons that can be found just about anywhere. The civilian model is manufactured primarily in Great Britain instead of in Germany. Though I have been unable to nail down the exact date, military versions of the HK33 series have apparently been out of production since about 1990.

The HK33 uses delayed blowback operation with roller locking, like the G-3 series. It has a two piece bolt, however. Like late-production G-3s, the HK33 is built using as many stamped steel components as possible, including a stamped steel receiver. The primary variants of the HK33 have a fixed polymer stock (the HK33A2, considered the "standard" version of the HK33) and a 15.35-inch barrel, a fixed polymer stock with an integral folding bipod (the HK33A2SG), a sliding metal stock (the HK33A3), the HK33K with a 12.67-inch barrel and sliding stock (though a fixed polymer stock is optional), and the HK33SG1, optimized for use as a designated marksman's rifle. (The latter weapon will be found in German Sniper Rifles.) In addition, there is a kit available to allow any version to be modified for use with .22 Long Rifle ammunition for training purposes. All of these weapons may also be found with the option to fire 3-round bursts, fully automatic fire, or semiautomatic fire (with the exception of the training version). A civilian version of the HK33A2 capable only of semiautomatic fire is also available (the HK-93), and may be the best selling of the HK33 line.

The HK53 is an HK33 with a greatly abbreviated 8.3-inch barrel. Though the Germans classify the HK53 as a submachinegun due to its short barrel length, most of the Western world (particularly North and South American countries, as well as the Russians and Chinese) use the newer terms "short assault rifle" or "assault carbine." Depending on how you look at it, the HK53 is a vastly scaled-down G-3, a scaled-up MP-5 submachinegun, or a compromise between the two. Original production HK53s used a three-position fire selector (safe, semiautomatic, automatic), but this was quickly replaced with a four position selector (safe, semiautomatic, 3-round burst, automatic). The normal flash suppressor is replaced with a larger four-prong device designed specifically for the HK53; though it is a type of flash suppressor it's highly-effective design makes it function more like a muzzle brake as well as dampening muzzle flash and blast far better than the average flash suppressor (though it is rather larger than the typical assault rifle's flash suppressor). Provision is made for a wide variety of optical equipment and magazines (most HK33 or US/NATO magazines may be used). It cannot, however, use rifle grenades or mount a bayonet, and underbarrel grenade launchers which will fit on a standard HK53. The US Navy SEALs were noted users of the HK53 (as well as the HK33 and HK33K), until the M-4 and its variants became available. Knight Manufacturing has recently introduced an MWS (Modular Weapon System) kit for the HK53, consisting of a replacement handguard with three MIL-STD-1913 rails (one on each side of the handguard, and one underneath), a side-mounted optics mount (as the HK53's charging handle is on the top of the weapon, slightly offset to the left), and a variety of KAC's standard add-ons.

In 1972, as the vehicle that would eventually become the M-2 Bradley IFV was being developed, the US Army was also looking for a firing port weapon to use with the new vehicle. Among the entries for this competition was Heckler & Koch, and they entered a variant of the HK53 called the HK53 MICV. The HK53 MICV for the most part used a standard HK53 receiver, pistol grip, and mechanism; there were, however, numerous modifications made to the HK53 for the role. The front sight of the HK53 was removed, as were the handguards. The handguards were replaced by a simple ventilated barrel jacket and sleeve equipped with an attachment for the ball-and-socket joint of the US Army's developmental vehicle (then called the XM-723 MICV). An attachment point was added to the right side of the receiver, allowing a canvas bag-type brass catcher to be placed over the ejection port. (This brass catcher had the incidental effect of capturing any gasses from the firing of the weapon that didn't get ventilated outside of the vehicle.) The stock was removed, as was any capacity to mount either a fixed or folding stock, and a simple endcap closed the back of the receiver. Operation of the HK53 was modified so that the HK53 fired from an open bolt instead of the traditional H&K method of firing from a closed bolt (open-bolt operation allows for better cooling of the barrel and mechanism and made the HK53 more compatible with the XM-723's method of venting firing gasses outside of the vehicle). Finally, the original fire selector mechanism was used, though the

cyclic rate of the HK53 was almost doubled. In the end, however, the US Army decided to adopt the Colt M-231 instead; though Heckler & Koch continued to improve and shop around the HK53 MICV (particularly to the *Bundeswehr*, who was at the time looking for a firing port weapon for the Marder), the HK53 MICV eventually became one of those interesting designs that never went into use, and is now a very rare item.

Perhaps the rarest production version of the HK33 series, the HK32, appeared in 1965, though a short time later than the HK33 (despite the designation). With the HK32, Heckler & Koch hoped to break the Russian/Warsaw Pack/Chinese stranglehold on weapons firing the 7.62mm Kalashnikov cartridge by offering a rifle with a more modern design. Heckler & Koch designed magazines for the HK32; rumors state that early-production models could also use standard AK/RPK-type magazines. Prototype HK32s used a flash suppressor which was simply a thickened muzzle with slots cut into it; production examples use a flash suppressor similar to that of the HK33 series. For the most part, the HK32 is otherwise identical to the HK33 except for the changes necessary for the use of the 7.62mm Kalashnikov cartridge. There is also an exceedingly-rare variant of the HK32, the HK32K, which is a short-barreled variant corresponding to the HK33K. Though Heckler & Koch did in fact build and sell a small number of HK32s, to whom and when these sales occurred is largely unknown as well as undisclosed and unconfirmed. Rumors range from the US Navy SEALs and other special operations units to well-heeled civilian firearms enthusiasts. Production was always very low-rate, and stopped entirely in 1982. To complicate the issue a bit more, some custom firearms builders in the US (most notably Bill Fleming) have modified small numbers of HK-91s (civilianized G-3s) into rifles closely resembling HK32s.

The GR series of assault rifles is somewhat of a mystery – are they their own series of short assault rifles, are they a further subtype of the HK53 (in the case of the GR2) and HK33K (in the case of the GR3), or simply specially-modified HK53s and HK33s? For the purposes of these pages, I will treat them the way a slight majority of firearms experts seem to regard them – as subtypes of the HK53 and HK33. Development of the GR series began in the early- to mid-1980s (and there is even confusion about this); they were supposedly intended primarily for export and were not designed in response to any German Army or Federal Police requirement. Apparently they were not sold in any noticeable numbers to any military or police forces anywhere in the world, though they first began appearing in rather small numbers in special operations of a few countries (particularly in German special ops un its) in the late 1980s. Even today, GR-series rifles are rarely seen anywhere, and even when they are spotted, there may be one or two being used by even large (for special ops) units.

The GR2 and GR3 are believed to be mechanically virtually identical to the rest of the HK33 series. There are, however, numerous differences; the entire GR series are said to be able to use both standard H&K magazines designed for use with the HK33 series as well as US/NATO STANAG 5.56mm NATO magazines. The sliding-stock versions normally use stocks more reminiscent of the early MP-5 rather than the HK33 or HK53. The handguard seen on the GR series is usually the same as used on the MP-5 submachinegun, though the GR series is also quite capable of using standard HK33 and HK53 handguards, and a very few appear to have modified handguards based on the HK33 handguard, but with four-point MIL-STD-1913 rails attached. The rifling on early versions was optimized for older 5.56mm M-193 ammunition, though supposedly most are now equipped with 1:9 rifling twist rates to allow good performance with SS-109 or M-193 ammunition. At first, the receiver was topped with H&K proprietary optics mounts; these have now been largely replaced with MIL-STD-1913 rails. At first, the standard optic for use with the GR series was a rather large, specially-designed adjustable 1.5x scope (with some being permanently attached to the receiver of the rifle) that was heavily influenced by that mounted on the then-new Steyr AUG assault rifle, though the aiming reticule was more prominent as well as illuminated. Finishes seen have been black, an all-over forest-green/brown camouflage pattern, and a peculiar tan/green desert camouflage pattern (often referred to as “baby-shit camo”). The different colors all add their own modifiers to the designations, but essentially the GR series can be broken into a few basic types of weapons. The GR2 is similar to the HK53, with its 8.3-inch barrel, though the muzzle brake used is longer and beefier – and often, the GR2 is seen with the muzzle brake replaced with a long, heavy, open-prong-type flash suppressor. The GR3K is similar to the HK33K, with its 12.67-inch barrel, and the same muzzle brake or the flash suppressor as the GR2. The GR3E is sort of a mid-sized carbine, with a 15.35-inch barrel, and otherwise equipped in the same manner as other GR-series rifles. Game prices below reflect the use of the standard 1.5x optical sight (and its successors).

The MKEK T-50 is essentially the HK33A3 produced under license in Turkey, and using an M-4-type stock instead of the standard folding stock of the HK33A3. For game purposes, it is the same as the HK33A3.

Twilight 2000 Notes: This weapon often formed the core of military-type rifles issued to Western European militia units; in addition, it was difficult to find a community in the US or Central America where at least one person did not have either an HK33 or HK-93. Older HK-93s were seemingly easy to convert to fully automatic fire. The HK53 MICV was, in the Twilight 2000 timeline, the standard-issue firing port weapon for the Marder; as with the US M-231, many HK53s were yanked out of wrecked Marders and put into ground service, often modified to accept a sliding wire stock. In addition, the HK53 was issued to many other units, from cooks to special operations troops.

Merc 2000 Notes: The HK33 could turn up in the strangest places, such as the bodyguard element for the Zairian president, and the guards for diamond mines in South Africa. It is even rumored that a tribe of Rhade in the highlands of Vietnam are primarily armed with the HK33, though how the HK33s got there is unknown.

Weapon	Ammunition	Weight	Magazines	Price*
HK33A2	5.56mm NATO	3.65 kg	20, 25, 30, 40	$738
HK33A2SG	5.56mm NATO	3.83 kg	20, 25, 30, 40	$1112
HK33A3	5.56mm NATO	3.65 kg	20, 25, 30, 40	$758
HK33KA1	5.56mm NATO	3.42 kg	20, 25, 30, 40	$711
HK33KA2	5.56mm NATO	3.42 kg	20, 25, 30, 40	$731

HK33A2 Trainer	.22 Long Rifle	3.35 kg	10	$223
HK53	5.56mm NATO	3 kg	20, 25, 30, 40	$733
HK53 MICV	5.56mm NATO	2.72 kg	20, 25, 30, 40	$501
HK32A2	7.62mm Kalashnikov	4.01 kg	30, 40	$1105
HK32A3	7.62mm Kalashnikov	4.01 kg	30, 40	$1125
HK32KA2	7.62mm Kalashnikov	3.76 kg	30, 40	$1081
HK32KA3	7.62mm Kalashnikov	3.76 kg	30, 40	$1101
GR2A2 (With Flash Suppressor)	5.56mm NATO	3.37 kg	20, 25, 30, 40	$848
GR2A2 (With Muzzle Brake)	5.56mm NATO	3.46 kg	20, 25, 30, 40	$874
GR2A3 (With Flash Suppressor)	5.56mm NATO	3.37 kg	20, 25, 30, 40	$828
GR2A3 (With Muzzle Brake)	5.56mm NATO	3.46 kg	20, 25, 30, 40	$894
GR3KA2 (With Flash Suppressor)	5.56mm NATO	3.84 kg	20, 25, 30, 40	$894
GR3KA2 (With Muzzle Brake)	5.56mm NATO	3.94 kg	20, 25, 30, 40	$940
GR3KA3 (With Flash Suppressor)	5.56mm NATO	3.84 kg	20, 25, 30, 40	$874
GR3KA3 (With Muzzle Brake)	5.56mm NATO	3.94 kg	20, 25, 30, 40	$920
GR3EA2 (With Flash Suppressor)	5.56mm NATO	3.93 kg	20, 25, 30, 40	$921
GR3EA2 (With Muzzle Brake)	5.56mm NATO	4.03 kg	20, 25, 30, 40	$967
GR3EA3 (With Flash Suppressor)	5.56mm NATO	3.93 kg	20, 25, 30, 40	$901
GR3EA3 (With Muzzle Brake)	5.56mm NATO	4.03 kg	20, 25, 30, 40	$947

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
HK33A2	3/5	3	1-Nil	6	2	3/6	37
HK33A2SG	3/5	3	1-Nil	6	2	3/5	37
(With Bipod)	3/5	3	1-Nil	6	1	2/3	48
HK33A3	3/5	3	1-Nil	4/6	2	3/5	37
HK33KA1	3/5	3	1-Nil	5	2	3/6	28
HK33KA2	3/5	3	1-Nil	4/5	2	3/6	28
HK33A2 Trainer	SA	1	Nil	6	1	Nil	33
HK53	3/5	2	1-Nil	3/4	2	3/5	13
HK53 MICV	10	2	1-Nil	2	2	9	13
HK32A2	3/5	3	2-Nil	6	3	5/8	42
HK32A3	3/5	3	2-Nil	4/6	3	5/8	42
HK32KA2	3/5	3	2-Nil	5	3	5/9	31
HK32KA3	3/5	3	2-Nil	4/5	3	5/9	31
GR2A2 (Flash)	3/5	2	1-Nil	3/4	2	3/5	14
GR2A2 (Brake)	3/5	2	1-Nil	3/4	2	2/4	14
GR2A3 (Flash)	3/5	2	1-Nil	4	2	3/5	14
GR2A3 (Brake)	3/5	2	1-Nil	4	2	2/4	14
GR3KA2 (Flash)	3/5	3	1-Nil	4/5	2	3/5	28
GR3KA2 (Brake)	3/5	3	1-Nil	4/5	2	2/4	28
GR3KA3 (Flash)	3/5	3	1-Nil	5	2	3/5	28
GR3KA3 (Brake)	3/5	3	1-Nil	5	2	2/4	28
GR3EA2 (Flash)	3/5	3	1-Nil	4/5	2	3/5	38
GR3EA2 (Brake)	3/5	3	1-Nil	4/5	2	2/4	38
GR3EA3 (Flash)	3/5	3	1-Nil	5	2	3/5	38
GR3EA3 (Brake)	3/5	3	1-Nil	5	2	2/4	38

*For those versions which come in burst/automatic selective fire versions, subtract $182 if a version is chosen which has only burst or only automatic fire capability. (Note that the GR series does not fall into this category as far as is known, though there is no reason that this should be true other than that the GR series seems to have been with only one type of fire selector mechanism.)

Heckler & Koch HK416

Notes: At the request of the US special operations community, Heckler & Koch in 2002 decided to address the current problems with the M-16/M-4 series and submit the resulting weapons to the US SCAR competition. The result of this is the HK416, which is basically a vastly-improved version of the M-16/M-4 series. Of course, Colt sued Heckler & Koch almost immediately for patent infringement (an action which made the special operations community decidedly unhappy, the outcome of which is still uncertain), and the US government barred the HK416 from the SCAR competition, citing that Heckler & Koch was a company supported by the German government (it is not) and thus not eligible for the competition. There is a strong sense that NIH (not invented here) is rearing its ugly head, and that the US government is rigging the competition in favor of Colt. In any case, the future of the HK416 is in serious

doubt at present. (By the way, the XM-8 has also been barred from the SCAR competition, for the same alleged reasons.)

The HK416 is similar in appearance to the various SOPMOD variations of the M-16 and M-4. The handguards have four MIL-STD-1913 rails for accessories, and the top of the receiver has another such rail for optics or other accessories. Heckler & Koch's first step was to dump the Stoner direct gas operation system, which basically contributes to the fouling of the rifle (it has been described as the system which "craps where it eats"). It was replaced by a G36-style of operation, which uses a sort of two-stage method of gas tapping known as "short recoil piston and pushrod," that prevents most of the carbon from being dumped in the barrel, and which can be cleaned by the operator, unlike the M-16's system. This operating system also comes in a kit which can be used to modify existing M-16s and M-4s. The locking system and bolt carrier group have also been improved, as has been the recoil spring system, the barrel attachment system, and the buffer group. The rifle is also deliberately made heavy to further reduce barrel climb.

Despite the suit by Colt, and despite its having been disqualified from the SCAR competition, the HK416 *is* being used by US and even some British and Australian special operations units in Afghanistan and Iraq. Most of these weapons were bought by the members of those units with their own money, and they say they are worth every penny.

Though Heckler & Koch has been aggressively marketing the HK416 in the 5.56mm NATO chambering, they were also for a time quietly testing an HK416 chambered for the 6.8mm SPC cartridge. Though their work with the 6.8mm SPC-chambered HK416 has apparently put on hold (they are possibly investigating different weapon designed to fire the 6.8mm SPC cartridge), the rumor mill says that there is some interest in this version of the HK416 from members of the special operations communities of several countries, and especially of the US. Figures are given below for this possible future version of the HK416, but they are provisional, educated guesses on my part, and should be used only for the *Twilight 2000* game and not taken as definitive information.

The HK417 is essentially an HK416 up-scaled to fire 7.62mm NATO ammunition. The intended market is the US, though Heckler & Koch has also had interest from other countries; US special operations units as well as some from other countries have reportedly combat-tested the HK417 in Afghanistan and had favorable reviews. The HK417 uses the same buttstock as the M27 below, with the same controls as the HK416 and same general operation. Though Heckler & Koch makes dedicated magazines for the HK417 in a variety of materials (including translucent plastic), the HK417 can also take G-3 magazines, or any magazine compatible with the G-3.

Recently, the US Marines have given the go-ahead for the acquisition of a new light automatic rifle for use by infantry in urban combat. This is the M27 IAR (Infantry Automatic Rifle). The M27 is a version of the HK416 which will replace the M-249 in some roles, and it is essentially a heavy-barreled version of the HK416. There has been considerable skepticism about the necessity of the M27, as it is in fact little more than a heavy-barreled, piston-driven M-16 with a different buttstock and standard four-point MIL-STD-1913 rails. It still fires from a closed bolt, and is thus still subject to same chamber and barrel heating as the M-16. There were better entries into the IAR competition from both Colt and FN, and it appears that the M27 was basically the best *political* choice, rather than the best *tactical* choice; some have said that the M27 was the easiest way to get an improvement over their M-16s and M-4s, and the real intent of the M27 is to eventually replace all of their M-16s and M-4s. The biggest difference between the M27 and the M-16/M-4 series is the buttstock, which is essentially an M-4-type stock with a ventilated rubber recoil pad, ambidextrous controls, and the heavy 16.5-inch barrel. Of course, being a variant of the HK416, it also uses a piston-driven gas system rather than the Stoner direct gas impingement system. The Marines intend the M27 to be used with a standard foregrip, ACOG or reflex-type sight, and sling swivels. In addition to 90-round MWG drums and 100-round Beta C-Mags, the Marines have also procured a number of 150-round Armtac SAW-MAGs (sort of an enlarged C-Mag).

Civilian versions of these rifles also exist. The MR556 is chambered for 5.56mm NATO and limited to 16.5" and 20" barrels, and the MR-308 is chambered for 7.62mm NATO and also limited to 16.5" and 20" barrels. Both are semiautomatic-only rifles, and design differences have made it virtually impossible to convert them to automatic fire. They are identical to their military counterparts for game purposes except for their lack of automatic fire capability.

Umarex USA makes a version in .22 Long Rifle called the HK416D. Umarex is known primarily for pellet and BB guns; this is one of two new offerings in .22 rimfire. The version is essentially an MR556 with a 20-inch barrel and has the folding stock and MIL-STD-1913 rails of its larger brethren. The barrel is tipped with a standard flash suppressor, and the suppressor can be removed and replaced with a silencer. The forward assist is a faux forward assist; it looks normal, but is simply a plug and non-functional. Operation is by blowback instead of gas, like most rimfire ARs. The HK416 D has a bolt hold-open; it not only holds the bolt open after emptying the magazine, but afterwards, and the bolt can also be locked open. The HK416 D145RS is essentially the same rifle, but is a joint venture between Heckler and Koch and Walther; if anything, the difference is in the better fit and finish.

In late 2010, Heckler & Koch introduced an update of the MR556, called the MR556A1. Other than being semiautomatic-only, many experts say the MR556A1 is better than even the HK416. The MR556A1 is replete with MIL-STD-1913 rails, on four sides of the handguard and atop the receiver (and continuous with the rail on top of the handguard). The firing pin is spring-loaded, ensuring a proper strike on the primer. The pistol grip is ergonomically improved, as is the sliding stock; the stock's buttplate can also be removed to real compartments for a cleaning kit and for batteries. The MR556A1 uses a 16.5-inch cold hammer forged heavy-profile match-quality barrel, improving accuracy. The bore also narrows ever so slightly in its internal diameter, which further increases accuracy (though not measurable in game terms). Part tolerances are very tight; Heckler & Koch's goal with the MR556A1 is no play between the upper and lower receiver. The tolerances were achieved partially through a modification of the takedown pins – so much that a special tool (normally stored in the stock) is requires to open the lower and upper receiver halves, and to push the takedown pins back in again. The MR556A1 uses Heckler & Koch-style diopter rear and open-topped front sights, though these are mounted on the MIL-STD-1913 rails and can be removed and replaced if desired. The MR556A1 has an ambidextrous selector and enlarged bolt lock, charging handle wings, and magazine release; the magazine well is also flared. The MR556A1 was designed to be a match rifle instead of simply a general-purpose rifle.

Twilight 2000 Notes: These rifles are not available in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
HK416 (10.5" Barrel)	5.56mm NATO	3.31 kg	10, 20, 30	$600
HK416 (12.5" Barrel)	5.56mm NATO	3.37 kg	10, 20, 30	$621
HK416 (14.5" Barrel)	5.56mm NATO	3.42 kg	10, 20, 30	$642
HK416 (16.5" Barrel)	5.56mm NATO	3.47 kg	10, 20, 30	$662
HK416 (20" Barrel)	5.56mm NATO	3.57 kg	10, 20, 30	$698
HK416 (10.5" Barrel)	6.8mm SPC	3.69 kg	8, 18, 28	$667
HK416 (12.5" Barrel)	6.8mm SPC	3.9 kg	8, 18, 28	$688
HK416 (14.5" Barrel)	6.8mm SPC	4.11 kg	8, 18, 28	$708
HK416 (16.5" Barrel)	6.8mm SPC	4.17 kg	8, 18, 28	$729
HK416 (20" Barrel)	6.8mm SPC	4.29 kg	8, 18, 28	$765
HK417 (10.5" Barrel)	7.62mm NATO	4.41 kg	5,10, 20	$1043
HK417 (12.5" Barrel)	7.62mm NATO	4.66 kg	5,10, 20	$1064
HK417 (14.5" Barrel)	7.62mm NATO	4.91 kg	5,10, 20	$1085
HK417 (16.5" Barrel)	7.62mm NATO	4.98 kg	5,10, 20	$1106
HK417 (20" Barrel)	7.62mm NATO	5.12 kg	5,10, 20	$1132
M27	5.56mm NATO	3.6 kg	20, 30	$674
HK416D	.22 Long Rifle	3.57 kg	10, 20, 30	$281
MR556A1	5.56mm NATO	3.9 kg	10, 20, 30	$608

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
HK416 (10.5", 5.56mm)	5	2	1-Nil	3/4	2	5	20
HK416 (12.5", 5.56mm)	5	3	1-Nil	4/5	2	6	27
HK416 (14.5", 5.56mm)	5	3	1-Nil	4/5	2	5	34
HK416 (16.5", 5.56mm)	5	3	1-Nil	4/6	2	5	42
HK416 (20", 5.56mm)	5	3	1-Nil	5/6	2	5	55
HK416 (10.5", 6.8mm)	5	3	1-1-Nil	4/5	2	6	23
HK416 (12.5", 6.8mm)	5	3	1-1-Nil	4/5	2	6	37
HK416 (14.5", 6.8mm)	5	3	1-2-Nil	4/6	2	6	38
HK416 (16.5", 6.8mm)	5	3	1-2-Nil	5/6	2	6	47
HK416 (20", 6.8mm)	5	3	1-2-Nil	5/7	2	6	62
HK417 (10.5")	5	4	2-Nil	4/5	3	7	22
HK417 (12.5")	5	4	2-Nil	4/6	3	7	30
HK417 (14.5")	5	4	2-3-Nil	5/6	3	7	38
HK417 (16.5")	5	4	2-3-Nil	5/7	3	7	47
HK417 (20")	5	4	2-3-Nil	6/7	3	7	62
M27	5	3	1-Nil	4/6	2	5	43
HK416D	SA	1	Nil	5/6	1	Nil	41
MR556A1	SA	3	1-Nil	4/6	2	Nil	46

VG 1-5

Notes: The VG 1-5 (*Volkssturm Gewehr*, or People's Rifle) was a weapon born of desperation. They were designed to be cheap and easy to manufacture weapons for last-ditch defense, issued to the Volkssturm (Home Guard) and other last-ditch defense organizations such as the Werewolves in the closing days of World War 2 when it was obvious that Germany herself would be invaded. As such, it is a very crude, but reasonably effective weapon that is unfortunately prone to stoppages and wears out quickly. As a result, the VG 1-5s were usually lubricated very liberally, which attracted dirt and caused its own problems. Most of these weapons seemed to be concentrated in and around Berlin itself, used against the Red Army.

Twilight 2000 Notes: Although this is not a modern weapon, it is a very good example of what factories such as Wojo works in Krakow or any of the other innumerable such post-Twilight War gunworks might produce.

Weapon	Ammunition	Weight	Magazines	Price
VG 1-5	8mm Kurz	4.52 kg	30	

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
VG 1-5	SA	3	2-Nil	5	3	Nil	40

Walther MKb42(W)

Notes: When The German Army first issued the requirement for what would become the assault rifle, Walther first responded with

the MKb42(W), and it was first classified by the Nazi Army as a “machine carbine.” Though some 8000 were built and about 5000 combat-tested, the MKb42(W) revealed numerous deficiencies and ultimately production ended early, in favor of the MKb42(H) and its successors.

The MKb42(W) was designed to be as simple and cheap as possible, made primarily of simple steel stampings and pressings instead of milled, machined, or worked steel. Most importantly, it fired the new 8mm Kurz round, which was modified from the 8mm Mauser round for just such a rifle. The MKb42(W) was a gas-operated design which used a form of telescoping bolt, unusual in a rifle. Barrel length was short at 16 inches, tipped by a slotted flash suppressor. Perhaps the biggest strike against the Walther design in the minds of the soldiers were its sights; the rear sight was mounted ahead of the receiver in what is now called the “scout position,” and the front sight post was so swde that the shooter’s target was eclipsed by the post at 200 meters. In addition, the trigger pull was very heavy, leading to inaccurate aimed fire. In the eyes of the Nazi government, the biggest liability was the complicated and expensive nature of the MKb42(W).

Weapon	Ammunition	Weight	Magazines	Price
MKb42(W)	8mm Kurz	4.42 kg	30	$755

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
MKb42(W)	5	4	2-Nil	6	3	8	44

AMD-65M

Notes: In 1965, the Hungarians started producing a modified copy of the AK-47s they were already locally building (called by the Hungarians the AKM-63). The chopped the barrel, added a muzzle brake, and replaced the plastic stock they were using for the AKM-63 with a folding metal stock. Some were also built with a forward pistol grip for more control. These modifications were made to allow the AMD-65M to function better as a firing port weapon in their BMP-1 ICVs.

Some time later, some AMD-65Ms was also modified; the muzzle brake was replaced with a rifle grenade launching attachment which almost takes the barrel length back to normal AK-47 length. The forward pistol grip was deleted, but the folding stock retained. Added to the folding stock was a thick rubber pad to ease recoil when firing rifle grenades. These weapons are also known as AMD-65Ms.

The AMD-65M is almost never seen outside of Hungarian service, but in recent years, they have sometimes been seen in the hands of US Army Special Forces troops operating in Afghanistan.

Twilight 2000 Notes: Like many firing port weapons, the AMD-65M has been removed from many wrecked vehicles and used as a ground weapon. The AMD-65M with the grenade launching attachment was, of course, not meant for this role, and was always used as an infantry weapon.

Weapon	Ammunition	Weight	Magazines	Price
AMD-65M	7.62mm Kalashnikov	3.27 kg	30	$838
AMD-65M w/GL	7.62mm Kalashnikov	3.19 kg	30	$813

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AMD-65M	5	3	2-Nil	4/5	3	7	31
AMD-65M w/GL	5	3	2-Nil	4/5	4	9	40

IOFB INSAS

Notes: This is the new Indian assault rifle, based on the AK series and the Galil. Though 7000 of these weapons were due for delivery by 1994, service adoption was complicated by the lack of 5.56mm NATO ammunition in the country, and by 1998, the INSAS had been issued only to special units such as special operations units and paratroopers. 50 million rounds of 5.56mm NATO ammunition were ordered from Israel in 1996 (with an option for 50 million more), but this order was cut by Israel (possibly due to political pressure from the US), before one-quarter of the initial batch actually delivered, and the remainder of the order was not delivered until recently. In the meantime, India was able to order a huge amount of AKMS and ammunition from Romania, and many of the units slated to receive the INSAS got AKMs instead. Indian troops that did receive the INSAS are reportedly pleased with it, finding it to very reliable and accurate, and by 2006, some 300,000 INSAS assault rifles were in service with the Indian Army.

In a way, the INSAS could almost be considered a "Frankenweapon;" the basic operation is very close to that of the AKM and AK-74 series, along with the stamped steel receiver. However, the INSAS also uses a FAL-like manual gas regulator and gas cutoff for use with rifle grenades, the charging mechanism and charging handle of the Heckler & Koch G-3 and HK-33 (including its position on left side of the fore-end), and a folding carrying handle similar to that of the L-1A1. The stock may be made from wood or polymer, or be a folding metal stock. Standard magazines contain 20 rounds and are made from translucent polymer, but similar 30-round magazines (intended primarily for use in the INSAS LMG) will also fit into the INSAS assault rifle. (These translucent polymer magazines are actually modified from those of the Steyr AUG.) 22-round light alloy magazines were used during the INSAS's development, but not officially adopted; however, such a large quantity of these magazines were made that they are issued quite often.

In 2007, a short version of the INSAS was designed, called the Kalantak. However, by 2010 it was still not in large-scale production, and only very limited issue had been made. The Kalantak has a shortened 13.11-inch barrel tipped by a standard INSAS flash suppressor, along with appropriately-shortened handguards. The handguards and pistol grip are of polymer, and the stock is side-folding. The Kalantak has a short length of MIL-STD-1913 rail in the scout position at the front of the receiver, with standard iron sights also being present. The rear sight is an aperture sight right now, but a drum-type sight is in development.

The Excalibur is another CQB version of the INSAS, one that has already seen large-scale issue and combat-testing. The Excalibur is designed for both police and military use; it has a 15.75-inch barrel which has reinforcement in the right places for bayonet fighting. The stock is folding and skeletonized. Atop the receiver is a MIL-STD-1913 rail, and newer-issue Excaliburs have MIL-STD-1913 rails atop and under the handguards. After its extensive testing, the Excalibur was deemed insufficient for use.

The newest version of the INSAS is the MSMC carbine (called the Amogh, and then the MINSAS, in development; MSMC stands for Modern SubMachine Carbine). Also designed for CQB, the biggest change from the rest of the INSAS series is the chambering of the MSMC for the new 5.56mm MINSAS round. Furniture is largely sheet steel enclosed in polymer, with receiver and working-part construction of steel. The current version has a very short length of MIL-STD-1913 rail atop the receiver primarily for small, reflex-type sights, and the handguards do not have any such attachment rails; a reflex-type sight is issued with the MSMC. The MSMC has a 13-inch barrel with the same sort of flash suppressor as the rest of the INSAS series, and a sliding stock on struts with a small polymer butt. Unusually for such a small weapon, the MSMC can take a bayonet. The magazine fits into the pistol grip, which connects to a long, wide trigger guard, big enough to enclose the fingers of the shooter's entire shooting hand.

Twilight 2000 Notes: Three production batches were built before 1998 Pakistani air strikes put the INSAS production lines out of action; production stopped after a little over 18,000 rifles and did not start again until nearly 2020. Low-scale production of 5.56mm NATO rounds began in India in mid-1997, but production never kept up with demand, and even many special units went back to the AKM and FN-FAL. The Kalantak, Excalibur, and MSMC do not exist in the Twilight 2000 timeline.

Merc 2000 Notes: Production and adoption of the INSAS was largely discontinued due to budgetary reasons in 1996; after this, Indian troops were armed mostly with a combination of older Russian and Eastern European-made weapons.

Weapon	Ammunition	Weight	Magazines	Price
INSAS (Wood Stock)	5.56mm NATO	3.28 kg	20, 22, 30	$576
INSAS (Polymer Stock)	5.56mm NATO	3.18 kg	20, 22, 30	$586
INSAS 2B	5.56mm NATO	3.25 kg	20, 22, 30	$606
Kalantak	5.56mm NATO	3.31 kg	20, 22, 30	$734
Excalibur	5.56mm NATO	3.81 kg	20, 22, 30	$585
MSMC	5.56mm MINSAS	2.8 kg	30	$431

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
INSAS (Wood or Polymer Stock)	3	3	1-Nil	6	3	4	48
INSAS 2B	3	3	1-Nil	5/6	2	4	48
Kalantak	3/5	3	1-Nil	4/6	2	4/6	29
Excalibur	5	3	1-Nil	4/6	2	6	39
MSMC	5	2	1-1-Nil	3/5	3	6	33

IOFB Zittara

Notes: In 2006, the Indian Army expressed to IMI in Israel their interest in the Tavor series, and specifically the MTAR and MTAR

9mm (though they left the door open for the purchase of other members of the Tavor family). The Indian Army has invested about $20 million in the acquisition of these MTARs and ancillary equipment, and deliveries appear to have begun in mid-2007. These MTAR variants, called the Zittara series by the Indians, are destined to equip the Indian Army's best special operations units.

The Indian variant of the MTAR-21, the Zittara Assault Rifle, is largely the same as the MTAR-21 in most respects: it is topped with a MIL-STD-1913 rail, able to take most underbarrel 40mm grenade launchers (given the right adapters), and equipped under most circumstances with the Israeli-made MARS sight – an integrated unit with a low-magnification sight, a red-dot reflex sight, day/night channels, and a laser aiming module. The sight can also take clip-on NVGs. The barrel of the Zittara, however, is 12.99 inches long – over 3 inches longer than that of its MTAR-21 parent. The flash suppressor is also (very) slightly different, a concession to local manufacturing methods, and the top MIL-STD-1913 rail is a longer than that found on the MTAR-21. Primarily due to the longer barrel and local manufacturing methods, the Zittara assault rifle is also a little heavier than the MTAR-21.

The Zittara shares with the MTAR-21 the ability to use kits to convert the Zittara into a submachinegun; however, the Zittara can also be converted into a sort of PDW/high-power SMG, firing a round based on the Colt's experimental 5.56mm MARS round (no relation to the MARS sight). The 9mm Parabellum version uses the same barrel length as the Zittara assault rifle, but has no flash suppressor, and can use a locally-produced 30-round magazine (rumored to be based upon the Sten magazine) as well as Uzi magazines. The 9mm Parabellum version, like the MTAR 9mm, can also have its barrel replaced with barrel that has an integral silencer.

The High-Power SMG version also uses the same 12.99-inch barrel, but the flash suppressor is retained. The High-Power SMG version is fed by a 30-round magazine designed for the purpose. The cyclic rate of fire is slightly higher than that of the Zittara Assault Rifle, but the increase in cyclic rate is inconsequential for game purposes.

Twilight 2000 Notes: The Zittara Series is not available in the Twilight 2000 timeline.

Merc 2000 timeline: In the Merc 2000 timeline, the Indians have kept their Zittaras quite close, and have never exported them. Of course, some Zittaras have inevitably been captured by the Pakistanis, and the Pakistanis are reportedly working on reverse-engineering them.

Weapon	Ammunition	Weight	Magazines	Price
Zittara Assault Rifle	5.56mm NATO	3 kg	20, 30	$1063
Zittara SMG (Standard Barrel)	9mm Parabellum	2.59 kg	25, 30, 32, 40	$1039
Zittara SMG (Silenced Barrel)	9mm Parabellum	3.29 kg	25, 30, 32, 40	$1179
Zittara High-Power SMG	5.56mm MINSAS	2.85 kg	30	$943

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Zittara Assault Rifle	5	3	1-Nil	4	2	6	26
Zittara SMG (Standard)	5	2	Nil	4	1	3	30
Zittara (Silenced, Standard Ammo)	5	2	Nil	5	1	3	25
Zittara (Silenced, Subsonic Ammo)	5	2	Nil	5	1	2	23
Zittara High-Power SMG	5	2	1-1-Nil	4	2	6	18

Pindad SS-1

Notes: The SS-1 series of assault rifles are essentially license-built versions of the Belgian FNC, with a few changes (mostly to suit Indonesian manufacturing methods), which produce some minor detail, weight, and dimension changes. The standard SS-1s are optimized for the SS-109 round, with a 1:7 rifling twist. They use a MIL-STD-1913 rail atop the receiver to mount optics.

There are five main variants of the SS-1: the SS-1-V1 is the standard version, with 17.7-inch barrel and a side-folding tubular metal stock; the SS-1-V3 is identical except for its fixed polymer stock. (All SS-1 variants have stocks which are shorter in pull than the normal FN stock, due to the smaller stature of the average Indonesian soldier.) The SS-1-V2 is a carbine version with a 14.3-inch barrel, but is otherwise identical. The SS-1-V4 is a special police model, mostly identical to the SS-1-V1 but locked to fire only on semiautomatic and with a different flash suppressor. The SS-1-V5 is a short assault rifle with a 9.9-inch barrel tipped with a muzzle brake instead of a flash suppressor; it is generally issued only to Indonesian special operations units and certain government bodyguard details, and is the CQB model of the SS-1. The SS-1-V1 and SS-1-V2 versions can fire Western-type rifle grenades of all types, and the SS-1-V1 may also mount the Pindad SPG-1A underbarrel grenade launcher or several Western-type grenade launchers. The SS-1-V4 version may also fire rifle grenades, but its flash suppressor only allows the firing of certain riot-control type grenades. The SS-1-V5 cannot fire rifle grenades, mount an underbarrel grenade launcher, or mount a bayonet.

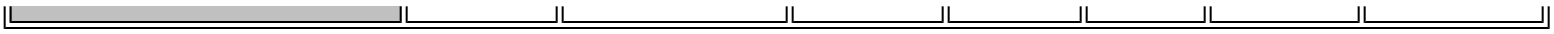
In addition, there are two limited production variants of the SS-1 series, designed for use primarily by police forces (as the ammunition comes in several special rubber antiriot rounds in addition to standard-type rounds). They are known as the Sabhara-V1 and Sabhara-V2, and their most unusual feature is the ammunition they fire – a locally-produced round which is a 5.56mm NATO case necked up to accept the bullet of a 7.62mm NATO round, and called the MU-11. Both are equipped with folding stocks; the Sabhara-V1 uses a 14.3-inch barrel with a flash suppressor, while the Sabhara-V2 has a 10-inch barrel with a muzzle brake.

Twilight 2000 Notes: The SS-1 series does not exist in the Twilight 2000 timeline.

Merc 2000 Notes: As with many weapons from this part of the world, the SS-1 series are mercenary favorites.

Weapon	Ammunition	Weight	Magazines	Price
SS-1-V1	5.56mm NATO	3.8 kg	30	$781
SS-1-V2	5.56mm NATO	3.7 kg	30	$746
SS-1-V3	5.56mm NATO	3.8 kg	30	$761
SS-1-V4	5.56mm NATO	4 kg	30	$775
SS-1-V5	5.56mm NATO	3.3 kg	30	$747
Sabhara-V1	7.62mm MU-11	4.19 kg	20	$1235
Sabhara-V2	7.62mm MU-11	4.14 kg	20	$1233

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
SS-1-V1	3/5	3	1-Nil	4/6	2	3/6	46
SS-1-V2	3/5	3	1-Nil	4/5	2	3/6	33
SS-1-V3	3/5	3	1-Nil	6	2	3/6	46
SS-1-V4	SA	3	1-Nil	4/6	2	Nil	46
SS-1-V5	3/5	2	1-Nil	3/4	2	3/4	18
Sabhara-V1	3/5	4	2-Nil	5/6	3	5/9	38
Sabhara-V2	3/5	3	2-Nil	4/5	2	3/5	21



Arsenal USA SLR-105

Notes: This Bulgarian-American product is basically a semiautomatic civilian version of the AK-74, with a few improvements. When first introduced in 2002, the Brady Gun Ban was in still effect, so the SLR-105 had no bayonet lug or sling swivels and special magazines with a capacity of ten rounds were made for the SLR-105. In addition, the normal flash suppressor was removed and replaced with a muzzle brake of US design and compliant with NATO threads. In addition, the stock is made from NATO standard synthetic material instead of wood. After the sunset of the Gun Ban, a new version, the SLR-105A1 was made, with a bayonet lug, sling swivels, and the ability to use standard AK-74 magazines (in addition to the 10-round magazines already in circulation). The stock and muzzle brake were retained on the new model. Other improvements include a new trigger disconnector that eliminates the "trigger slap" which is common in AK-series rifles; in addition, the new trigger group is simply better than the standard AK-74's trigger group, with no creepy feeling and a light pull. The SLR-105A1 is also available with a Russian-style scope rail (mounted on the left side of the receiver); this version is known as the SLR-105A1R. All these versions shoot identically for game purposes.

A genuine AK-74 is now available in the US; though it too is semiautomatic-only, for all other purposes, it is essentially a standard (Bulgarian version) of the AKS-74. As it is a post-ban weapon, this includes the AK-74-type flash suppressor/muzzle brake and even a bayonet lug. An AKS-74 version is also sold by Arsenal USA, and the left-side sight mounts are available for both types. Stats are included here for completeness.

Twilight 2000 Notes: These rifles do not exist in the Twilight 2000 timeline (nor does Arsenal USA, for that matter).

Merc 2000 Notes: Same as above.

Weapon	Ammunition	Weight	Magazines	Price
SLR-105	5.45mm Kalashnikov	3.22 kg	10	$560
SLR-105A1	5.45mm Kalashnikov	3.22 kg	10, 30, 40, 45, 60, 75D, 90	$560
AK-74	5.45mm Kalashnikov	3.18 kg	10, 30, 40, 45, 60, 75D, 90	$560
AKS-74	5.45mm Kalashnikov	3.18 kg	10, 30, 40, 45, 60, 75D, 90	$580

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
SLR-105 (All)	SA	3	1-Nil	5	2	Nil	46
AK-74	SA	3	1-Nil	5	2	Nil	45
AKS-74	SA	3	1-Nil	4/5	2	Nil	45

Krebs KTR-03S

Notes: A joint project of Krebs Custom Firearms of the US and Saiga of Russia, the KTR-03S (Krebs Tactical Rifle, 103 version, and S for Saiga) is a highly modified AK-47/AKM, modified almost beyond recognition. Saiga supplies the base rifles, which are 7.62mm versions of the AK-103 version of the AK series. Krebs then goes to work, tightening down the tolerances between parts (and replacing them entirely when necessary), adding a rear peep sight over the modified receiver cover, strengthening and fluting the gas tube, adding a flash suppressor, and adding a MIL-STD-1913 rail atop the receiver and 3-position (3, 6, and 9 o'clock) MIL-STD-1913 rails on a modified handguard for accessories. The furniture is all-synthetic instead of wood, including a Galil-type pistol grip and safety. Markings are in English instead of Russian. The trigger is two-stage. Automatic versions are available to qualified buyers, but the lion's share of these rifles are made in semiautomatic.

Twilight 2000 Notes: This rifle is not available in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
KTR-03S	7.62mm Kalashnikov	2.95 kg	30, 40, 45, 60, 75D	$811

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range

KTR-03S	5	4	2-Nil	6	4	10	46

IDIO S-5.56

Notes: Supposedly designed by the Iranian Defense Industries Organization, it is almost certain that the S-5.56 is in fact an almost exact copy of the Chinese CQ assault rifle (which is itself a close copy of the M-16A1). The S-5.56 is not intended for domestic use; rather, the S-5.56, according to the Iranians, is meant for export sales. (With the Iranians' history, I can easily see these weapons ending up in the hands of terrorist organizations as well.) The S-5.56 appears to be identical in operation to the CQ (and therefore close to the M-16A1's operation), but uses a different pistol grip than the CQ. The S-5.56 also comes in two versions: the S-5.56A1, with a 19.9-inch barrel and 1:12 rifling to optimize it for use with M-193-type cartridges, and the S-5.56A3, with a 20-inch barrel and a 1:7 rifling twist to optimize it for firing SS-109-type ammunition. (Apparently, neither the Chinese nor the Iranians know that if you give a 5.56mm NATO-firing rifle about a 1:9 rifling twist, it is capable of properly stabilizing both M-193-type and SS-109-type ammunition…) The two versions are otherwise identical. It is not known if any sales or giveaways of any type have been made for the S-5.56.

The Sudanese make a copy of the S-5.56 Assault Rifle under license (which makes it sort of interesting – a licensed copy of a licensed copy of an *unlicensed* copy) called the Terab. The unusual difference is while it mostly conforms to the IDIO base, but it chambered for 7.62mm NATO, making more of a copy of the AR-10. The Sudanese also used the AR-10 as its standard service rifle from 1957-89. Recent updates are more straightforward copies of the S-5.56, firing 5.56mm NATO.

Twilight 2000 Notes: This assault rifle does not exist in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
S-5.56A1	5.56mm NATO	3.22 kg	5, 10, 20, 30	$605
S-5.56A3	5.56mm NATO	3.22 kg	5, 10, 20, 30	$606
Terab	7.62mm NATO	3.3 kg	5, 10, 20	$1023
Terab	5.56mm NATO	3.3 kg	5, 10, 20, 30	

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
S-5.56A1/A3/Terab (5.56mm)	5	3	1-Nil	6	3	6	55
Terab (7.62mm)	5	4	2-3-Nil	6	4	10	62

IDIO Khaybar KH-2002

Notes: Introduced in 2003, the KH-2002 was at first announced to be for police use only, but may in fact also equip some Iranian special units, and possibly one day see wider issue. There are also rumors that it may be offered for export in the near future. (The name "Khaybar" commemorates the oasis of Khaybar, approximately 153 kilometers east of Medina in Saudi Arabia. During the Battle of Khaybar in Islam's early history, the largest Jewish settlement in the Arab world at that time was destroyed.)

Although details are sketchy, it appears that the KH-2002 is probably a modified conversion of the S-5.56 (above) to a bullpup configuration. It thus has a modified M-16A1-type operating system, and the KH-2002 can take any magazine compatible with the M-16/AR-15 series. The fire controls are screwy; they are not anywhere near the pistol grip, but are instead on the left side of the buttstock almost at the rear, and I find it difficult to see how they can be manipulated when the KH-2002 is on the shooter's shoulder without taking the weapon off the shoulder. The fire controls allow for safe, semiautomatic, burst, and full-automatic settings. The trigger group looks almost identical to that of the FAMAS G2, with a huge trigger guard as long as the pistol grip. Below the front of the narrow barrel shroud is a permanently-attached folding bipod which is to a small extent adjustable for height and cant. The barrel shroud itself is partially ventilated, using five slots on either side of the shroud. The entire weapon is largely enclosed in a two-piece polymer shell, with a recoil pad on the butt. The top of the rifle has a long handguard, which can accept both Eastern and Western optics, and can also mount virtually any sort of mounting hardware (including a MIL-STD-1913 rail). Case ejection is to the right, with the ejection port being in just the right position for hot brass to hit the face of left-handed shooters. The KH-2002 can accept standard M-16-type bayonets, Iranian bayonets, or G-3-style bayonets; in addition, a special folding bayonet has been designed for the KH-2002. Provision is made for an underbarrel grenade launcher (a modified M-203 of Iranian design) and rifle grenades are also usable. The KH-2002 is available in three versions, with the Designated Marksman version having a heavier, better-quality barrel of 30.71 inches. The standard assault rifle version uses a barrel of 28.74 inches, with the "carbine" having a 26.77-inch barrel. All are tipped with a modified M-16A1-type flash suppressor. The long barrels lead to a very long exposed length of barrel, but give the KH-2002 excellent accuracy. However, the barrels, being essentially lengthened M-16A1-type barrels, can be easily bent in the heat of battle.

Just a personal observation: I frankly don't see the point of having such a long bullpup weapon; the whole idea of a bullpup weapon is to make a weapon *smaller,* not to be able to stuff such a long barrel into it that it is the same length as any other assault rifle.

Twilight 2000 Notes: The KH-2002 is not available in the Twilight 2000 timeline.

Merc 2000 Notes: Available in early 2002, the KH-2002 was soon seen all over the Middle East, and as far away as Indonesia and Serbia in small numbers.

Weapon	Ammunition	Weight	Magazines	Price
KH-2002 Assault Rifle	5.56mm NATO	3.7 kg	20, 30	$1578
KH-2002 Carbine	5.56mm NATO	3.63 kg	20, 30	$1518
KH-2002 Designated Marksman	5.56mm NATO	3.8 kg	20, 30	$1639

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
KH-2002 Assault Rifle	3/5	3	2-Nil	6	2	3/5	76
With Bipod	3/5	3	2-Nil	6	1	2/3	98
KH-2002 Carbine	3/5	3	2-Nil	6	2	3/5	70
With Bipod	3/5	3	2-Nil	6	1	2/3	91
KH-2002 Designated Marksman	3/5	3	2-Nil	7	2	3/5	81
With Bipod	3/5	3	2-Nil	7	1	2/3	106

Tabuk Assault Rifle

Notes: This is the Iraqi equivalent of the AK-47. There are several changes from the original design; the flash suppressor is shaped differently, venting gasses upwards to help fight barrel climb; the top of the receiver has a folding antiaircraft sight that can also be used when the Tabuk is equipped with a GP-25 grenade launcher; the butt is shaped differently and is longer, to better fit the taller Iraqi soldiers; and lighter woods are used to reduce weight.

The Iraqis also made a version of the Tabuk Assault Rifle chambered for 5.56mm NATO ammunition; this weapon was made mostly for export, but is unknown if any sales were ever made. The 5.56mm NATO version can be found with a fixed wooden butt or a folding metal butt.

Twilight 2000 Notes: The 7.62mm version is the primary assault rifle encountered by troops fighting the Iraqis in the Middle East. The 5.56mm version was never produced.

Weapon	Ammunition	Weight	Magazines	Price
Tabuk Assault Rifle	7.62mm Kalashnikov	3.75 kg	30	$793
Tabuk Assault Rifle (Fixed Butt)	5.56mm NATO	3.2 kg	30	$549
Tabuk Assault Rifle (Folding Butt)	5.56mm NATO	3.28 kg	30	$588

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Tabuk Assault Rifle (7.62mm)	5	4	2-Nil	6	4	9	44
Tabuk Assault Rifle (5.56mm, Fixed Butt)	5	3	1-Nil	6	2	6	41
Tabuk Assault Rifle (5.56mm, Folding Butt)	5	3	1-Nil	4/6	2	6	41

Tabuk Short Assault Rifle

Notes: This is a shortened version of the standard Tabuk Assault Rifle. The wooden stock is replaced with a folding metal stock, and the ability to accept shortened 20-round magazines is added. The pistol grip has a slightly different shape and is made of plastic, the front sight is moved back and has a hooded post, and the muzzle is modified to allow the use of rifle grenades.

Weapon	Ammunition	Weight	Magazines	Price
Tabuk Short Assault Rifle	7.62mm Kalashnikov	3.21 kg	20, 30	$785

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Tabuk Short Assault Rifle	5	3	2-Nil	4/5	3	7	29

HEZI SM1

Notes: This rifle is based on the M1 Carbine, turned into a bullpup assault rifle. It was designed for law enforcement; the .30 Carbine cartridge has decent striking power and penetration, but not enough to accidentally shoot innocent bystanders through walls or through the actual target of the weapon. The SM1 retains only the action, feed system, and barrel of the M1 Carbine; the rest is replaced by new parts, such as a synthetic bullpup stock with a carrying handle topped by a MIL-STD-1913 rail, and another such rail below the barrel. The controls are made ambidextrous. The bolt is strengthened and a firing pin safety is installed, as is a hinged ejection port dust cover. The extractor and gas system are improved, and a muzzle brake is installed on the barrel. Normally, this weapon is sold to law enforcement and civilians in semiautomatic form, but law enforcement and military can also buy the SM1 in fully automatic form.

Twilight 2000 Notes: This weapon does not exist.

Weapon	Ammunition	Weight	Magazines	Price
SM1	.30 Carbine	2.99 kg	10, 15, 30	$352

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
SM1	5	2	1-Nil	4	1	2	45

IMI Galil

Notes: This is an Israeli-built assault rifle, manufactured for domestic use and for export. The Galil is known for its resistance to dirt even under the worst conditions (it is, after all, based upon an AK-type weapon, the Finnish M62); however, it is also known to be a rather fragile weapon (especially the plastic parts and bending barrels) that is damaged easily, and also weighs too much. The prototypes were tested in 7.62mm Kalashnikov, 5.56mm NATO and 7.62mm NATO chamberings, but primarily only the 5.56mm NATO version survived, primarily due to the lighter weight of both the resulting rifle and its ammunition; the 7.62mm NATO version is comparatively rare, and the 7.62mm Kalashnikov version was not proceeded with beyond the early prototype stage.

The operation of the Galil series is essentially almost identical to that of Kalashnikov series assault rifles, modified for use with different ammunition, of course. The Galil ARM has several novel features, such as a bipod which doubles as a wire cutter (for medium-gauge barbed wire at the thickest), a handguard which can be used to open bottles (primarily to stop troops from bending the lips of their magazines by using *them* as bottle openers), ambidextrous fire selectors which are similar to the AK on the right side of the receiver, but like those of an HK-built weapon on the left, and a charging handle on the right side like that of the AK series, but bent upwards to better facilitate ambidextrous operation. The sights consist of a hooded front sight and a rear diopter sight; in addition, the sight mounts allow these sights to be folded down, and night sights with tritium inlays raised when necessary. In addition, scope mounts may be mounted on a bracket which attaches to the left side of the receiver, like the Kalashnikov series. A FAL-like carrying handle may be added to the Galil ARM when desired. Though an unmodified Galil can only use the 12-round, 35-round, and 50-round magazines designed for it, the Galil may also use M16 magazines with the addition of an adapter (which may be added by the user, and requires no skill other than knowledge of how to do it). The handguard, pistol grip, and other non-metallic parts are made from high-impact plastic (though early prototypes had a wooden handguard).

The standard Galil is the ARM; it has an 18.1-inch barrel and a folding stock similar to that of the FAL Para. The Galil SAR is a carbine version of the ARM; it uses a 13.1-inch barrel, but has neither a bipod nor a mount for a carrying handle. It is otherwise identical to the ARM. The ARM (and the AR) can use a variety of US bayonets and Kalashnikov-type bayonets.

The Galil MAR, also known as the Galil Micro, is a CQB/PDW variant of the Galil, with a stubby 7.7-inch barrel. It was designed for uses ranging from special operations to vehicle crews and rear area troops. The handguard is contoured at the front with a lip to prevent the shooter's hand from slipping in front of the barrel. Instead of steel, the stock of the MAR is made from aluminum alloy. A variant of the Galil MAR, the MAR Special, is modified for use by special operations troops; it can accept a suppressor, use subsonic ammunition, and has MIL-STD-1913 rails atop the receiver and on the handguard to allow the use of various optics and accessories. It is otherwise identical to the standard MAR for game purposes. The MAR cannot mount a bayonet or an underbarrel grenade launcher, and does not have the nifty bottle-opening handguard.

The Galil also comes in a relatively rare chambering: 7.62mm NATO. This was first developed in response to the IDF's request for a heavier-caliber battle rifle for certain applications; however, the IDF largely passed on the 7.62mm NATO version of the Galil, preferring to arm themselves with proven surplus (and usually heavily-modified) designs firing the 7.62mm NATO cartridge such as the US M14 and the FN-FAL. They then tried marketing this heavier version overseas, but it had little luck in the international market. It did, however, serve as the basis of the Galat'z Sniper Rifle. Both long-barreled (AR) and short-barreled (SAR) versions exist, and except for the modifications required for the heavier caliber, they are essentially identical to their assault rifle cousins. In addition, the 7.62mm version of the Galil typically feeds from a proprietary 25-round magazine, though 20-round FAL magazines are also usable. The Hadar II is a heavily-modified version of the AR, originally intended for police use, but later also sold as a civilian rifle. The primary differences are that the Hadar II is capable only of semiautomatic fire, and the folding stock has been replaced with a thumbhole-type wooden stock (of average-quality wood, but weatherproofed and otherwise very well-finished). Civilian versions sold in the US during the Assault Weapons Ban were normally sold with 10-round magazines (though they could take the standard 25-round AR magazines and FAL magazines) and had no flash suppressors. Police versions do have flash suppressors, but neither one have bayonet lugs or bipods.

The Magal is a modification of the Galil MAR, used for a short time by the Magav (Israeli National Police). The police felt that the

standard Galil SAR, with its 5.56mm NATO ammunition, was too powerful and it's ammunition over-penetrating, often exiting one victim and striking another behind it. However, the Magav still needed a weapon that could penetrate soft body armor, at least at short range. Their solution was to modify the Galil MAR, rechambering it for .30 Carbine ammunition, making some ergonomic adjustments, and changing the construction somewhat. The new weapon was called the Magal, and issued to the Magav starting in 1994. The Magal looks externally like a short assault rifle that is based on the Galil MAR, but is also greatly different in appearance. The handguard is rather large, made from reinforced polymer rather than high-impact plastic, and deliberately increased somewhat in mass so that it can be used as an impromptu clubbing instrument. The pistol grip assembly is built in a similar manner, and is also joined to the receiver with a reinforced polymer bar. The folding stock itself is partially made from lighter high-impact plastic. The top of the receiver has a MIL-STD-1913 rail, along with backup iron sights like those of the Galil MAR (modified for the .30 Carbine ammunition).

Complaints about the Magal began almost immediately; the short barrel, barely adequate for 5.56mm NATO ammunition, was equally unsuited for lower-powered ammunition like .30 Carbine. Jams and failures to feed were quite common. In addition, the weapon could not develop the energy to properly launch BTU rifle grenades, even when equipped with the proper muzzle device. The 4000 Magals in the government's order were built, but they were largely handed down to the Civil Guard and certain conventional police units by 2001; the riot control-type police units reverted back to Galil MARs, CAR-15s, and Colt Commandos early in 2001. Another recipient of the Magal, the Israeli Civil Guard, largely went back to their M1 and M2 Carbines, which the Magal was supposed to replace.

Though the Galil was nonetheless considered a successful design, it did not enjoy wide issue in Israel, mostly because the Israelis were sold mountains of M16A1s, CAR-15s, and later M16A2s and M4s at virtually no cost starting in the late 1960s. In fact, the Galil was more successful in a slightly modified form in South Africa (the R-4 series), and was also sold to several African, South American, and Asian countries. Even semiautomatic civilian variants of the Galil have proven more successful. In the past few years, even the Israelis have been silently ditching the Galil in favor of M16 series weapons, particularly the M16A3/4 and the M4/M4A1, and more recently, the Tavor bullpups. Despite the fact that the Galil MAR is far stronger than the standard Galil and is a more solid weapon, it was never really accepted by the Israeli military, and it was not produced in large numbers.

While the Galil was built in a number of semiautomatic civilian and police versions almost since the military version had been fielded, most of its customers were in the US, where they were eventually banned during the period of the ill-conceived Assault Weapons Ban. These civilian/police Galils were generally built in Israel and marketed through various American or European import companies. However, the Israelis almost completely stopped the manufacture of these civilianized Galils when the Assault Weapons Ban went into effect, and after its sunset, and IMI was unwilling to resume production (as was Columbia, the last known country to have a license to produce both military and civilian Galils; their license expired in 2006, and they did not renew it). However, in 2006, a US company, Century International Arms, purchased a license to make and sell civilianized Galils. These versions of the Galil were christened the Golani Sporter by Century International, are now being sold. They are almost identical to earlier civilianized Galils, but use an 18-inch barrel, and are chambered only for 5.56mm NATO. Their receivers and barrels are strengthened somewhat to allow the use of the various wildcat 5.56mm rounds that are popular in the US, ranging fom slow rounds with heavy bullets to extreme hotloads. While the Golani Sporter has the traditional Galil AK-type lever selector switch on the left side (minus the auto setting, of course), it also has a smaller thumb selector on the right side above the pistol grip. The charging handle has a 90-degree bend in it, which makes it easier to grasp and pull. The rear sight has been moved to the top of the receiver cover, and has flip-type aperture sights with an additional blade with a tritium inlay that may be flipped up to make the day sight into a night side. The front sight is standard Galil, but also has a flip-up post with a tritium inlay. Operation is nearly the same as the Galil, but has improvements increasing reliability and making the Golani Sporter easier to maintain and strip. The Handguard and pistol grip are made from stronger polymer than the standard Galil's plastic, and the handguard also has an aluminum heat shield inside of it. Instead of a flash suppressor, the barrel is tipped with a short muzzle brake. The Golani Sporter has no bipod. Otherwise, the Golani Sporter is pretty much a Galil.

The ACE is an attempt to modernize and improve upon the Galil. It is essentially an AK in polymer instead of wood furniture. They have a plethora of MIL-STD-1913 rails – above the receiver, on all four sides of the handguards, above the gas block bridging over to the upper handguard (the handguards of an ACE are rather short). It has an A2-type flash suppressor – the ACE 31 has an 8.5-inch barrel, while the ACE 32 has a 16-inch barrel. Both have a sliding stock. Operation is by gas piston. The target audience of the ACE is countries using primarily the AK, but whose AKs are getting long in the tooth or who desire a more up-to-date firearm, but not want to buy hoards of new ammunition. However, IMI did actually put some 5.56mm-firing ACEs on the market, the ACE-21, ACE-22, and ACE-23. These are basically built the same as the ACE-31/32, but have 8.5-inch, 13-inch, and 16-inch barrels, respectively. Newer versions, the ACE-51, 52, and 53, fire 7.62mm/.308 ammunition. The charging handle is moved to the left side of the receiver allowing for weak hand operation. Much more of the rifles are made of polymer than the standard Galils, making for relatively lighter weapons. Civilian, semiautomatic versions, with 16-inch barrels only, are also made, and have sold well in the US, Israel, and Western Europe.

JAXX Industries in the US produces copies of the Galil MAR (though their website currently lists them as sold out in all variations). For the most part they are faithful copies of the MAR, but perhaps a little better made, with stronger polymer fittings and a better finish. JAXX lists this as a pistol variant (it is a pistol for US laws), but it has an arm brace welded to the receiver; in all effects this is essentially a stock. The external metal is Cerakoted and the action is custom tuned. These MARs are, of course, semiauto only. The barrel is 9.5 inches and is made of Chrome/Vanadium steel; the flash suppressor is removable, allowing the use of a suppressor. The rear of the receiver can take a Picatinny Rail, but does not come with the rifle from JAXX. Forward on the receiver is a short length of rail about 76 centimeters long. The JAXX MAR, unusually, charges from the left side instead of the right side. The trigger pack is

custom tuned and is a G2 double hook trigger.

Twilight 2000 Notes: Though the Galil is a reliable weapon, and scored points for that, the fragility of the Galil meant that it got discarded in favor of other weapons. Though weapons similar to the MAR were produced on an ad hoc basis during the Twilight War, true production MARs were small in number. The late 1990s and early 2000s clashes between the Palestinians and the Israelis would either not have taken place at all or would have been met with much more force in the Twilight 2000 world. The Magal would thus probably not be built in the Twilight 2000 timeline. In addition, the Golani Sporter does not exist in the Twilight 2000 timeline, nor does the Galil ACE series or the JAXX Galil MAR.

Merc 2000 Notes: The Galil MAR weapon has been exported to unknown parties in addition to standard Galils, but aside from limited sales to countries already using the Galil, there are no official sales. For different reasons, the Palestinian-Israeli violence would probably also be met with more force in the Merc 2000 world, and the Magal would be unlikely to have been built.

Weapon	Ammunition	Weight	Magazines	Price
Galil ARM	5.56mm NATO	4.35 kg	12, 20, 30, 35, 50 Drum	$1036
Galil AR	7.62mm NATO	5.55 kg	20, 25	$1558
Galil SAR	5.56mm NATO	3.75 kg	12, 20, 30, 35, 50 Drum	$555
Galil SAR	7.62mm NATO	5.27 kg	20, 25	$1006
Galil MAR	5.56mm NATO	2.95 kg	12, 20, 30, 35	$499
Magal	.30 Carbine	2.76 kg	15, 30	$330
Hadar II	7.62mm NATO	4.35 kg	10, 20, 25	$1030*
Golani Sporter	5.56mm NATO	4.2 kg	5, 10, 20, 30, 35, 50 Drum	$650
ACE-31	7.62mm Kalashnikov	3.05 kg	10, 20, 30, 40, 75 Drum	$806
ACE-32	7.62mm Kalashnikov	3.46 kg	10, 20, 30, 40, 75 Drum	$878
ACE-21	5.56mm NATO	3 kg	12, 20, 30, 35, 50 Drum	$559
ACE-22	5.56mm NATO	3.35 kg	12, 20, 30, 35, 50 Drum	$605
ACE-23	5.56mm NATO	3.4 kg	12, 20, 30, 35, 50 Drum	$637
ACE-51	7.62mm NATO	3.48 kg	5, 10, 20, 25	$935
ACE-52	7.62mm NATO	3.89 kg	5, 10, 20, 25	$981
ACE-53	7.62mm NATO	3.95 kg	5, 10, 20, 25	$1013
JAXX MAR 5.56	5.56mm NATO	2.99 kg	12, 20, 30, 35	$499
JAXX MAR 7.62	7.62mm Kalashnikov	2.99 kg	12, 20, 30, 35	$748
JAXX MAR .300	.300 Blackout	2.99 kg	12, 20, 30, 35	$678

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Galil ARM	5	3	1-Nil	5/6	2	5	48
(With Bipod)	5	3	1-Nil	5/6	1	3	62
Galil AR	5	4	2-3-Nil	6/7	3	8	67
(With Bipod)	5	4	2-3-Nil	6/7	2	4	87
Galil SAR (5.56mm)	5	3	1-Nil	4/5	2	5	29
Galil SAR (7.62mm)	5	4	2-3-Nil	5/6	3	8	43
Galil MAR	5	2	1-Nil	3/4	2	6	11
Magal	5	2	1-Nil	3/4	3	7	14
Hadar II	SA	4	2-3-Nil	7	4	Nil	67
Golani Sporter	SA	3	1-Nil	4/6	2	Nil	47
ACE-31	5	3	2-Nil	5	2	5	16
ACE-32	5	4	2-Nil	4/6	3	7	44
ACE-21	5	2	1-Nil	3/4	2	4	14
ACE-22	5	3	1-Nil	4/5	2	4	29
ACE-23	5	3	1-Nil	4/5	2	4	40
ACE-51	5	3	2-Nil	4/5	4	9	15
ACE-52	5	4	2-Nil	5/6	4	9	32
ACE-53	5	4	2-3-Nil	5/6	4	9	44
JAXX MAR 5.56	SA	2	1-Nil	4	2	Nil	18
JAXX MAR 7.62	SA	3	2-Nil	4	3	Nil	20
JAXX MAR .300	SA	3	2-Nil	4	3	Nil	21

*For civilian versions without flash suppressors, subtract $12.

IMI TAR-21 Tavor

Notes: This feisty bullpup was designed as a replacement for the Galil and M16 series. The result is similar to the South-African Vektor assault rifle series (and the Israelis and South Africans often collaborate on arms projects). The TAR-21 (Tavor Assault Rifle) is a 5.56mm NATO-firing selective-fire bullpup, very compact (only 73 cm), yet easier to use than the British L-85 or Austrian Steyr AUG bullpup rifles. The Tavor is now produced by IWI (Israeli Weapons Industries), which was formerly a subsidiary of IMI, but is now

a semi-independent company.

The TAR-21 has ambidextrous controls and can use a variety of night-vision devices and telescopic sights; standard is the ITL MARS, which is a reflex/collimator red-dot sight with an integral laser aiming module below it. The soldier can also attach the types of night vision goggles by the Israelis directly to the sight unit. This sight unit is mounted on a short MIL-STD-1913 rail located directly above the trigger group, and the unit may be completely removed and replaced with other optics as desired. There are no conventional iron sights, though rudimentary emergency sights are located on the sight housing. The TAR-21 may use any sort of M16 magazine, and may be fitted with the M203 or M203PI (and several other underbarrel grenade launchers), as well as use NATO- or Israeli-pattern rifle grenades. The TAR-21 uses an 18.1-inch barrel tipped with an M16A2-type flash suppressor. Construction of the shell of the rifle is largely of green or black polymer, with steel reinforcement bars at strategic places. Field stripping is done by pulling the operating parts out as a unit from the hinged buttplate. Except for the ejection port, the operating parts of the TAR-21 are otherwise completely enclosed and quite resistant to dirt. The Tavor has an ejection port on either side of the rifle, one of which is sealed; this allows for the operating system to be reversed for use by right or left-handed shooters. There are similar charging handle slots on both sides of the weapon as well. To a point, operation is similar to a combination of the M16 and AK series, but most of it is the result of new research. A recent addition to the Tavor line, the TC-21, is a carbine variant, equipped with a 16.1-inch barrel. It is otherwise outfitted the same as the standard TAR-21 assault rifle.

The CTAR-21, also known as the Tavor Commando, is also sort of a carbine version of the TAR-21, with 15-inch barrel and accompanying shorter handguard section. The CTAR-21 may not mount a standard M203 grenade launcher, but can mount the M203PI and most other NATO-compatible underbarrel grenade launchers. (It does, however, get a bit clumsy to handle with an underbarrel grenade launcher attached.) Unlike the TAR-21, the CTAR-21 cannot mount a bayonet.

The MTAR-21, also known as the Micro Tavor or the Tavor Micro, uses an even shorter 9.84-inch barrel, and is primarily meant for use by special operations, bodyguards, vehicle crews and in CQB. The Micro Tavor is so short and well-balanced that it can actually be fired with one hand (though not with nearly the accuracy as two-handed firing). The handguard section is quite abbreviated, and the barrel barely protrudes from them; nonetheless, the same M16A2-type flash suppressor is used so muzzle flash is very large and bright. This short barrel and handguard also means the Tavor Micro cannot mount underbarrel grenade launchers, use rifle grenades, or mount bayonets. A parts kit is also available to turn the Micro Tavor into 9mm submachinegun, which uses Uzi magazines (in a pinch, Glock 9mm Parabellum magazines can also be used with the MTAR 9mm), and may use a standard or a barrel with an integral silencer. (Early prototypes were tested chambered for .40 Smith & Wesson and .45 ACP, but IMI decided not to go ahead with those chamberings.) This version is known by many names: MTAR-21 9mm, MTAR 9mm, MTAR Submachinegun, and a few others. Other than modifications necessary for the change in ammunition and the lack of a flash suppressor, the MTAR 9mm is otherwise outfitted the same as the MTAR-21 (as I will refer to it in these pages). Though the MTAR 9mm is actually a submachinegun, it is included here for completeness.

The STAR-21 is version of the TAR-21 assault rifle is designed for platoon sharpshooters. The basic TAR-21 is modified with match-grade parts, a bipod, a longer MIL-STD-1913 rail, a padded butt, and an adjustable, folding, lightweight bipod. It is liked for its compact size and light weight, but not used for serious sniping due to the limits of its ammunition; its job is instead to fulfill the role of Designated Marksman Rifle. The STAR-21 also uses an 18.1-inch barrel, but of better quality than that found on the TAR-21 assault rifle version.

First issue of the Tavor series to Israeli units began in 2003, though reportedly operational testing had been conducted in actual combat as early as 2001. By the time of this writing (Late February 2008), it is estimated that as many as a third of the M16-series rifles in the IDF have been replaced by the TAR-21 series.

The Indians have placed an order for up to $20 million worth of MTAR-21-type rifles, ammunition and accessories; deliveries began in 2007. There are also some unconfirmed rumors that the Indians may be interested in partially replacing their AKMs and INSAS rifles with other members of the Tavor series. The Indian version of the MTAR-21, which they call the Zittara, is a bit different than the IMI MTAR-21 and is covered in the Indian Assault Rifles section.

One of the newest members of the Tavor series is the X-95. It comes in several versions and calibers, and it comes with many accouterments and adapters for use with most equipment and enhancements used by Special Operations personnel today. It is used by Indian SF as well as most of the Israel Ground Defense Force today. The X-95 is available in its standard chambering of 5.56mm, as well as 5.45mm, a round the IDF's special units are experimenting with these days, and 9mm, allowing the quick conversion into a low-penetration submachineguns. It also allows the conversion of the X-95 into different calibers and many weapon configurations easily, with minimal training. The X-95 SMG and X-95S differ primarily in their attachment hardware for silencers, and are the same in T2K rules.

MIL-STD-1913 rails are found on the upper receiver as well as the bottom of the handguards and at the 10 and 2-o'clock positions. (As the X-95 is short, the rails are necessarily short as well; however, they are adequate for most uses that special ops personnel encounter.) The top rail can be replaced by one that bridges the upper receiver and the gas block; this makes necessary the removal of the front iron sight. The barrel is threaded behind the flash suppressor; on the standard and S versions; a special silencer was designed for use with the X-95. The flash suppressor is similar to the A2 type. The standard X-95 has a 13-inch barrel, while the L has a 16.5-inch barrel. The SMG and S use an 11-inch barrel. These barrels generally follow the lines of the Tavor in construction.

The Tavor 7 similar to the X-95L, but is chambered for the 7.62mm NATO cartridge. This makes it more of a battle rifle than an assault rifle, but is included here for completeness. The Tavor 7 uses a 16.5-inch barrel tipped by a large flash suppressor that is fluted for use in shooting out rebar. This muzzle device is removable, revealing threads that can be used for the attachment of a suppressor or muzzle brake. The Tavor 7 is ergonomically more sound, and has changes requested by users of the Tavor series, both

civilian and military. Changes range from the angle of the pistol grip to the change of the ambidextrous controls to a 45-degree throw maximum for all functions. The barrel is not only chrome-lined, it is cold hammer forged and made of CrMoV steel. The shell and internal frame of the Tavor 7 is reinforced in certain critical areas to cater to the heavy-caliber ammunition.

Twilight 2000 Notes: There may be some small numbers of this weapon series around in the Twilight 2000 timeline, but is unlikely that it will be found outside of Israeli hands. The TC-21 and MTAR 9mm do not exist in the Twilight 2000 timeline, nor does the X-95 series or Tavor 7, and the standard sight is the ITL MARS for most purposes.

Merc 2000 Notes: After 2000, the Tavor became more and more common, both in Israel and in other countries; after 2010, it almost seemed that Central America was being overrun by military units carrying the Tavor and its variants.

Weapon	Ammunition	Weight	Magazines	Price
TAR-21	5.56mm NATO	2.8 kg	20, 30	$1116
TC-21	5.56mm NATO	2.75 kg	20, 30	$1095
CTAR-21	5.56mm NATO	2.7 kg	20, 30	$1084
MTAR-21	5.56mm NATO	2.4 kg	20, 30	$1030
STAR-21	5.56mm NATO	3.4 kg	20, 30	$1690
MTAR 9mm (Standard Barrel)	9mm Parabellum	2.42 kg	25, 32, 40	$1054
MTAR 9mm (Silenced Barrel)	9mm Parabellum	3.12 kg	25, 32, 40	$1194
X-95 Rifle/Carbine	5.56mm NATO	3.03 kg	20, 30	$1109
X-95 Rifle/Carbine	5.45mm Kalashnikov	3.03 kg	20, 30, 40	$1300
X-95L Rifle/Carbine	5.56mm NATO	3.2 kg	20, 30	$1157
X-95L Rifle/Carbine	5.45mm Kalashnikov	3.2 kg	20, 30, 40	$1122
X-95 SMG	9mm Parabellum	2.98 kg	25, 32, 40	$818
Tavor 7	7.62mm NATO	4.08 kg	20	$1130

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
TAR-21	5	3	1-Nil	5	3	7	43
TC-21	5	3	1-Nil	4	3	7	36
CTAR-21	5	3	1-Nil	4	3	7	32
MTAR-21	5	2	1-Nil	3	3	7	16
STAR-21	5	3	1-Nil	5	2	5	45
With Bipod	5	3	1-Nil	5	1	3	59
MTAR 9mm (Standard)	5	2	Nil	3	1	3	23
MTAR 9mm (Silenced, Standard Ammo)	5	2	Nil	4	1	3	19
MTAR 9mm (Silenced, Subsonic Ammo)	5	2	Nil	4	1	2	18
X-95 Rifle/Carbine (5.56mm)	5	3	1-Nil	4	2	5	26
X-95 Rifle/Carbine (5.45mm)	5	2	Nil	4	2	4	34
X-95L Rifle/Carbine (5.56mm)	5	3	1-Nil	4	2	5	37
X-95L Rifle/Carbine (5.45mm)	5	3	1-Nil	4	2	4	42
X-95 SMG	5	2	1-Nil	3	1	2	30
Tavor 7	5	4	2-3-Nil	5	4	9	43

“Sawn-Off” CAR-15 (Mekut’zrar)

Notes: The Sawn-Off CAR-15 is basically a version of a standard Colt CAR-15, modified by unit armorers and gunsmiths to use a radically-shorter barrel (usually about 9-10 inches.) These modifications began in about the time of the 1987 *Intifada,* the Palestinian uprising against the Israelis. The first units to use these shortened weapons were new IDF and Police CT undercover units, the Mistaravim; these units needed a short assault rifle with decent firepower, but could still be hidden under civilian clothing or in bags or backpacks with relative ease. The existing Galil SARs were still a bit too bulky, the Galil MAR had not yet entered service, and the Colt Commando version of the M16A2 was in *extremely* short supply. The sawn-off CAR-15s were later adopted by a few other IDF special operations units, but throughout their short service with the IDF, remained a very-limited issue weapon. It should be noted that the name “Mekut’zrar” (a Hebrew slang term meaning “very short”) was given to both the sawn-off CAR-15 and the Colt Commando.

As stated above, the sawn-off CAR-15 used a very abbreviated 9-10-inch barrel. Adjustments to the gas system were made to improve reliability (with a barrel shortened below 11 inches, the Stoner gas system becomes very unreliable). Unfortunately, there is only so much one can do with the Stoner gas system, especially as the barrel lengths get shorter and shorter, without having to undertake a radical redesign of the gas system itself. In addition, the weapon was given a different flash suppressor, a modified version of the larger one found on the Galil SAR. While not as effective as an actual muzzle brake, it is somewhat more effective than the standard M16-type flash suppressor, while not having the bulk (or expense) of actual muzzle brakes available for the CAR-15 at the time; the short barrel coupled with the need to *not* shorten the gas tube any further also made mounting the standard CAR-15 muzzle brake very difficult. Modifications were also made to the sliding stock to allow it to retract even further.

The biggest downfall of the sawn-off CAR-15 was that it was a handmade, *ad hoc* modification, done at the unit level and without any of the quality controls of an actual production weapon. Pretty much, no two were alike. They were inherently unreliable due to the limitations of the Stoner gas system, and could not be repaired quickly. Poor reliability is a severe deficit in the CQB combat for which

the sawn-off CAR-15 was meant (to say the least), and the shooter could pretty much forget about hitting a target beyond 100 meters or so without undue aiming. The nature of the modifications also added a small measure of fragility as well as unpredictability in performance. And, while the unit armorers of special operations units are more skilled than the average military armorer, they still were nowhere near as capable as an actual factory producing such a weapon. Therefore, the sawn-off CAR-15, even in its informal role, were essentially banned for use by IDF or Israeli Police less than a decade later; they were replaced by the Colt Commando, Galil MAR, and later, the TAR-21 series. Most present users of the sawn-off CAR-15 are therefore very senior officers, primarily as a status symbol – and they are frowned upon by their peers for setting a bad example for their troops.

Twilight 2000 Notes: This is another of those interesting examples of *ad hoc*-type weapons that would be encountered here and there in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
Sawn-Off CAR-15 (9” Barrel)	5.56mm NATO	1.85 kg	20, 30	$513
Sawn-Off CAR-15 (10” Barrel)	5.56mm NATO	1.87 kg	20, 30	$523

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Sawn-Off CAR-15 (9”)	5	2	1-Nil	3/4	3	7	16
Sawn-Off CAR-15 (10”)	5	2	1-Nil	3/4	3	7	19

Beretta AR-70 Series

Notes: The AR-70 began in 1968, when Italy belatedly decided to adopt the 5.56mm NATO cartridge that most of the rest of NATO was already using for its assault rifles. They had been using the 7.62mm NATO-firing BM-59 series, but after a couple of years of testing candidates (and stalling somewhat), they adopted the AR-70 series (also called the AR-70/223) in 1970.

The AR-70 series, though reminiscent in appearance of the Stoner 63 series, has nothing to do with the Stoner in design; the operation is a derivative of the AK-47 gas system, with a modified M-1 Garand/BM-59 bolt. Construction is largely of stamped steel, and nonmetallic parts are of synthetics or plastics. (Prototypes, however, used wooden furniture.) The handguard was originally ribbed, but this was later changed to a fluted design. The fire selector is conventional and mounted on the left side of the receiver, with the charging handle on the right side. The sights are conventional and similar to those found on most assault rifles, but the AR-70 also has folding tangent leaf sights for use with rifle grenades. The AR-70 series also has a gas cutoff for use with older rifle grenades. The receiver has a mount for use with most NATO-type optics of the period, and the bayonet lug accepts most US-pattern bayonets.

The AR-70 is the standard assault rifle using a 17.7-inch barrel; the SC-70 is the paratroopers' carbine, essentially the same weapon with a folding steel stock coated with plastic. There is also a SCS-70 special paratroopers' carbine, with a folding stock and shortened 12.6-inch barrel; it cannot use a bayonet, and the use of rifle grenades requires the attachment of a clip-on muzzle device and grenade sights. The LM-70 is a heavy-barreled sharpshooters' weapon, and the price includes a telescopic sight and bipod. The AR-70 series are fed by proprietary magazines, and cannot use any other type of magazines.

By the mid-1980s, it was felt that the AR-70 was getting long in the tooth, and a series of modernization upgrades were taken to extend the service life of the weapon. This resulted in the AR-70/90 series. General modifications include simplified manufacturing processes, a light alloy lower receiver (with hardened steel rails for the bolt to move upon), a straight-line layout (done mostly by raising the heel of the stock), a detachable carrying handle (when removed, the AR-70/90 can use any sort of STANAG-compliant optics or devices), and an ambidextrous fire selector. The standard selector lever allows for both bursts and full automatic fire, but versions are also available which omit the burst-firing feature. The magazine well was modified to accept M-16-type magazines of any sort (and it cannot use the older AR-70 magazines). Any member of the series may be fitted with a removable folding bipod, with the exception of the LM-70/90, where the bipod is fixed. In addition to being able to fire rifle grenades, the AR-70/90 and SC-70/90 may also mount underbarrel grenade launchers. Rifling twist was changed for compatibility with the new SS-109 ammunition.

The AR-70/90 uses a 17.7-inch barrel and is the standard assault rifle version; the SC-70/90 is the same weapon with a folding stock. The SCP-70/90 is a paratrooper's carbine, with a 14.17-inch barrel and a folding stock. The SCS-70/90 is designed for special operations (like its SCS-70 predecessor); it uses a 13.86-inch barrel, but requires adapters to use rifle grenades, cannot mount underbarrel grenade launchers, and cannot use bayonets. It also has no ability to use the bipod. The LM-70/90 is, of course, the equivalent of the LM-70 in the AR-70/90 series.

The AR-70 and AR-70/90 have also been sold on the civilian market; often, these semiautomatic-only versions will often be seen with thumbhole wooden stocks, omitted flash suppressors, and/or no bayonet lugs.

Twilight 2000 Notes: At the start of the Twilight War, about half the Italian armed forces were still using the AR-70 and the LM-70; most SC-70s and SCS-70s had been replaced with their AR-70/90 equivalents. Jordan and Malaysia were also using the AR-70 series. There were also a surprising amount of Romanian irregular forces found to be armed with the AR-70 series, and a lot of Swiss and Austrian civilians had apparently managed to capture AR-70 series weapons as well. Only about half the Italian military's AR-70s and LM-70s had been replaced with the AR-70/90 and LM-70/90, but most of the SC-70s and SCS-70s had been replaced with their AR-70/90 equivalents. As above, a lot of these weapons were found in the hands of Swiss and Austrian civilians during and after the Twilight War.

Merc 2000 Notes: Jordanian AR-70s were largely replaced by M-16A2s and M-4s by 2000; Italian AR-70s were almost entirely replaced by AR-70/90s by the late 1990s. The AR-70/90 was very much an "Italian-only" weapon; there were a lot of cheaper weapons to be found on the international market.

Weapon	Ammunition	Weight	Magazines	Price*
AR-70	5.56mm NATO	3.8 kg	8, 20, 30	$576
LM-70	5.56mm NATO	4.9 kg	8, 20, 30	$1265
SC-70	5.56mm NATO	3.85 kg	8, 20, 30	$599
SCS-70	5.56mm NATO	3.7 kg	8, 20, 30	$547
AR-70/90	5.56mm NATO	3.99 kg	20, 30	$1186
LM-70/90	5.56mm NATO	4.25 kg	20, 30	$1447
SC-70/90	5.56mm NATO	3.99 kg	20, 30	$1206
SCP-70/90	5.56mm NATO	4.05 kg	20, 30	$1108
SCS-70/90	5.56mm NATO	3.79 kg	20, 30	$745

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AR-70	5	3	1-Nil	6	2	6	46
LM-70	5	3	1-Nil	6	2	5	54
LM-70 (Bipod)	5	3	1-Nil	6	1	3	69
SC-70	5	3	1-Nil	5/6	2	6	46

SCS-70	5	3	1-Nil	4/5	2	6	27
AR-70/90	3/5	3	1-Nil	6	2	3/6	46
AR-70/90 (Bipod)	3/5	3	1-Nil	6	1	2/3	60
LM-70/90	3/5	3	1-Nil	7	2	3/5	54
LM-70/90 (Bipod)	3/5	3	1-Nil	7	1	2/3	69
SC-70/90	3/5	3	1-Nil	5/6	2	3/6	46
SC-70/90 (Bipod)	3/5	3	1-Nil	5/6	1	2/3	60
SCP-70/90	3/5	3	1-Nil	4/6	2	3/5	34
SCP-70 (Bipod)	3/5	3	1-Nil	4/6	1	2/3	45
SCS-70/90	3/5	3	1-Nil	4/5	2	3/6	32

*For AR-70/90 series weapons without a burst firing feature, subtract $182 from the price.

Beretta ARX-160

Notes: Called during development the AR-160X, the ARX-160 was originally designed to compete in the US SCAR competition. Other than by US testers, the ARX-160 was first seen at SOFEX 2008 in Jordan. It lost the SCAR competition, but remained in development; currently, some Italian special ops units are using it, Albania's nascent special ops units are using it (they have some 100 of them), and it is being used as a base for Italy's *Soldato Futuro* program, something similar to the FN and the Belgian government's F-2000 rifle family, France's PAPOP system, and the US Future Soldier program. It is still being developed as of January 2010, but most of the development of the rifle itself is complete. What's being developed now is various equipment and packages/add-ons for the ARX-160 and the *Soldato Futuro* program. Some of these "add-ons" include a laser-pointer, a thermal imager, a rangefinder, a ballistic computer, an ACOG-type sight, a combination thermal imager/day telescopic sight/ACOG/laser pointer, a 40mm underbarrel grenade launcher, and a 12-gauge underbarrel pump shotgun designed for use with magnum shells. I say "add-on" because these accessories are designed so be semi-integrated with the ARX-160 upon which they are mounted, reducing bulk. For now, I will limit my scope to the rifle itself.

The ARX-160 is gas piston-operated, using a rotating bolt for breech locking, and firing from a closed bolt. The ARX-160 can use magazines designed for it, most magazines designed for the particular chambering used, or STANAG magazines. Though several lengths of barrel will be delineated below, the barrels are actually quickly removed and changed in the field with no special tools. The receiver is of light-alloy-strengthened polymer, with the upper and lower receivers collected by quick-release locks instead of push-pull pins like most military weapons these days. The ARX-160 uses a surprisingly small length of action, making the overall length of the ARX-160 itself surprisingly short. Above the receiver is a full-length (extending to the front sight) MIL-STD-1913 rail made of aircraft-quality aluminum. Unlike most conventional-design (ie, non-bullpup) rifles, the ARX-160 can be assembled to be left-handed or right-handed; this is necessary due to the short length of the receiver. This includes the charging handle, which is attached to the bolt carrier. The fire controls themselves are ambidextrous. The fore-end also has three MIL-STD-1913 rails (at 3, 6, and 9-o'clock). The lower rail is specially strengthened to be able to solidly-accept grenade launchers, shotguns, foregrips, and bipods. The stock is also polymer and folds to the right as well as being telescoping to adjust further to shooter size and the tactical situation. The stock has a textured rubber plate to eliminate slip, not as a recoil pad.

The ARX-160 has a total of six sling attachment points, allowing the use of almost all types of slings in use today. The primary development chambering has been 5.56mm NATO, but the ARX-160 can be quickly changed to 6.8mm SPC, 7.62mm Kalashnikov, or 5,45mm Kalashnikov by a change of barrel, lower receiver, and bolt head. Maintenance and field stripping are said to be very simple (one Beretta designer said that if you can play with LEGOs, you can maintain an ARX-160 and add any component). Currently, the ARX-160 is designed with a 12-inch-barrel Special Forces Carbine (SFC) version, a 16-inch standard carbine, and a 16-inch Designated Marksman Carbine version, with a heavy-profile match-quality carbine and a floating barrel. 14-inch, 20-inch, and 20-inch Designated Marksman versions have been rumored, and you know I could not resist that. Designated Marksman versions below include a bipod and a light telescopic sight. Unusually for an assault rifle, the ARX-160 has a quick-change barrel; this is more to facilitate changes between barrel lengths than to change a hot barrel.

Twilight 2000 Notes: The ARX-160 is not available in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
ARX-160 (12" Barrel)	5.56mm NATO	2.86 kg	20, 30	$549
ARX-160 (14" Barrel)	5.56mm NATO	2.93 kg	20, 30	$569
ARX-160 (16" Barrel)	5.56mm NATO	3 kg	20, 30	$590
ARX-160 (20" Barrel)	5.56mm NATO	3.23 kg	20, 30	$632
ARX-160 (16" Designated Marksman)	5.56mm NATO	4.09 kg	20, 30	$1195
ARX-160 (20" Designated Marksman)	5.56mm NATO	4.27 kg	20, 30	$1323
ARX-160 (12" Barrel)	5.45mm Kalashnikov	2.77 kg	20, 30	$497
ARX-160 (14" Barrel)	5.45mm Kalashnikov	2.84 kg	20, 30	$518
ARX-160 (16" Barrel)	5.45mm Kalashnikov	2.91 kg	20, 30	$539
ARX-160 (20" Barrel)	5.45mm Kalashnikov	3.13 kg	20, 30	$580
ARX-160 (16" Designated Marksman)	5.45mm Kalashnikov	3.96 kg	20, 30	$1144
ARX-160 (20" Designated Marksman)	5.45mm Kalashnikov	4.13 kg	20, 30	$1270
ARX-160 (12" Barrel)	6.8mm SPC	3.09 kg	20, 30	$689

ARX-160 (14" Barrel)	6.8mm SPC	3.17 kg	20, 30	$710
ARX-160 (16" Barrel)	6.8mm SPC	3.25 kg	20, 30	$731
ARX-160 (20" Barrel)	6.8mm SPC	3.5 kg	20, 30	$772
ARX-160 (16" Designated Marksman)	6.8mm SPC	4.43 kg	20, 30	$1337
ARX-160 (20" Designated Marksman)	6.8mm SPC	4.62 kg	20, 30	$1472
ARX-160 (12" Barrel)	7.62mm Kalashnikov	3.26 kg	20, 30	$798
ARX-160 (14" Barrel)	7.62mm Kalashnikov	3.34 kg	20, 30	$820
ARX-160 (16" Barrel)	7.62mm Kalashnikov	3.42 kg	20, 30	$840
ARX-160 (20" Barrel)	7.62mm Kalashnikov	3.68 kg	20, 30	$882
ARX-160 (16" Designated Marksman)	7.62mm Kalashnikov	4.66 kg	20, 30	$1450
ARX-160 (20" Designated Marksman)	7.62mm Kalashnikov	4.87 kg	20, 30	$1579

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
ARX-160 (5.56mm, 12")	5	2	1-Nil	3/5	3	6	25
ARX-160 (5.56mm, 14")	5	3	1-Nil	4/5	3	6	32
ARX-160 (5.56mm, 16")	5	3	1-Nil	4/5	3	6	40
ARX-160 (5.56mm, 20")	5	3	1-Nil	5/6	3	6	55
ARX-160 (5.56mm, 16" DMC)	5	3	1-Nil	4/5	2	5	41
With Bipod	5	3	1-Nil	4/5	1	3	54
ARX-160 (5.56mm, 20" DMR)	5	3	1-Nil	5/6	2	5	57
With Bipod	5	3	1-Nil	5/6	1	3	74
ARX-160 (5.45mm, 12")	5	2	1-Nil	3/5	3	6	29
ARX-160 (5.45mm, 14")	5	2	1-Nil	4/5	3	6	36
ARX-160 (5.45mm, 16")	5	3	1-Nil	4/5	3	6	44
ARX-160 (5.45mm, 20")	5	3	1-Nil	5/6	3	6	61
ARX-160 (5.45mm, 16" DMC)	5	3	1-Nil	4/5	2	5	46
With Bipod	5	3	1-Nil	4/5	1	3	60
ARX-160 (5.45mm, 20" DMR)	5	3	1-Nil	5/6	2	5	61
With Bipod	5	3	1-Nil	5/6	1	3	81
ARX-160 (6.8mm, 12")	5	3	1-1-Nil	3/5	3	6	34
ARX-160 (6.8mm, 14")	5	3	1-2-Nil	4/5	3	7	44
ARX-160 (6.8mm, 16")	5	3	1-2-Nil	4/5	3	7	54
ARX-160 (6.8mm, 20")	5	3	1-2-Nil	5/6	3	7	74
ARX-160 (6.8mm, 16" DMC)	5	3	1-2-Nil	4/5	2	6	56
With Bipod	5	3	1-2-Nil	4/5	1	3	72
ARX-160 (6.8mm, 20" DMR)	5	3	1-2-Nil	5/6	2	6	78
With Bipod	5	3	1-2-Nil	5/6	1	3	102
ARX-160 (7.62mm, 12")	5	3	2-Nil	3/5	3	7	29
ARX-160 (7.62mm, 14")	5	3	2-Nil	4/5	4	9	36
ARX-160 (7.62mm, 16")	5	4	2-Nil	4/5	4	9	44
ARX-160 (7.62mm, 20")	5	4	2-3-Nil	5/6	4	9	60
ARX-160 (7.62mm, 16" DMC)	5	4	2-Nil	4/5	3	8	46
With Bipod	5	4	2-Nil	4/5	2	4	60
ARX-160 (7.62mm, 20" DMR)	5	4	2-3-Nil	5/6	3	8	62
With Bipod	5	4	2-3-Nil	5/6	2	4	81

Beretta P-30

Notes: This odd M-1 Carbine variant was inspired by the carbines supplied by the US Government after World War 2 and Soviet experiments with semiautomatic and automatic rifles during that war. The result is basically an M-2 Carbine using a modified Tokarev action instead of the standard M-1/M-2 Carbine action. An odd feature of this weapon is that no visible parts move during firing; the necessary movements are all internal. The rifle used a virtually standard M-1 Carbine stock, and fired M-1 Carbine ammunition. The P-30 had two triggers; the rear trigger fired semiautomatic, unless the front trigger was pulled first (acting as sort of a selector lever).

Weapon	Ammunition	Weight	Magazines	Price
P-30 (Fixed Stock)	.30 Carbine	2.95 kg	15, 30	$315
P-30 (Folding Stock)	.30 Carbine	2.45 kg	15, 30	$340

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
P-30 (Fixed Stock)	5	2	1-Nil	5	1	3	49

P-30 (Folding Stock)	5	2	1-Nil	4/5	1	3	49

Howa Type 89

Notes: The Type 89 is the standard rifle of the Japanese Self-Defense Force. It is essentially a highly-modified AR-18; the Japanese had a license to manufacture the AR-18 for a short time in the late 1960s, but their Constitution at the time made it illegal to sell military-type weapons to the belligerents of *any* conflict, and the US was involved in the Vietnam War at the time, as well as many Pacific Rim nations. They did not waste their experience with the AR-18, however. Many parts of the design of the AR-18 were incorporated into the Type 89. As befits the Japanese Constitution, the Type 89 has never been exported.

The Type 89 is gas-operated, employing the core of the AR-18 operating system. The receiver is of stamped steel, as are some of the operating parts. An unusual feature of the operating system (for a rifle) is that it uses a telescoping bolt, which allows a long gas expansion path that prolongs the life of its moving parts, but still making the Type 89 fairly compact. Furniture is largely polymer, but the folding stock is of plastic-coated steel and folds to the right side. The Type 89 has a detachable folding bipod. Sights are the basic flip-type aperture sights in the rear, adjustable for windage and elevation; the front sight is a simple hooded post. The Type 89 is capable of firing NATO-type rifle grenades, and the 16.54-inch barrel is fitted with a flash suppressor/muzzle brake. The trigger mechanism is unusual; the burst mechanism is separate from the rest of the selective fire mechanism, and if the burst mechanism fails, the Type 89 can still be fired automatically or semiautomatically. (The selector switch is still a single four-position switch.) The burst mechanism can also be easily removed.

Twilight 2000 Notes: These weapons were sold to the Philippines after the Twilight War (starting in 2003), but was otherwise a Japan-only weapon.

Weapon	Ammunition	Weight	Magazines	Price
Type 89 (Fixed Stock)	5.56mm NATO	3.5 kg	20, 30	$1192
Type 89 (Folding Stock)	5.56mm NATO	3.5 kg	20, 30	$1212

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Type 89 (Fixed Stock)	3/5	3	1-Nil	6	2	3/4	42
(With Bipod)	3/5	3	1-Nil	6	1	1/2	54
Type 89 (Folding Stock)	3/5	3	1-Nil	4/6	2	3/4	42
(With Bipod)	3/5	3	1-Nil	4/6	1	1/2	54

Mendoza FX-05 Xiuhcoatl

Notes: The FX-05 Xiuhcoatl (*Fusil Xiuhcoatl 2005; Xiuhcoatl* means Fire Serpent) began replacing the G-3 and the limited-issue M-16A1s and other assault rifles in limited use by the Mexican military in 2005. The FX-05 is itself still in limited issue, primarily due to funding problems, but it it already equipping the GAFE (Special Forces Airmobile Groups), most of the Military Police, and a few other Army units. The FX-05 has had an interesting political and legal history – most military experts believe it is an unlicensed derivative of the export version of Heckler & Koch G-36 assault rifle, with a very few modifications internally and dressed up externally so it does look exactly the same as the G-36. The Mexican firm of Mendoza (who claims to have independently developed the FX-05) was very nearly sued in international court by Heckler & Koch over this; it is possible that Heckler & Koch dropped the lawsuit in exchange for some "royalty" money and an agreement that Mexico buy an unspecified number of actual G-36 rifles from Heckler & Koch at inflated prices for their special operations units. The Mexicans *did* test the G-36 and rejected it, though what technical information they obtained during their trials is also unknown.

Another story says that Heckler & Koch did in fact examine the FX-05 in detail, and, while they thought it might have been based on the G-36, concluded the FX-05 was not similar enough to the G-36 for Heckler & Koch to believe they could win a lawsuit. A third story says that Heckler & Koch dropped the suit at the request of the US government, again in exchange for unspecified "rewards," and for unspecified reasons. Regardless, production of the FX-05 is proceeding at a low rate, though the Mexicans hope to go to full production rates in late 2007 or early 2008.

The FX-05 is a modular design, which allows for changes in sights, accessories, stocks, muzzle devices, etc., quite easily. Most of the receiver, optical sight/carrying handle, and the pistol grip and trigger group do in fact look almost exactly like that of the G-36, though more composites are used in the construction of those elements. (In fact, the lower receiver is virtually entirely made of high-strength polymer.) The stock is usually side-folding, though sliding stock and fixed-stock versions have been seen in photographs; the fixed and folding stocks look very much like those of FN's SCAR, while the sliding stock is very much like that of Colt's M-4. In the case of the side-folding and fixed stocks, they are a bit shorter than the stocks of most assault rifles, in order to account for the shorter stature of most Mexican soldiers. The handguard is equipped with short MIL-STD-1913 rails on either side near the end of the handguard; the optical sight/carrying handle can be removed, revealing another, longer MIL-STD-1913 rail atop the receiver. A possibility for future versions is another MIL-STD-1913 rail under the handguard, running the full length of the handguard (though this has not yet been seen on any FX-05). Fire controls and the magazine release are ambidextrous. The FX-05 is able to accept an M-203PI (but not a standard M-203). Standard magazines are made from translucent plastic, again virtually identical to those of the G-36, though the FX-05 is rumored to be able to accept M-16-type magazines as well (again, this has not yet been seen by observers). Rumors also state that a carbine with an even shorter barrel than the assault rifle version exist, as well as longer-barreled SAW and marksman versions; these also have not been seen by any observers as of yet.

The Mexicans have not allowed anyone else from any other country, military or civilian, to examine or even handle any FX-05s; therefore, anything after this point is essentially an educated guess. The operation is presumed to be virtually identical to that of the G-36. The barrel of the standard version has been calculated from photographs to be approximately 12.5 inches long and tipped with a pronged flash suppressor; versions have also been seen with several different types of muzzle brakes. The barrel length seems to make the FX-05 more of an assault carbine than an assault rifle. Rumors indicate that the barrel is made from stainless steel, with a chromed bore and an intermediate rifling twist compatible with both SS-109 and older M-193 5.56mm NATO ammunition (which would put it somewhere from 1:7 to 1:9). The short barreled version is rumored to have a barrel of only about 9 inches, and the barrels of the SAW and marksman versions 20 inches. (Presumably, the marksman version uses a better barrel and better sight than that of the SAW version, and the SAW version uses 100-round C-Mags as standard. Both are probably equipped with bipods. Marksman versions would probably not use muzzle brakes, but I have included them below "just in case.") Small arms experts believe the weight of the standard FX-05 to be approximately 2.65 kilograms. Assuming the FX-05 is based on the export model of the G-36, the optical sight on the carrying handle would be of 1.5x magnification with a high-contrast aiming reticle, though rumors state that the optical sight of the FX-05 does in fact have 3x magnification. Adjustable backup iron sights are also provided.

Twilight 2000 Notes: The FX-05 does not exist in the Twilight 2000 timeline.

Merc 2000 Notes: The Germans sold the Mexicans genuine G-36s instead, and the FX-05 was never even designed or contemplated.

Weapon	Ammunition	Weight	Magazines	Price
FX-05 (Fixed Stock, Flash Suppressor)	5.56mm NATO	2.65 kg	20, 30	$682
FX-05 (Fixed Stock, Muzzle Brake)	5.56mm NATO	2.75 kg	20, 30	$727
FX-05 (Folding Stock, Flash Suppressor)	5.56mm NATO	2.65 kg	20, 30	$702

FX-05 (Folding Stock, Muzzle Brake)	5.56mm NATO	2.75 kg	20, 30	$747
FX-05 (Sliding Stock, Flash Suppressor)	5.56mm NATO	2.68 kg	20, 30	$702
FX-05 (Sliding Stock, Muzzle Brake)	5.56mm NATO	2.78 kg	20, 30	$747
FX-05 Carbine (Fixed Stock, Flash Suppressor)	5.56mm NATO	2.53 kg	20, 30	$645
FX-05 Carbine (Fixed Stock, Muzzle Brake)	5.56mm NATO	2.62 kg	20, 30	$691
FX-05 Carbine (Folding Stock, Flash Suppressor)	5.56mm NATO	2.53 kg	20, 30	$665
FX-05 Carbine (Folding Stock, Muzzle Brake)	5.56mm NATO	2.62 kg	20, 30	$711
FX-05 Carbine (Sliding Stock, Flash Suppressor)	5.56mm NATO	2.56 kg	20, 30	$665
FX-05 Carbine (Sliding Stock, Muzzle Brake)	5.56mm NATO	2.65 kg	20, 30	$711
FX-05 SAW (Fixed Stock, Flash Suppressor)	5.56mm NATO	3.47 kg	20, 30	$1597
FX-05 SAW (Fixed Stock, Muzzle Brake)	5.56mm NATO	3.59 kg	20, 30	$1641
FX-05 SAW (Folding Stock, Flash Suppressor)	5.56mm NATO	3.47 kg	20, 30	$1617
FX-05 SAW (Folding Stock, Muzzle Brake)	5.56mm NATO	3.59 kg	20, 30	$1661
FX-05 SAW (Sliding Stock, Flash Suppressor)	5.56mm NATO	3.51 kg	20, 30	$1617
FX-05 SAW (Sliding Stock, Muzzle Brake)	5.56mm NATO	3.63 kg	20, 30	$1661
FX-05 Marksman (Fixed Stock, Flash Suppressor)	5.56mm NATO	3.23 kg	20, 30	$1295
FX-05 Marksman (Fixed Stock, Muzzle Brake)	5.56mm NATO	3.35 kg	20, 30	$1339
FX-05 Marksman (Folding Stock, Flash Suppressor)	5.56mm NATO	3.23 kg	20, 30	$1315
FX-05 Marksman (Folding Stock, Muzzle Brake)	5.56mm NATO	3.35 kg	20, 30	$1359
FX-05 Marksman (Sliding Stock, Flash Suppressor)	5.56mm NATO	3.27 kg	20, 30	$1315
FX-05 Marksman (Sliding Stock, Muzzle Brake)	5.56mm NATO	3.39 kg	20, 30	$1359

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
FX-05 (Fixed, Suppressor)	5	3	1-Nil	5	3	7	27
FX-05 (Fixed, Brake)	5	3	1-Nil	5	2	5	27
FX-05 (Folding/Sliding, Suppressor)	5	3	1-Nil	4/5	3	7	27
FX-05 (Folding/Sliding, Brake)	5	3	1-Nil	4/5	2	5	27
FX-05 Carbine (Fixed, Suppressor)	5	2	1-Nil	4	3	7	18
FX-05 Carbine (Fixed, Brake)	5	2	1-Nil	4	2	5	18

FX-05 Carbine (Folding/Sliding, Suppressor)	5	2	1-Nil	3/4	3	7	18
FX-05 Carbine (Folding/Sliding, Brake)	5	2	1-Nil	3/4	2	5	18
FX-05 SAW (Fixed, Suppressor)	5	3	1-Nil	6	2	6	55
With Bipod	5	3	1-Nil	6	1	3	72
FX-05 SAW (Fixed, Brake)	5	3	1-Nil	6	2	5	55
With Bipod	5	3	1-Nil	6	1	2	72
FX-05 SAW (Folding/Sliding, Suppressor)	5	3	1-Nil	5/6	2	6	55
With Bipod	5	3	1-Nil	5/6	1	3	72
FX-05 SAW (Folding/Sliding, Brake)	5	3	1-Nil	5/6	2	5	55
With Bipod	5	3	1-Nil	5/6	1	2	72
FX-05 Marksman (Fixed, Suppressor)	SA	3	1-Nil	6	3	Nil	57
With Bipod	SA	3	1-Nil	6	1	Nil	74
FX-05 Marksman (Fixed, Brake)	SA	3	1-Nil	6	2	Nil	57
With Bipod	SA	3	1-Nil	6	1	Nil	74
FX-05 Marksman (Folding/Sliding, Suppressor)	SA	3	1-Nil	5/6	3	Nil	57
With Bipod	SA	3	1-Nil	5/6	1	Nil	74
FX-05 Marksman (Folding/Sliding, Brake)	SA	3	1-Nil	5/6	2	Nil	57
With Bipod	SA	3	1-Nil	5/6	1	Nil	74

TARA TM-4

Notes: Like the TARA's TM-9 pistol, the TM-4 is a combination of old and new. Inspiration was derived from the M-4, Galil, and AR-18; new influences included the MIL-STD-1913 rails above the receiver and the four on the handguards, a short-stroke piston system (supposedly adapted from the AK), a lower receiver of polymer with steel reinforcing bars and hoops, fully ambidextrous controls, cold hammer forging with NITREX-coated barrel (chromed inside), and other anticorrosion coatings elsewhere on and inside the rifle. The upper receiver is of 7075-T6 aircraft aluminum and almost identical to that of the M-16A3/4. The stock is a sliding polymer stock (the rifle uses the M-4's buffer tube), and a Magpul adjustable stock with the addition of a recoil pad. The charging system and handle is M-4. The barrel, other than being cold hammer forged, uses a proprietary rifling process and is hand-fitted to the receiver nut; it is 14.5-inches long and designed for CQB, with a strong bayonet lug. The gas piston is adjustable, whether to compensate for dirt or to fire older rifle grenades. The TM-4 is currently re-equipping the Montenegrin armed forces and looking for export buyers. Magazines are light alloy and again, compatible with the M-4/M-16 series and the Galil.

Weapon	Ammunition	Weight	Magazines	Price
TM-4	5.56mm NATO	2.72 kg	20, 30, 35, 50	$729

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
TM-4	5	3	1-Nil	4/5	2	5	35

Radom Tantal/Beryl

Notes: The Russians had two policies towards their Warsaw Pact allies and some other countries – "You can buy your AKs directly from us, or you can buy a license for production in your own country, and pay through the nose for it." The Czechs bucked both of these by designing and building most of their own small arms, and the Hungarians later also built several of their own assault rifles, light machineguns, and pistols. By the late 1970s, the Poles too were tired of Moscow's dictates and decided to start their own program for producing a domestic assault rifle – the Tantal project. The project kicked off in earnest in 1981, though it was not deemed fit for service until 1989. This rifle also produced a short assault rifle variant, the Onyx, and the current Polish standard assault rifle, the 5.56mm Beryl.

The Wz.88 Tantal was the Polish replacement for the AK-74, first appearing in Polish service in 1990. At first, the design work was based directly on the AKS-74, but new firing mechanisms were eventually used, a new buttstock, four selector positions on two selector levers (the large characteristic AK lever is used only to switch the rifle to safe), and the gas system modified to prevent the bolt cover from falling off when firing rifle grenades (a persistent problem with the AK-74 series). It may fire Polish or other Pact rifle grenades, as well as mount the GP-25 or PALLAD. Tantal production had barely gotten off the ground when the first cracks appeared in the Warsaw Pact and the Iron Curtain in general, and the Gdansk shipyard riots and the subsequent elections led the General Staff of Polish Armed Forces to put a hold on Warsaw Pact-caliber weapons production. The Tantal became a stopgap rifle until the Tantal could be rebuilt into a 5.56mm rifle, especially after Poland became the first former Warsaw Pact country to join NATO. Construction of the Tantal included a large amount of polymer and updated versions of steel stampings, along with some light alloy parts – the Tantal looks more like an AK "Hundred Series" design than the traditional AK series. The barrel is longer than that of the AKM, being 17 inches in length. The folding stock is of a totally different design (often called the "fire poker" stock due to its strange shape), and no fixed stock version was designed.

Parallel with the development of the Tantal was the design of a short assault rifle to fill the same role of the Russian AKS-74U, called the Wz.89 Onyx. The barrel is 9 inches in length. Construction of the Onyx is largely the same as the Tantal, and there were even more differences between the Onyx and the AKS-74U -- a more-efficient muzzle brake, the addition of a 3-round burst mechanism, and an extended rear sight base that can be used to attach Eastern or Western optics. The folding butt is also of a different design, borrowed from the folding stock of East German variants of the AKMS. The Onyx did not survive the transition to the 5.56mm NATO caliber, though it is also still being shopped around on the export market.

The Wz.96 Beryl is a modernized version of the Tantal that fires 5.56mm NATO ammunition instead of 5.45mm Kalashnikov. The top of the receiver has a sight rail that can mount any NATO or Pact optics. The barrel is lengthened to 18 inches. The folding stocks are stronger than those used on the Tantal or Onyx, made from twin steel struts encased in shrink-shaped plastic shaped in roughly the same shape as a standard stock, and equipped with rubber buttplate (not a pad); it is similar in design to the folding stock of the Galil.) Most of the rest of the rifle is made from stamped steel, except for polymer parts such as the pistol grip and handguard. The other furniture such as the handguard is made from gray polymer. The Beryl can mount either the GP-25 or Pallad grenade launchers, or use the M-203PI or TGS, as well as use Polish rifle grenades or Western bullet-trap grenades. They can use most Western and Eastern optics and accessories, being equipped with a Polish modification of the MIL-STD-1913 rail, atop the receiver. Flip-up iron sights at the rear and a hooded front post sight are also available. The kbs version is the standard assault rifle; the kbk is a short-barreled assault rifle. The kbk is more commonly referred to as the Mini-Beryl, and it replaced the Onyx. It uses a barrel only slightly more than half the length of the kbs (9.3 inches), tipped with an abbreviated (and some say, rather ineffective) flash suppressor. The optics mounting rail on the receiver is shorter than that of the kbs, but closer in design to the MIL-STD-1913 rail and therefore able to use a wider variety of optics and accessories.

A new version of the Beryl, the Wz.04, was introduced and was already being issued to Polish troops. The Mini-Beryl can still use rifle grenades.

In Iraq, Polish troops started equipping their Wz.96s with non-standard features, ranging from Romanian-made foregrips to MIL-STD-1913 rails atop the receiver and on the sides and bottom of the handguard to aftermarket reflex and ACOG-type sights, aftermarket finishes, and even more. At the same time, several deficiencies in the Beryl's design were being noted, such as the heat-absorbent qualities of the stock, the poor flash suppressor, the sling (which was often replaced with US-built 3-point slings bought as US PXs in Iraq), the cumbersome safety/selector system, and the non-folding backup iron sights. This led to the Wz.04 Beryl, which had most of those improvements. For game purposes, it is identical to the original Beryl. (A feature which fell by the wayside quickly was the translucent plastic magazines – they proved to be too brittle and reflective of sunlight). A newer version, the Wz.07, has since been introduced; the differences include a stock that both folds and telescopes, a new, tougher finish, and a Brugger & Thomet-designed muzzle brake. The stock was improved so as not to absorb heat like the original stock. (These improvements were applied to all versions of the Beryl.)

In 2006, another version of the Beryl was designed – the mid-sized Wz.06 Beryl Commando, informally called the "Midi-Beryl." The barrel is slightly-over 14.75 inches long, and the stock is not the same as that of the Wz.07 Beryl – it is a US-built Lepers M-4-type telescoping stock which has six positions and is attacked to a folding mechanism. It was designed specifically at the request of the 1st Commando Special Regiment of Lubliniec, but apparently is not in production or issue at this time.

Twilight 2000 Notes: The Tantal equipped about a quarter of Polish forces at the start of the Twilight War, and was definitely preferred over the AK-74. Tantals in the Twilight 2000 timeline do not have the ability to use Western optics. The Wz.96 Beryl was originally produced for export in the Twilight 2000 timeline, but during the Twilight War were used by Polish special operations forces for use behind the enemy lines, in order to use captured NATO ammunition. Nonetheless, the Beryl is a rather rare weapon in the Twilight 2000 timeline. The Onyx was a fairly common sight among Polish troops, particularly higher-ranking NCOs and lower-ranking

officers. In addition, special ops troops and bodyguard details like the Onyx.

Weapon	Ammunition	Weight	Magazines	Price
Wz.88 Tantal	5.45mm Kalashnikov	3.4 kg	30, 40, 75	$701
Wz.96 kbs Beryl	5.56mm NATO	3.35 kg	20, 30	$787
Wz.96 kbk Beryl	5.56mm NATO	3 kg	20, 30	$697
Wz.07 kbs Beryl	5.56mm NATO	3.69 kg	20, 30	$841
Wz.07 kbk Beryl	5.56mm NATO	3.3 kg	20, 30	$751
Wz.06 Beryl Commando	5.56mm NATO	3.47 kg	20, 30	$807
Wz.89 Onyx	5.45mm Kalashnikov	2.9 kg	30, 40, 75	$694

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Wz.88 Tantal	3/5	3	1-Nil	4/6	2	4/6	48
Wz.96 kbs Beryl	3/5	3	1-Nil	4/6	2	4/6	47
Wz.96 kbk Beryl	3/5	2	1-Nil	3/4	2	4/6	16
Wz.07 kbs Beryl	3/5	3	1-Nil	4/6	2	3/4	47
Wz.07 kbk Beryl	3/5	2	1-Nil	3/4	2	3/4	16
Wz.06 Beryl Commando	3/5	3	1-Nil	4/5	2	¾	35
Wz.89 Onyx	3/5	2	1-Nil	3/4	2	4/6	16

Radom AKM/AKMS

Notes: This is a locally-produced version of the Russian AKM and AKMS assault rifles. They are basically the same as the standard AKM and AKMS, but the Radom version can also mount the Polish Pallad grenade launcher, the Radom version can mount both Eastern-Bloc and Western optics, the handguard and stock (of the fixed-butt version) are made from plastic, and the folding-stock version uses a different style of stock. The Radom AKM and AKMS were used by Polish forces until the Poles replaced it with the AK-74.

Twilight 2000 Notes: There were still a fair amount of these rifles in the hands of the Polish Army at the start of the Twilight War, and most of the ones that were in storage were passed out to units raised later in the war and local militia units. Radom AKMs and AKMSs in the Twilight 2000 world do not have the ability to use Western optics.

Merc 2000 Notes: Most of these weapons were sold, both legally and illegally, around the world after 2000.

Weapon	Ammunition	Weight	Magazines	Price
Radom AKM	7.62mm Kalashnikov	3.165 kg	30	$807
Radom AKMS	7.62mm Kalashnikov	3.165 kg	30	$827

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Radom AKM	5	4	2-Nil	6	4	9	46
Radom AKMS	5	4	2-Nil	5/6	4	9	46

RATMIL AKM-63

Notes: This Romanian variant of the AKM is not only one of the most unique-looking AKM variants; it is also one of the lightest. This is achieved by extensive use of plastics, light alloys, and light woods. The AKM-63 features a foregrip (though later models dispensed with this to make manufacturing easier and to allow the attachment of a grenade launcher). India purchased about 100,000 of the AKM-63 due to the problems with acquiring 5.56mm ammunition for its new INSAS assault rifle and difficulties with finding someone who would replace their aging FN-FALs and L-1A1s; these AKM-63s are in the process of being replaced by the now-available INSAS and new purchases of Tavor-series rifles from Israel.

The AKM-80 is the carbine variant of the AKM-63; the primary changes are the chopped barrel and lighter sort of folding stock. It is also able to accept a 20 round magazine in addition to the normal 30-round magazine. The barrel is so short that it can be difficult to control, and the lack of a flash suppressor does not help with the massive muzzle blast. Compared to the AKM-63, the AKM-80 is rare, but the AKM-63 was produced in such large numbers that this is not saying much. The AKM-80 cannot mount a bayonet, nor can it mount a grenade launcher.

Twilight 2000 Notes: A very large portion of the Romanian Army was still armed with the AKM-63 or AKM-80 at the start of the Twilight War. In addition, a large amount of replacement handguards were also manufactured to replace the ones with foregrips and allow a larger use of GP-25 and AG-40 grenade launchers. India started to receive AKM-63s in 1994, but the shipments abruptly ceased in early 1995 after the Indians had received a mere 8,000 of them. The AKM-80 was a fairly common weapon among vehicle crews and certain command personnel; though Romania did not have much in the way of a special operations capability, the AKM-80 was also used by those special ops soldiers she did have.

The AIMS also known as the AKM-65, is a variant of the AKM which is slightly heavier than the AKM-63 due to differences in the folding stock. It was also designed to reduce costs, using the less-expensive folding stock version, a 45-degree gas block, and a rear trunnion using less rivets. Shooting wise, it is identical to the AKM-63 (in game terms).

Merc 2000 Notes: by 2002, the Romanians had managed to dump virtually all of their AKM-63s on the international military and civilian markets in favor of newer weapons. Aside from India, the best place to find an AKM-63 was in Africa or Southeast Asia.

Weapon	Ammunition	Weight	Magazines	Price
AKM-63	7.62mm Kalashnikov	3.1 kg	30	$827
AKM-80	7.62mm Kalashnikov	2.8 kg	20, 30	$783
AIMS	7.62mm Kalashnikov	3.2 kg	30	$827

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AKM-63/AIMS	5	4	2-Nil	4/5	4	9	46
AKM-80	5	3	2-Nil	3/5	3	7	29

RATMIL AK-86

Notes: This is the Romanian counterpart of the AK-74; it is not really a Romanian *variant* of the AK-74, since RATMIL used the AKM as a base and then converted it to fire 5.45mm Kalashnikov. Like the RATMIL version of the AKM, the standard version is lighter than its Russian counterpart due to the use of polymer furniture; however, early production models used wooden furniture and had a foregrip, like the AKM-63. (These early production versions are rarely seen in Romanian service anymore, but many collectors are interested in them.) The early production model also lacked any sort of flash suppressor or muzzle brake, but current production models have a RATMIL-designed flash suppressor. When found with a grenade launcher, it is normally fitted with the AG-40 instead of the GP-25. The fire selector allows for safe, semiautomatic, automatic, and 3-round burst. The other difference is the different stock style, with a skeletonized stock on the AK-86 and a very light metal stock on the AKS-86 (also known as the AIMS-74; though the AIMS-74 designation was not given to the 5.56mm NATO version) and AKS-97; these versions also used less experience (in real life) and use a 45-degree gas block, a less-expensive folding stock, and a rear trunnion with less rivets. A modified training version of both types is also available, firing .22 Long Rifle ammunition, and RATMIL began selling a model firing 5.56mm ammunition in 1996, in anticipation of Romanian entry into NATO. The training rifle differs in having a solid hardwood stock and sights calibrated for shorter ranges; the 5.56mm NATO model also has different sights suited to the ammunition. Both can still mount a bayonet or a grenade launcher.

The last version, the AKS-97, is designed for use by special operations, bodyguards, and for CQB. It is essentially the AK-86 with shorter barrel. It can still mount an underbarrel grenade launcher, but cannot use a bayonet. Rumors say that the Romanians are working on a “tricked out” version of the AK-97 with a MIL-STD-1913 rail atop the receiver and four-position rails on the handguards, but this has not been confirmed.

Twilight 2000 Notes: Most Romanian soldiers not armed with the AKM-63/80 were armed with the AK-86 or its carbine variant. Most of the training rifles have been converted back to 5.45mm. The 5.56mm version was never produced. The AK-97 is available, but only in small numbers.

Merc 2000 Notes: This weapon was almost also very common on the world market, but not as popular as the AKM-63/80. The 5.56mm version has seen some sales, but is out of production by 2002; the AK-97 version in 5.56mm was particularly disliked due to high muzzle blast and a flash suppressor that was ill-suited to the round.

Weapon	Ammunition	Weight	Magazines	Price
AK-86 (Early Production)	5.45mm Kalashnikov	3.21 kg	30, 40	$656

AK-86	5.45mm Kalashnikov	3.1 kg	30, 40	$671
AKS-86	5.45mm Kalashnikov	3.1 kg	30, 40	$691
AK-86	5.56mm NATO	3.1 kg	20, 30, 40	$747
AKS-86	5.56mm NATO	3.1 kg	20, 30, 40	$767
AK-86 Trainer	.22 Long Rifle	3.57 kg	20	$227
AK-97	5.45mm Kalashnikov	2.8 kg	30, 40	$645
AK-97	5.56mm NATO	2.8 kg	20, 30, 40	$722

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AK-86 (Early)	3/5	3	1-Nil	5	2	4/6	45
AK-86 (5.45mm)	3/5	3	1-Nil	5	2	4/6	45
AKS-86 (5.45mm)	3/5	3	1-Nil	4/5	2	4/6	45
AK-86 (5.56mm)	3/5	3	1-Nil	5	2	4/6	41
AKS-86 (5.56mm)	3/5	3	1-Nil	4/5	2	4/6	41
AK-86 Trainer	3/5	-1	Nil	5	1	1/2	34
AK-97 (5.45mm)	3/5	2	1-Nil	3/5	2	4/6	28
AK-97 (5.56mm)	3/5	2	1-Nil	3/5	3	4/6	25

Izhmash AK-9

Notes: The AK-9 is a relatively new development in the quest for specialist weapons for Russian special operations units, and in particular silenced assault rifles. The AK-9 is based on the "Hundred Series" of AK assault rifles (specifically the AK-104), but has been greatly modified, the biggest change is that it is based around the 9mm SP-5, SP-6, and PAB-9 rounds and the titanium-alloy silencer custom-designed for the AK-9. The silencer for the AK-9 is said to be wipeless, wears very slowly, can fire up to 3000 full-auto shots before wearing out, and is sealed and does not require any operator maintenance. The design makes much use of light alloys and polymers, with much of the receiver being light alloy and the stock, pistol grip, fore-end and heat shield, and some other small parts being made of polymer. The magazines are also polymer. Controls are familiar to anyone who can use an AK-series weapon. The fore-end has a MIL-STD-1913 rail under the handguard for accessories. The AK-9 has the customary AK-type sight interface to the left side of the receiver – and the rear sight is both flip up and removable. The barrel length has not been published, but **my estimate** (which includes the semi-fixed silencer) is 11.38 inches. The stock is solid polymer (except for some light alloy reinforcing), but folds to the right.

It should be noted that the AK-9 is just one of several limited-production weapons produced for the same purposed, designed to compete with other such silenced assault rifles such as the AS Val, some iterations of the OTs-14 Groza, and the SR-3 Vikhr. Any or all may be adopted for full-scale production, or any or all may remain in limited production since their rate of issue is relatively small.

Twilight 2000 Notes: The AK-9 is not available in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
AK-9	9mm SP5	3.1 kg	20	$1013
AK-9 (With Silencer)	9mm SP5	3.8 kg	20	$1679

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AK-9 (PAB-9)	5	4	2-3-Nil	4/6	4	10	27
AK-9 (SP-5)	5	4	1-2-Nil	4/6	4	10	27
AK-9 (SP6)	5	4	1-2-3	4/6	4	10	32
AK-9 (PAB-9, Silenced)	5	3	2-3-4	6/8	3	8	23
AK-9 (SP-5, Silenced)	5	3	2-3-Nil	6/8	3	8	23
AK-9 (SP-6, Silenced)	5	3	1-2-Nil	6/8	3	8	27

Izhmash AK-12

Notes: One day, representatives from Izhmash contacted the Russian Army's R&D facility and said it could fix the AK-74M. The AK-74M has long been a bone of contention among Russian soldiers, though it too is a fix of the earlier AK-74. (The stocks and handguards, in particular, are regarded as too fragile, and the barrel tends to warp after large amounts of firing, such as during MOUT combat.) The problem for Russian Army, however, was that they had mountains of AK-74s and AK-74Ms, so even an improved version of the AK-74M was a tough sell to the Russian Army, Naval Infantry, and Air Force; in addition, Russian special ops units were not interested (they already use a lot of high-speed weapons designed specifically for them). The future for the AK-12 is therefore iffy, though it is reportedly in advanced testing by a limited number of Russian troops and Russian Police special units. In addition to the mountains of AK-74s and AK-74Ms, there is also a money crunch in the Russian military that limits the acquisition of new weapons of any sort, and a growing number of countries in the world that are switching to 5.56mm NATO or back to 7.62mm Kalashnikov, or already use them.

Improvements made to the AK-74M platform to produce the AK-12 (which many in the design team call the AK-200) include a smaller ejection port (so less crud gets into the chamber and to the bolt carrier), a new ambidextrous fire control lever that is set back as to be able to be actuated by the thumb of the firing hand and has three modes of fire (Semi, Auto, and Burst) as well as Safe, a monolithic Picatinny rail atop the receiver, another rail under the handguard, an ergonomic pistol grip, a NATO-compatible 22mm muzzle to allow the use of NATO or newer Russian or Chinese rifle grenades, improved rifling that stabilizes the 5.45mm Kalashnikov round better, a charging handle that may be moved from side to side, much stronger polymer parts made from newer carbon-fiber-based materials. A folding stock is used, and extra Picatinny rails around the handguards are optional. The stock includes a raised cheekpiece and a rubber/foam buttpad, and is adjustable for length as well as being side-folding. Only a standard AK-74-type front sight is permanently mounted, though it is issued with an adjustable BUIS for the rear. The standard barrel is 16.3 inches, of heavy profile and fluted, and tipped with a modified AK-74-type muzzle brake; the bore, chamber, and bolt are chromed. as

The AK-12, if it is possible, has more resistance to dirt, crud, water, and fouling; this is despite the fact that the parts have closer tolerances. However, it is not regarded by most shooters and experts as a pretty rifle – most consider it downright ugly. It is quite functional, however.

The rumor mill (particularly out of the British SAS and MI6) states that Spetsnaz is testing a variant of the AK-12 in 7.62mm Kalashnikov. This version is designated the AK-15. I have included this rumored version below. Short 12-inch barreled versions, designated AK-12K and AK-15K, are also reportedly being tested. (The barrel lengths used in the stats below are an educated guess, based on the overall length of the two versions; however, they are not definitive figures.) A rumored version of the AK-12 is in 5.56mm NATO, designed for export to military, police, and civilians. (It is not being imported to the US, as one of Barak Obama's last pieces of gun-control legislation made the importation of Russian-made assault rifles illegal. AK-12s made by Kalashnikov Concern USA, however *will* appear on the US market.) This can take special magazines designed for the AK-type feed system, including two types

of drum magazines. Another rumored export version is a variant of the AK-15, chambered for the 7.62mm NATO round. This version uses Izhmash-designed magazines, including two drums. All of the AK-12 series can also take a new 60-round quad stack magazine that is no longer than a 30-round magazine.

Twilight 2000 Notes: The AK-12 is not available in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
AK-12	5.45mm Kalashnikov	3.4 kg	5, 10, 20, 30, 40, 60, 75D, 96D	$889
AK-12	5.56mm NATO	3.4 kg	5, 10, 20, 30, 60, 60D	$887
AK-15	7.62mm Kalashnikov	3.4 kg	5, 10, 20, 30, 40, 60, 75D	$1328
AK-15	7.62mm NATO	3.4 kg	5, 10, 20, 30, 60, 60D	$1595
AK-12K	5.45mm Kalashnikov	3.17 kg	5, 10, 20, 30, 40, 60, 75D, 96D	$844
AK-15K	7.62mm Kalashnikov	3.17 kg	5, 10, 20, 30, 40, 60, 75D	$1284

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AK-12 (5.45mm)	3/5	3	1-Nil	4/5	2	2/4	46
AK-12 (5.56mm)	3/5	3	1-Nil	4/5	2	2/4	42
AK-15 (7.62mm Kalashnikov)	3/5	4	2-Nil	5/6	2	4/6	47
AK-15 (7.62mm NATO)	3/5	4	2-3-Nil	5/6	2	4/6	47
AK-12K	3/5	2	1-Nil	3/5	2	2/4	29
AK-15K	3/5	3	2-Nil	4/5	2	3/5	29

Izhmash AK-107/108

Notes: At first thought to be variants of the AK-100 series (above), the AK-107 and AK-108 are now understood to be completely different designs resulting from a different development process. The genesis of these rifles came in the early 1970s, when Yuriy Alexandrov developed an assault rifle partially based on the Kalashnikov action called the AL-7. The AL-7 used an operating system that, while based on gas operation, used what Alexandrov called a “balanced gas” system. The balanced gas system uses the gas from the firing of a round to a pair of operating rounds – both fairly heavy as operating rods go – which move simultaneously in opposite directions, one partially counteracting the recoil caused by the other. This acts to reduce actual recoil in addition to felt recoil – and a modified version of the AK-74M’s muzzle brake further reduces felt recoil, even though the cyclic rate of the rifles are much higher than those of the AK-74M. (The cyclic rate is still not high enough to affect the game statistics, however.) When the AL-7 was first designed, however, it was ahead of its time – Soviet production methods were ill-suited for mass production of what is a complicated weapon in a reasonable period of time and at a reasonable cost.

The AL-7 was shelved until the mid-1990s, when manufacturing methods had improved considerably and Alexandrov had worked his way up to a senior engineer at Izhmash. Collaboration was undertaken with Kalashnikov, and the AK-107 was introduced in about 1998. It differed little from the AL-7 – the AL-7 used a machined, fluted receiver, while the AK-107 uses a plain stamped steel receiver, and a three-round burst setting was added to the fire controls. The AK-107 was intended to be a competitor to the AN-94 Abakan (and still is – in real-life terms, it is much cheaper to produce than the AN-94), but like the AN-94, its future and that of the AK-108 remain uncertain due to the poor economic climate in Russia.

The AK-107 and AK-108 do have a marked resemblance to the AK-100 series; however, this is probably due to their both using the basic Kalashnikov design as a basis. The AK-107 and AK-108 use mostly polymer furniture, but most of the metalwork is of stamped steel. The ejection port is larger than that of a typical Kalashnikov-based weapon, with a stronger extractor. The receiver’s cover is hinged at the front instead of lifting completely off when being field stripped. The rear sight is mounted directly on the receiver cover, rather than on the receiver itself. The typical Russian-style brackets for the mounting of optical devices can be mounted, but these brackets can also accept rails which allow the use of many Western-type optics. The magazines are, however, the same proprietary magazines used on the AK-100 series.

Twilight 2000 Notes: These assault rifles do not exist in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
AK-107	5.45mm Kalashnikov	3.45 kg	30, 40, 75D	$811
AK-108	5.56mm NATO	3.45 kg	30, 40, 75D	$887

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AK-107	3/5	3	1-Nil	4/5	2	2/4	45
AK-108	3/5	3	1-Nil	4/5	2	2/4	41

Kalashnikov AK-47/AKM

Notes: Though weapons like the FG-42 and MP-44 were the first true assault rifles, the AK-47 is probably the first weapon that one thinks of when the words “assault rifle” are mentioned. The AK-47 is the invention of a tanker, Mikhail Kalashnikov, who began working on it in 1943 after being seriously wounded in battle. He completed his first drawing-board prototype about two years later (though it was not ready for World War 2), and after a lengthy competition and development process, the AK-47 emerged as the winner of the competition, and Mikhail Kalashnikov emerged has the head of his own small-arms design bureau. (He later headed

Izhmash, which was then building and developing AK-series weapons.) The AK-47 was the first mass-issue of assault rifles to any world army. Within 15 years, the AK-47 could be found almost anywhere a Communist government or insurgency could be found, and by 2002, you'd be hard put to find a place on the planet where an AK-47 or AKM could not be found. The AK series has also spawned a large number of clones and variants, from Finnish Valmet rifles to Galils to the Indian INSAS, and the list is growing every day. It has a well-deserved reputation for toughness and reliability.

The original AK-47 was crafted out of rather expensive milled steel and with walnut stocks. There is no bolt-hold-open device when the magazine empties (in fact, if you find the bolt on your AK-47 open and the weapon is not firing, it is definitely jammed). It is also not known for long-range accuracy.

There are generally two basic variants of the AK-47: the standard AK-47 with a wooden butt, and the AKS with a folding steel stock. There is a third variant, the AKT-47; this is a wooden-stocked version that has been modified to fire .22 Long Rifle ammunition, and used to lower training costs.

By 1959, the Soviets were facing a number of problems with the AK-47. One, the production methods used to make the AK-47 was rather expensive. Two, every Soviet ally, client state, and insurgent movement was demanding the AK to replace its old weapons, which in some cases were pre-World War I vintage. Three, troops having to hump the AK-47 were complaining a lot about the weight. Four, sight mounts for the new night vision scopes were either not found or difficult to retrofit to the AK-47. And five, the original batches of AK-47s were simply getting worn out due to extensive use and the slightly corrosive nature of the cleaning fluid the Soviets were using at the time.

Kalashnikov therefore did some extensive modifications to the AK-47. The quality of the steel was improved while the production methods were simplified to use stamped instead of milled steel; this allowed lighter steel to be used as well as bring down production costs. A recess was placed on each side of the magazine well to act as a guide during magazine insertion. A rudimentary muzzle compensator has been added to help with recoil (though this is largely counteracted by the lighter weight of the weapon). And the expensive woods formerly used in the AK-47 were replaced by cheaper and lighter wood; in some cases, it is simply laminated plywood. The AKM is also capable of being fitted with a suppressor (in most cases, this is the PBS-1), and mounting a wider variety of optics. Like the AK-47, there are two basic versions of the AKM, the standard AKM with fixed wooden stock, and the folding-stock AKMS. There does not appear to be any Russian-made training version of the same sort as the AKT-47, though other countries have built such variants.

Both the AK-47 and AKM have essentially the same gas operation, with a heavy bolt carrier group and a long-stroke gas piston. The bolt carrier rides on rails attached to the receiver, and uses a rotating bolt. Extraction comes in two phases. A curved cam ensures that the bolt rotates. The cocking handle reciprocates with the bolt carrier, as the cocking handle and bolt carrier are in fact one unit formed out of the same piece of metal. The parts of the AK have significant play in them (if you pick one up and shake it, it rattles like crazy), but not enough to stop the weapon from working. And this is part of the key to the AK's reliability -- this play in the parts helps to a large degree to make the AK highly resistant to dirt and fouling. The 16.34-inch barrel has threads at the muzzle just ahead of the gas block -- on the AK-47, these threads are normally hidden by a simple protector, while on the AKM, a simple spoon-shaped compensator is attached to help reduce muzzle climb. The threads may also be used to attach a blank firing adaptor, or even a special silencer designed for use on the AK-47 and AKM and for use only with subsonic ammunition. Furniture is largely of beech, though late-production versions of the AKM use a plastic pistol grip, and the folding stock versions have a steel-strut stock which folds underneath the rifle. Feed is mostly from the characteristic heavy ribbed steel 30-round magazines, though both the AK-47 and AKM can feed from the RPK's 40-round magazines and 75-round drums. In addition, some recent-production 7.62mm magazines are of brick-red or black plastic or polymer.

By 2006, most AK-47s had been replaced with more modern weapons (usually other AKs or weapons based on the AK) in most world armies. Many of the rest had been modified with anything from replaced worn-out parts to plastic stocks and better linings for the barrels. However, since there were probably over 50 million AK-47s and AKMs manufactured worldwide, there is a good chance that some examples from the original production batch are floating around somewhere. There are still huge numbers of AKMs in front-line use, and even more in units ranging from Category II Russian to militia units in Europe. They have been sold by the mountains all over the planet.

A number of AK-47/AKM clones have been built in China, Eastern Europe, and later, the West, or imported from there. Most use the same barrel length. Some have new fore-ends with MIL-STD-1913 rails, and rails above the receiver.

Bravo Arms in the US makes the Bravo 18 AKM. This is equipped with a Magpul CTR folding/sliding stock, handguards with six MIL-STD-1913 rails (with the top extended to the receiver), a selector reworked to not stick out so much, an ergonomic polymer pistol grip, and a stubby 10.5-inch barrel tipped by a unique, compact, spiral-cut flash suppressor.

Another .22 variant is the GSG AK-47. This is made for the .22 chambering rather than simply being an AK-47 with a cut-down receiver and internals. The GSG AK-47 is made from American Walnut stocks and pistol grips, and is externally virtually identical to a Kalashnikov AK-47. The magazine is a 10-rounder, but looks like a 30-round magazine, and is proprietary. Versions include one with wood furniture and one with synthetic furniture; the synthetic version has a Picatinny Rail atop the receiver, atop the rear of the barrel, and below the rear of the handguard.

The Spetznaz makes much use of a suppressed AKMS variant called the AKMSB. They were issued quite often to Spetsnaz troops for clandestine work and assassinations, as well as for initiating ambushes or carrying them out whole. The rifle is easily available these days, but the PBS-1 suppressor is subject to large amounts of red tape when one attempts to acquire one. The PBS-1 can stand up to automatic fire and (to a lesser extent) standard-loading ammunition.

Definitive Arms in St Petersburg, Florida makes a highly-modified AKM called the DAKM-4150 (Definitive AKM). It is a limited-

production, and the last lot that was put up for sale sold out in 12 minutes. The action is made to much closer tolerances than the AKM, and is described as “buttery smooth” by Mitch Hardin, a noted firearms expert. The barrel is 16 inches and is an American-made 4150 chrome/moly/vanadium steel alloy construction. It has a three-slot muzzle brake at the muzzle. The handguards are polymer and are made by Zenit; they have Picatinny rails on top, the sides, and underneath. Those on the sides and underneath are longer than the one atop the handguard, and the DAKM-4150 comes with a bottom rail mounted removable foregrip. The rails are made in Russia and designed for an AKM-type rifle. The stock is a polymer Magpul Zhukov-S side-folding stock; it does not get in the way of the pistol grip or trigger when folded. Finish is a mix of OD Green and burnt orange Cerekote for every part except the handguards. The pistol grip is a Command Arms UPG-47 polymer grip. The front sight is by XS Sight Systems, the rear sight adjustable aperture is by Krebs Custom. The DAKS-4150 comes with a side-mounted sight rail with a Picatinny rail on top. The optics sold with the rifle is a Primary Arms 1-6x24 SFP with an ACSS reticle. Trigger action is light and described as silky smooth, though it is not super crisp, either. Magazines sold with the DAKM-4159 are polymer Magpul magazines, though the DAKM-4150 can also use any sort of AK-47/AKM/RPK magazines. The excellent barrel and internal components make for an accurate rifle, despite it being basically a modified military rifle.

German Sports Guns (GSG) is an up-and-coming company making copies of great past rifles in .22 Long Rifle caliber. The GSG Rebel AK-47 is one of these. The finish is standard, though carefully “weathered” to mimic a Third-World AK-47 that has seen hard use. The handguards are taped together with “dirty” white tape, and the stock and pistol grip has a cloth (also “dirty”) that the “owner” added to increase comfort and cheekweld, and secured with staples. The barrel and many of the metal parts is “rusty,” though under that rust is hard parkerization. The Rebel’s receiver, thou it looks like the original steel, is actually a steel/zinc alloy to reduce weight and reduce cost. The stock looks well worn and even has scratches and nicks. Under the issue magazines, which look like standard AK-47 magazines (appropriately worn) is another piece of medical tape; in a divergence from the original AK-47, they are polymer, though they look like worn steel magazines. Despite it’s appearance, the Rebel AK-47 is a solidly-built rifle, with internals and the receiver built to Western standards. The 16.5-inch barrel has no muzzle device, like the original; however a cap on the end of the muzzle may be unscrewed, revealing threads for a flash suppressor or muzzle brake (a suppressor will not fit without major re-engineering). The gas block, tube, and piston are just for looks, as operation is actually blowback, as befits a .22 Long Rifle gun. Even the long, heavy, and mushy trigger pull of the AK-47 is duplicated. The sights are basic AK-47, with rear sights that are adjustable for windage but not elevation, and the controls are also AK-47. Diverging from the AK-47, the Rebel has a bolt hold-open device. It also has a magazine safety. Inside, of course, the Rebel is a very different animal, since it’s parts are for blowback operation and firing rimfire cartridges. However, field stripping and disassembly are quite simple, though it involves a lot of small parts and screws. A Note: The Rebel AK-47 was first sold as the Zombie AK-47, with a marketing campaign that advertised its appearance as a weapon that would appear like one well-used in a zombie invasion.

There is a version of the AKMS chambered for 8mm Kurz; however, it is something of a mystery as to who was the gunsmith that produced this iteration. This gunsmith reportedly called the rifle the “44 Bore.” The rifle is all the rage in Pakistan right now, though where they got rifles to find out the 8mm Kurz is a viable cartridge is unknown. Though now it is popular, the gunsmith is said to have made his first one in 2012. However, the 44 Bore is enjoying a surge in sales in Pakistan as this time (Feb 21). The barrel and chamber are reamed out and adjusted to accept the 8mm Kurz cartridge, The gunsmith says that there is enough metal in the barrel and chamber to safely fire the 44 Bore on full automatic. However Western shooters, including one who went to Pakistan to fire the 44 Bore, say that 44 Bore is not a safe weapon, and in time it will bite you in the form of a ruptured barrel, ruptured chamber, or broken gas piston. They also state that you probably couldn’t get a conventional license to fire even a semiautomatic version in the US due safety concerns. Cases most often eject from the chamber with a double or triple shoulder head, because the chamber is not properly reamed out for the 8mm Kurz cartridge and basically expands two or three times in the chamber.. It is claimed by many Pakistani owners of the 44 Bore that standard AK-47 and AKM magazines will work with 8mm Kurz without a problem, and in fact failures to feed seem to be rare. The AK-47/AKM magazines hold 28 rounds of 8mm ammunition. The impulse to produce this weapon appears to be a 2012 Pakistani law outlawing the passion of 7.62mm Kalashnikov cartridges.

Weapon	Ammunition	Weight	Magazines	Price
AK-47	7.62mm Kalashnikov	4.3 kg	30	$797
AKS	7.62mm Kalashnikov	3.8 kg	30	$822
AKT-47	.22 Long Rifle	4.3 kg	30	$218
AKM	7.62mm Kalashnikov	3.14 kg	30	$722
AKMS	7.62mm Kalashnikov	3 kg	30	$852
Bravo 18 AKM	7.62mm Kalashnikov	3.63 kg	30	$771
AKMSB	7.62mm Kalashnikov Subsonic and 7.62mm Kalashnikov	3.6 kg	30	$1383
GSG AK-47	.22 Long Rifle	3.2 kg	10, 24	$227
DAKM-4150	7.62mm Kalashnikov	3.18 kg	30	$1075
GSG Rebel AK-47	.22 Long Rifle	3.18 kg	24	$215
44 Bore	8mm Kurz	3 kg	28	$780

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AK-47	5	4	2-Nil	5	3	8	46
AKS	5	4	2-Nil	4/5	3	9	46

AKT-47	5	-1	Nil	5	1	1	34
AKM	5	4	2-Nil	5	3	8	46
AKMS	5	4	2-Nil	4/5	3	9	46
Bravo 18 AKM	5	3	2-Nil	3/5	2	6	23
AKMSB (Standard Ammunition)	5	4	2-Nil	9/10	4	9	38
AKMSB (Subsonic Ammunition)	5	3	1-Nil	9/10	3	6	28
GSG AK-47	SA	1	Nil	5	1	Nil	37
DAKM-4150	SA	4	2-Nil	5/6	3	Nil	47
GSG Rebel AK-47	SA	1	Nil	6	1	Nil	34
44 Bore	5	4	2-Nil	4/5	4	10	44

Kalashnikov AK-74

This standard assault rifle of Russian troops was first seen in Afghanistan shortly after the invasion of that country. It is basically a smaller-caliber version of the AKM that is built with more modern materials. The 5.6mm Kalashnikov was originally designed for what would become the AK-74, but prototype AK-74's cartridge was changed for unknown reasons to the 5.45mm Kalashnikov round. (The 5.6mm Kalashnikov round later became a popular civilian round in Russia and Eastern Europe, but of course, I have provided game figures for a 5.6mm version of the AK-74, mostly out of curiosity.) Early models used exclusively wooden stocks, but later models have been built with plastic stocks and handguards (usually of the same color wood that the Russian normally use for their weapons). AK-74s usually have a groove running down the sides of their stocks to provide a quick recognition feature; this was especially necessary in very early models that did not have the now-distinctive muzzle brake. Magazines for the AK-74 are made of plastic-coated steel (usually dark red or light brown, but sometimes black). The magazines are of the same dimensions as those for the AKM and AK-74, but will not fit into those rifles (and they couldn't fire that ammunition anyway). Though it is not often done, the AK-74 can also use the 40-round box magazines and 75-round drums of the RPK-74 automatic rifle. The AK-74 sports a muzzle brake that actually works rather well; however, as the muzzle blast is largely directed upwards and to the right (to fight the natural recoil of the AK-74 to the same direction), fellow soldiers on that side of the AK-74 user tend to stay at least three meters away from each other to avoid having muzzle blast and sand kicked in their faces. (There was also a concern early in the development program that AK-74 firers had a higher incidence of hearing loss, because of the design of the muzzle brake.) The muzzle brake, however, actually increases muzzle blast and this can be a problem, especially at night.

A number of AK-74 variants have been produced, both in Russia and in other countries. Most of these are either folding-stock variants, shortened-barrel variants, or versions firing other calibers (mostly 5.56mm NATO). The most notable Russian folding stock variants include the AKS-74, with a tubular folding stock, and the AK-74M, which simply puts a right-folding hinge on a solid plastic stock. The Paratrooper's Model of the AKS-74 is essentially identical to the standard AKS-74, except for a slight difference in weight and stronger construction. Another variant is the AK-74MN3, which was designed with a mount for the NPSU-3 IR sight (later superseded by other night vision equipment that is easier to mount).

An odd variant is the AKS-74Y; this model has a special barrel surrounded by silencer designed specifically for the AKS-74Y. The AKS-74Y is meant for use exclusively with subsonic ammunition; standard 5.45mm Kalashnikov ammunition will quickly ruin the silencer and the barrel inside it.

Most versions of the AK-74 series firing calibers other than 5.45mm Kalashnikov are made in other countries, with the notable exception of the AK-100 series (q.v.).

The AKS-74U (also known as the AKSU or AKMS-U) is an AKS-74 cut down to submachinegun size. (In fact, the Russians do refer to it as a submachinegun, though it is essentially a short assault rifle.) It is also known as the Krinkov, particularly in the West; where this nickname came from is somewhat of a mystery, and just about every firearms expert will tell you something different about the origin of the "Krinkov" nickname. Among Russian troops, the most common nicknames for the AKS-74U are the *Okurok* (cigarette stub) and *Ksysusha* (a derogatory female nickname). When first seen, Western analysts also referred to the AKS-74U as the AKR-80 or simply the AKR. The operating system does have some changes to allow the weapon to function reliably with the reduced barrel length, while also reducing the recoil a bit. In addition, the AKS-74U has a muzzle device designed specifically for it; this device consists of a gas expansion chamber which helps cycle the AKS-74U reliably, reduces the felt recoil, and reduces muzzle flash. The muzzle device also has a large conical flash hider, further reducing muzzle flash. The AKS-74U was first seen in use by Russian troops during the invasion of Afghanistan, where it was a common weapon among vehicle crews; a short time later, East German and Romanian border guards were also seen with the weapon. Since then, it has been copied and modified by perhaps a dozen countries; it may even be more common worldwide than the AKS-74 from which it was derived. (Virtually every photo or video of Osama Bin Laden ever seen shows him with an AKS-74U over his shoulder or at his side.) Note that despite the greatly-reduced length, the AKS-74U can still be fitted with the GP-25 or BG-1 grenade launcher. There is a very rare accessory for the AKS-74U; it is a special shoulder holster, designed for use by helicopter and armored vehicle crews; unfortunately, this holster has proven to be rather clumsy and awkward. A special 20-round magazine is used when the AKS-74U is worn in the shoulder holster; these magazines are also very rare, and not in general issue. The AKS-74U itself ended production in 1997, replaced in production by the AK-105. This is partially due to the AK-74U's tendency to overheat during long bursts or prolonged use in a short period.

In the recent fighting in Chechnya, a new version of the AKS-74U has been seen. This version fires 7.62mm Kalashnikov

ammunition, and has a slightly longer barrel (8.5 inches vs. the 8.1 inches of the 5.45mm version). When this version was actually introduced is unknown, but it is known that Russian troops have long been clamoring for a return to the 7.62mm Kalashnikov round and its generally greater range and hitting power. This version of the AKS-74U was also replaced in production in 1997, by the AK-104 in this case.

After Afghanistan, many Russian troops quietly went back to the AKM; this was not because of the design of the AK-74 (which they liked, despite its shortcomings), but because of dissatisfaction with the 5.45mm Kalashnikov round developed for use in the AK-74. Most of the complaints centered on a lack of range and damaging power, compared to the AKM and AK-47.

A number of AK-74 clones have been built in China, Eastern Europe, and later, the West, or imported from there. Most use the same barrel length. Some have new fore-ends with MIL-STD-1913 rails, and rails above the receiver. Arsenal of Bulgaria, in their US facility, produces a civilianized version with a 16-inch barrel to conform with US firearms regulations. Except for certain details such as the flash suppressor and the butt, it is otherwise like a standard AK-74.

Joe Firearms in the US makes a version of the AK-74 called the AJAK-47 Enhanced (Angry Joe AK). This is not your average AK-74 clone. This version has a custom digital woodland camouflage pattern in Cerekote, a US Palm Battle Grip-type pistol grip, a Magpul Zhukov-S folding stock, and a standard AK-74 muzzle brake. The front sight is an XS Big Dot post and the rear is a Krebs Custom aperture rear. The top of the handguard has a Picatinny rail, and the handguards themselves are tubular with cooling holes and short Picatinny rails on the sides at the ends of the handguards. Coming with the rifle is a Leupold DeltaPoint Pro CQB sight on an UltiMAK Optics Mount and a side-mounted SureFire Scout Light near the end of the handguard on top. The charging handle and spent case ejection has been moved to the left side. The controls are oversized or reshaped to be easy to grasp. The trigger is tuned to 4 pounds pull weight, which is lighter than the average assault rifle. (Lighter triggers are available, and the stock trigger pack can be tuned further by a gunsmith. The AJAK-47 has a match-quality 16.5-inch barrel.

First observed in 2010 was a helical magazine for the Type 88, the North Korean version of the AK-74. This magazine is about 370 millimeters long with a width of 85 millimeters, and holds about 100 rounds. It is bulky, but not as bulky as a conventional 100-round magazine or drum would be. Use of this magazine does mean that a GP-25 or BG-1 grenade launcher cannot be mounted. These magazines appear to be found only in the hands of Kim Jong Un's personal guard.

Twilight 2000 Notes: The AK-74 series is the assault rifle most Category I soldiers went to war with, and also equipped a lot of soldiers of Warsaw Pact nations. As most of the Russian forces used in the Twilight War were Category II, III, or Mobilization-Only units, the AK-74 was not actually the rifle found in the hands of the bulk of Russian forces. The AKS-74U was a fairly common weapon during the Twilight War, though Western troops were more likely to refer to it as an "AKR." The 7.62mm-firing version does not exist in the Twilight 2000 timeline. The AKS-74Y was typically found with Russian special operations units and to a certain extent airborne units.

Merc 2000 Notes: As with the Twilight 2000 Notes, this is the rifle that most Category I Russian forces use. However, in the Merc 2000 World, the Russian have virtually no funding for other units (and barely enough funding for their Category I units, for that matter).

Weapon	Ammunition	Weight	Magazines	Price
AK-74 (1st Prototype)	5.6mm Kalashnikov	3.56 kg	30	$503
AK-74 (Early Production)	5.45mm Kalashnikov	3.41 kg	30, 40, 75D	$505
AK-74	5.45mm Kalashnikov	3.3 kg	30, 40, 75D	$515
AKS-74 (Motorized Infantry Version)	5.45mm Kalashnikov	3.34 kg	30, 40, 75D	$533
AKS-74 (Paratrooper Version)	5.45mm Kalashnikov	3.33 kg	30, 40, 75D	$539
AKS-74Y	5.45mm Kalashnikov Subsonic	4 kg	30, 40, 75D	$749
AKS-74U	5.45mm Kalashnikov	2.7 kg	20, 30, 40, 75D	$449
AKS-74U	7.62mm Kalashnikov	2.99 kg	20, 30, 40, 75D	$750
Arsenal Civilian AK-74	5.45mm Kalashnikov	3.4 kg	20, 30, 40, 75D	$501
AJAK-47	5.45mm Kalashnikov	3.08 kg	30, 40, 75D	$1213

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AK-74 (1st Prototype)	5	3	1-Nil	6	2	6	46
AK-74 (Early)	5	3	1-Nil	6	2	5	45
AK-74	5	3	1-Nil	5	2	5	45
AKS-74 (Both)	5	3	1-Nil	4/5	2	5	45
AKS-74Y	5	2	1-Nil	6/7	1	3	34
AKS-47U (5.45mm)	5	2	1-Nil	3/4	2	6	15
AKS-74U (7.62mm)	5	3	2-Nil	3/5	3	7	16
Arsenal Civilian AK-74	SA	3	1-Nil	6	2	Nil	44
AJAK-47 Enhanced	SA	3	1-Nil	5/6	3	Nil	48

Kalashnikov AK-100 Series

Notes: The AK-100 series, also known as the Hundred Series, is a post-Cold War weapon group of Russian design based on the AK-74 assault rifle. The AK-100 series was actually begun with the production of the AK-74M (AK-100, an AK-74 with a folding plastic stock). The entire series is a family of assault rifles and submachineguns based around standardized parts but with different caliber

chambering. Note that the 5.56mm NATO versions do not accept standard STANAG magazines. (For that matter, magazines designed for the Hundred Series have a bit less of a curve in them, but are still interchangeable with those designed for the original AK/AK-74 series.) The AK-100 series uses plastics instead of wood in its construction, and uses somewhat higher production standards, since it was meant mostly for export instead of domestic use (though the AK-105 was recently picked to supplement the AN-94 in Russian service, and of course the "AK-100" is used by the Russians as the AK-74M). Most of the metalwork is of steel with a black phosphate finish; the barrels are cold hammer forged, and tipped with a muzzle device similar to that of the AKS-74U, but with a smaller conical flash suppressor which is also notched on the sides.

There is no "AK-100" as such; the rifle originally called the AK-100 by the designers was type-standardized by the Russians as the AK-74M. The AK-101, introduced in 1993, is essentially an AK-74M chambered for the 5.56mm NATO cartridge. The AK-102 is a short-barreled carbine version of the AK-101. The AK-101-1 is a semiautomatic civilian/police version of the AK-101, while the AK-101-2 is the AK-101 with a 3-round burst mechanism instead of full-automatic fire capability. The AK-101N2 and AK-101N3 are models with mounts for the 1PN58 and 1PN51 night scopes, respectively.

The AK-103 series fires 7.62mm Kalashnikov ammunition, and also uses a somewhat different muzzle device due the different requirements of the ammunition. Nomenclature is essentially the same as the AK-101 series: the AK-103-1 semiautomatic version, the AK-103-2 version with a three-round burst mechanism, the AK-103N2 and AK-103N3 versions with night sight mounts, and the AK-104 short-barreled carbine version. The AK-105 series also has identical nomenclature, but fires 5.45mm Kalashnikov ammunition, and that all versions of the AK-105 are short-barreled carbines (the normal-length counterpart of the AK-105 is in fact the AK-74M).

Twilight 2000 Notes: Not introduced until nearly 1994, the Hundred Series is a rather rare rifle group. Most versions produced are 5.45mm or 7.62mm versions, but a few 5.56mm versions were also made. Most of the Hundred Series ended up in use by Airborne, Air Assault, special operations, or VIP protection units, but perhaps 5000 or so made it into the international market, and somewhat ironically, were mostly bought by Americans.

Merc 2000 Notes: Mostly the same as the Notes; however, very little domestic use was made of the Hundred Series, and most of them were sold on the international marketplace.

Weapon	Ammunition	Weight	Magazines	Price
AK-101	5.56mm NATO	3.4 kg	30, 40, 75D	$630
AK-101-2	5.56mm NATO	3.4 kg	30, 40, 75D	$630
AK-102	5.56mm NATO	3 kg	30, 40, 75D	$590
AK-103	7.62mm Kalashnikov	3.3 kg	30, 40, 75D	$872
AK-103-2	7.62mm Kalashnikov	3.3 kg	30, 40, 75D	$872
AK-104	7.62mm Kalashnikov	2.9 kg	30, 40, 75D	$833
AK-105	5.45mm Kalashnikov	3 kg	30, 40, 75D	$540
AK-105-2	5.45mm Kalashnikov	3 kg	30, 40, 75D	$540

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AK-101	5	3	1-Nil	4/5	2	4	41
AK-101-2	3	3	1-Nil	4/5	2	3	41
AK-102	5	3	1-Nil	3/5	2	5	27
AK-103	5	4	2-Nil	4/5	3	7	46
AK-103-2	3	4	2-Nil	4/5	3	4	46
AK-104	5	3	2-Nil	3/5	2	5	30
AK-105	5	2	1-Nil	3/5	2	5	30
AK-105-2	3	2	1-Nil	3/5	2	3	30

Kovrov AEK-971

Notes: This was one of the contenders to replace the AKM and AK-74 in Russian military service, but it has apparently been beaten out in that respect by the AN-94; Kovrov is reportedly now looking for export customers. This is despite fact that the AEK-971 is also simpler and cheaper to manufacture than the AN-94, a fact which is very important in post-Cold War Russia.

Though it looks externally similar to a modified Kalashnikov, it in fact uses a wholly different method of operation. The AEK-971 has two gas pistons and two gas chambers; the first set of these works as is normal for a gas-operated rifle, but the second moves in an opposite direction than the first set and greatly helps to dampen recoil. This is especially evident in automatic and burst fire, where felt recoil can be reduced by as much as 20%. Like most Russian small arms, the AEK-971 is constructed largely of steel, though the steel used is of better quality than most Russian assault rifles. At first, the AEK-971 was equipped with a plastic-coated steel folding stock, but newer models use a skeletonized polymer folding stock. The fore-end and pistol grip are made from high-impact plastic. Automatic fire is low enough (about 800 rpm) to allow for burst fire from trained troops; initial models had no burst setting, but Kovrov now includes a burst-fire setting in the AEK-971. The fire selector is simple to use and is a thumb switch like most Western assault rifles. Feed is from standard Kalashnikov-type magazines of all sizes and types. The barrel is 16.54 inches long and is tipped with a muzzle brake similar in appearance to that of the AK-74.

Twilight 2000 Notes: The AEK-971 does not exist in the Twilight 2000 timeline.

Merc 2000 Notes: A rare weapon in the extreme, funding has severely limited the testing of the AEK-971.

Weapon	Ammunition	Weight	Magazines	Price*
AEK-971	5.45mm Kalashnikov	3.3 kg	30, 40, 45, 60, 75D	$814
AEK-972	5.56mm NATO	3.43 kg	20, 30	$887
AEK-973	7.62mm Kalashnikov	4.07 kg	30, 40, 60, 75D	$1253

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AEK-971	3/5	3	1-Nil	4/5	2	2/4	46
AEK-972	3/5	3	1-Nil	4/5	2	2/4	41
AEK-973	3/5	4	2-Nil	5/6	2	3/6	47

*The price for the earlier version without the burst fire mechanism is $182 less.

Nikonov AN-94 (ANS)

Notes: According to Gennadiy Nikonov, the designer of the AN-94, the AK-74 was always considered an interim design between the AK-47/AKM and newer assault rifles. The AN-94 had been in development for 10 years before being chosen as the new type standard in 1994. Due to budget constraints, the AN-94 had not been delivered to all Russian military units by 2006; in fact, full-scale production has yet to even commence, due the poor state of the Russian economy. It is believed by Western experts that possibly as few at 3,000 AN-94s have been produced and issued to troops, even though most of the pre-production batch of 1,000 saw service in the recent campaigns in Chechnya. Though the Russian government maintains that the AN-94 will eventually replace all of the Kalashnikov-series rifles in Russian service, this replacement will at least be very slow, and complete replacement may never actually happen.

It should be noted that though in the West the AN-94 is often called the “Abakan,” the term Abakan (named for a village in Siberia where most of the testing of the candidate rifles took place) was actually the code name of the weapons development program to replace the AK-74 and *not* the name of the rifle itself. “ANS” was Nikonov’s developmental name for the AN-94, and it is reportedly still called by some Russian troops the ANS. Since Nikonov is not itself a manufacturing facility, the AN-94 is actually manufactured by Izhmash.

The AN-94 features higher accuracy, a mount for standard Pact optical equipment (with a 4x sight being standard and included in the cost of the weapon), and reduced felt recoil. The AN-94 is built using advanced polymers for parts normally made of wood, making the weapon lighter than the AK series. The AN-94 is capable of firing semiautomatic, 2-round burst, and on full automatic. The AN-94 can be equipped with a bipod or the BG-15 grenade launcher, and the stock folds to the right for close-quarters fighting. The 2-round burst feature is very complicated, but it greatly reduces felt recoil and at normal combat ranges, both rounds in the burst will strike (or miss) the target before recoil from the first round is felt. The operation of the weapon is likewise complicated, using both gas and recoil operation in a process called by Nikonov “Blowback Shifted Pulse” operation. BPSS is an incredibly complicated operating system that would take a far longer explanation than I want to put down here; the net result is a mechanism which greatly reduces felt recoil and actual recoil, and this is further decreased by an effective muzzle brake. Construction of the AN-94 is largely of polymers where earlier Russian rifles used wood, an aluminum alloy receiver, cover and magazines, a chrome-lined steel barrel and chamber, and a liberal use of laser welding. This gives the AN-94 great structural strength, but at a high monetary cost.

Now, all that said, the reports from Russian troops who have been able to use the AN-94 in combat are not all rosy. The complicated operating system makes the AN-94 difficult and time-consuming to field-strip and reassemble, and armorers also have found the AN-94 difficult to maintain and repair. The ergonomics are said not to be the best; the pistol grip is not well-shaped and is uncomfortable when firing, and the magazine, even though it is only slightly off the vertical axis, can easily throw off a soldier who is used to the AK-series and hasn’t had enough training or experience with the AN-94. The flip-type rear sight is essentially unprotected and also has too-small apertures on both settings. The AN-94 has several sharp edges which can snag and cut the user. Mounting even standard Russian underbarrel grenade launchers requires a special adapter with a large space between the handguard and the launcher (meant to allow an underbarrel grenade launcher to fire with a bayonet attached to the AN-94; this also adds more weight to the rifle than such a grenade launcher would add to an AK-series weapon. The selector switch is easy to reach, but is also quite difficult to turn; you are supposed to be able to flip it with a thumb like on Western-type assault rifles, but most troops find this impossible. The folding stock is otherwise solid; in early production AN-94s, this made it difficult to fire the AN-94 with the stock folded. The shape of the buttstock was redesigned, but this made the stock uncomfortable when it is not folded.

The AK-74 and RPK-74 can use the new magazines introduced with the AN-94. Magazines fitted into the AN-94 have a slight cant to the right, due to the design of the operating system. Though current AN-94s are chambered for 5.45mm Kalashnikov ammunition, Nikonov has also made several 5.56mm NATO-firing prototypes and is shopping them around in hopes of export sales; unfortunately, the high real-life cost of the AN-94 is definitely a liability in this regard.

Twilight 2000 Notes: Except for the war would have eventually replaced all AK-74s in Pact military service. As it was, the AN-94s were generally only issued as far as the best Category I units.

Merc 2000 Notes: Though a few units make use of the AN-94, widespread adoption of the AN-94 has been seriously delayed by budget shortfalls.

Weapon	Ammunition	Weight	Magazines	Price
AN-94	5.45mm Kalashnikov	3.85 kg	30, 40, 45, 60, 75D	$1090
AN-94	5.56mm NATO	3.92 kg	30, 40, 45, 60, 75D	$1166

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AN-94 (5.45mm)	2/5	3	1-Nil	4/5	1	1/4	46
AN-94 (5.56mm)	2/5	3	1-Nil	4/5	1	1/4	41

Simonov SKS Carbine

Notes: Though the design of the SKS dates as far back as 1943 (the M-1943 7.62x39mm "Kalashnikov" cartridge was first used in the SKS), they were not first issued to Russian troops until almost the end of World War 2. These first SKSs were made only in limited numbers; full production did not start until 1949. Production in the Soviet Union ended in 1955, but copies have been made elsewhere much later. The design might actually be considered to be much older; the SKS is almost a vastly scaled-down PTRS antitank rifle with better wooden fittings. The SKS and various modifications of it can be found in almost every country in the world, whether it was built there, given to that country, of sold there later on.

The SKS is a very simple rifle to strip and maintain, and is capable of some decent long-distance shooting, but is otherwise an uninspired design that owes its success to the simplicity of its manufacture. Barrel length is 20 inches, with no sort of flash suppressor or muzzle brake. Most of the SKSs have a permanently-mounted folding bayonet under the barrel, but most SKS later sold to civilians do not have them. Originally, the SKS had no sling swivels, but they were quickly added. Military and some civilian versions have a hole running down the fore-end for a cleaning rod, but most civilian versions do not have the hole or the internal cleaning rod.

Various civilian models, most made by the Chinese, were put on the international weapons market as hunting weapons starting in the 1980s. Others could be bought, suitably demilled, on the military surplus market starting as early as the early 1970s. The SKS Hunter is almost identical to the standard civilian SKS (it has no bayonet lug or hole for a cleaning rod), but it has an ambidextrous safety, a magazine that holds only five rounds, and dovetailed mounts for a scope. A civilian-type rear sight was installed and the front sight hood was removed.

The SKS Sporter was introduced a short time after the SKS Hunter. The biggest change between it and a standard SKS was the replacement of the stock with a polymer skeletonized stock with a pistol grip in it. The butt has a ventilated recoil pad. A variant of the SKS Sporter, the SKS Sharpshooter, has a bayonet lug and is sold with a Type 89 2.5x telescopic sight and equipped with a bipod. The SKS Model D is essentially the same as the SKS Sporter, but can accept AK magazines and has a slightly longer 20.5-inch barrel.

Weapon	Ammunition	Weight	Magazines	Price
SKS Carbine	7.62mm Kalashnikov	3.85 kg	10 Clip	$846

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
SKS Carbine	SA	4	2-3-Nil	6	4	Nil	62

TSIITOCHMASH AS Val

Notes: The AS was designed in the late 1980s to be a true silenced assault rifle for Russian special operations troops. It is part of a projected family of small, which so far include the VSS Sniper Rifle, the SR-3 Vikhr and the AS itself. In addition to its use by GRU, Spetsnaz, and Alpha Teams, the AS is in limited use by Army reconnaissance teams, some Interior Ministry units, and some FSB SRT-type teams (the FSB and Interior Ministry inherited the mantle of the former KGB).

Like most Russian small arms, the AS Val (also known as the 6P30) is based partly on the Kalashnikov action. The Val (like the VSS Vintorez silent sniping rifle) is also based on the receiver and operation of the Vikhr short assault rifle. However, this weapon is fitted with an integral silencer assembly, and fires a special subsonic 9x39mm round (itself based upon the 7.62mm Kalashnikov round) to provide far greater range and penetration than is normal for a silenced weapon. This weapon is capable of sustained silent operation in both single shot and automatic fire without damage or reduction in effectiveness of the silencer; the silencer itself is said by the Russians to be effective for "several thousand rounds." (In fact, the AS *cannot* be fired without the silencer affixed without damaging the weapon and injuring the shooter.) The silent assault rifle has a short fore-end and a skeletonized folding butt. The trigger unit is a modified version of that used on the Czech CZ-58 Assault Rifle. The safety is a standard Kalashnikov lever, but the selector lever itself is a separate crossbolt button inside the trigger guard behind the trigger. Any Russian sight or optical device may be fitted above and to the left of the receiver on a bracket similar to those used on certain Kalashnikov-type rifles; backup iron sights are also available. The Val can fire both SP-5 and SP-6 ammunition, but the steel or tungsten-cored SP-6 ammunition is normally reserved for use by the VSS Vintorez Sniper Rifle (q.v.). A standard ball round, the PAB-1, is also available. The AS cannot use bayonets, rifle grenades, or an underbarrel grenade launcher.

Strangely enough, the Val can trace its origins back to the shoot-down of Francis Gary Powers' aircraft in May of 1960. One of the items that were captured with the pilot was a silenced pistol that used a suppressor of advanced design, extremely quiet and very resistant to wear. This silencer features a two-chamber design which essentially slows the round slightly and dilutes the sound of the firing of the round and the resulting gas. The Russians were very impressed, but decades went by before they could reproduce the technology. One of the weapons that eventually came out of the study of that pistol and its suppressor was the AS Val.

Twilight 2000 Notes: Often, the first time NATO or Chinese troops knew they were facing Russians armed with this weapon was when their comrades started falling around them, victims of "bullets from nowhere." However, the Val was never available in large quantities, and most of its users were a part of assassination teams or agents who had to quietly take over a facility.

Merc 2000 Notes: Despite the large amount of interest all over the world in the Val, and the potentially large amounts that the Russians could make from its sale, the Russians have been strangely tight-lipped and stingy with it. If you gain possession of a Val,

you probably took it off a dead Russian special ops trooper or have some sort of contact high in the Russian hierarchy.

Weapon	Ammunition	Weight	Magazines	Price
AS Val	9mm SP-5, SP-6, and PAB-9	2.5 kg	10, 20	$1788

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AS Val (9mm PAB-9)	5	3	2-Nil	4/5	4	11	33
AS Val (9mm SP-5)	5	3	1-Nil	4/5	4	11	33
AS Val (9mm SP-6)	5	3	1-2-Nil	4/5	4	11	40

TSKIB SOO OTs-14 Groza

Notes: This Groza (Thunder -- doesn't that seem to be a common name for Russian weapons?) was developed in the early 1990s as a close-combat weapon for Spetsnaz, Alpha teams, airborne forces, and combat engineers. Primarily manufactured at a special arms facility called TSKIB SOO, it was also for a short time in the mid-1990s manufactured by Tula. Though it was used in decent numbers during the First Chechen War in 1999, it is apparently no longer being manufactured, possibly at the request of the troops themselves.

The OTs-14 comes in two calibers: 7.62mm Kalashnikov and 9mm SP5/SP6. The 7.62mm version was primarily used by airborne troops and combat engineers, while the 9mm version is the more common one, used by Spetsnaz and Alpha teams. The Groza has a 75% parts commonality with the AK-74 and is essentially an AKS-74U upsized and turned into bullpup form. When mounted with the GP-25, a single trigger fires both the assault rifle and grenade launcher, with a barrel selector switching between the weapons. The Groza can mount the PSO-1 sight used on the SVD and SVU sniper rifles, and is threaded for a suppressor. There are four basic configurations for the OTs-14; the standard version is called the OTs-14-4A, which is the rifle with a standard-length barrel and an attached grenade launcher. Without the grenade launcher, it is called the OTS-14-4A-01. With a short barrel installed, the designation is the OTs-14-4A-02 (attaching the GP-25 is not possible with the short barrel installed); when a suppressor is added to the short barrel, the designation becomes OTs-14-4A-03. (The long barrel is not threaded for a suppressor.)

From an ergonomic standpoint, the OTs-14 was apparently terrible; the AK series in general is not really suited to *simple* conversions to a bullpup layout; a lot of work has to be done to really make an AK-series bullpup work right. On the OTs-14, this meant that the charging handle would dig into the shoulders of some troops as it reciprocated, it could not be fired from the left shoulder (due to the position of the ejection port), it was rather unbalanced, and the pistol grip was uncomfortable. When using iron sights, they are *both* mounted on a detachable carrying handle, which resulted in an unusually short sight radius.

Twilight 2000 Notes: Though the Groza has been produced since late 1992, it is nonetheless a rather rare weapon, normally only used by special operations personnel or Airborne Pathfinders. The 7.62mm version, in particular, is extremely rare, as production concentrated on the more compact 9mm version.

Merc 2000 Notes: This is another weapon the international arms market would love to get their hands on, but few, if any, are available outside of certain Russian units.

Weapon	Ammunition	Weight	Magazines	Price
OTs-14 (Long Barrel)	9mm SP5/SP6	2.7 kg	10, 20, 30	$921
OTs-14 (Short Barrel)	9mm SP5/SP6	2.61 kg	10, 20, 30	$908
OTs-14 (With Suppressor)	9mm SP5/SP6	3.18 kg	10, 20, 30	$995
OTs-14 (Long Barrel)	7.62mm Kalashnikov	3.1 kg	30, 40, 75D	$832
OTs-14 (Short Barrel)	7.62mm Kalashnikov	2.92 kg	30, 40, 75D	$796
OTs-14 (With Suppressor)	7.62mm Kalashnikov Subsonic	3.52 kg	30, 40, 75D	$894

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
OTs-14 (Long Barrel, 9mm SP5)	5	4	2-3-Nil	3	4	10	21
OTs-14 (Long Barrel, 9mm SP6)	5	4	1-2-3	3	4	10	26
OTs-14 (9mm SP5, Suppressed)	5	3	1-Nil	4	3	6	15
OTs-14 (9mm SP6, Suppressed)	5	3	1-1-Nil	4	3	6	18
OTs-14 (Long Barrel, 7.62mm)	5	4	2-3-Nil	4	4	10	54
OTs-14 (Short Barrel, 7.62mm)	5	4	2-Nil	4	4	10	42
OTs-14 (7.62mm, Suppressed)	5	3	1-Nil	5	3	6	31

TSNIITOCHMASH SR-3 Vikhr

Notes: The Vikhr (Whirlwind) was first revealed to the world at various international arms shows in 1992, but development may have started as early as the mid-1980s. It was first confused with another short assault rifle that had not yet been seen at that time in public, the A-91M. Cousins of the Vikhr include the AS Val silent assault rifle and the VSS Vintorez silent sniper rifle. The Vikhr is sometimes called the MA, since "MA" was its development designation (the contraction for the Russians words meaning "small-size assault rifle"). The Vikhr is very much a special duty weapon; aside from special operations use, it is believed that the Vikhr is generally found only in the special briefcases carried by the FSO bodyguards of certain high government officials. (FSO is roughly the Russian equivalent of the VIP protection detachment of the US Secret Service.)

The Vikhr (Whirlwind) fires the same 9mm SP5 and SP6 rounds, and is meant to provide a weapon capable of high armor penetration and inflicting serious wounds, but is also fairly concealable. It uses the same 10 and 20-round magazines of the AS and VSS, and the operating system is essentially identical. There are two versions of the Vikhr: early production models (also known as the MA) , with very-low profile sights and no sort of muzzle device, and more recent versions, which have larger rear sights, a ribbed fore-end for a better grip, and a small muzzle brake. No provision is made in either case for mounting any sort of silencer or sound suppressor. Metal parts are of steel (mostly machined), including the top-folding stock. The sights of the Vikhr are also much simpler than those of the AS. The AK-type safety has been replaced with an ambidextrous thumb switch above the trigger guard, but the fire selector remains the same crossbolt button behind the trigger. The charging mechanism can be difficult to master; though it slides quite easy, it consists of a pair of sliders on either side of the Vikhr which must be pinched between the thumb and finger and pulled back. This charging mechanism helps dehorn the Vikhr, but is unusual for those not trained in the Vikhr's use.

Twilight 2000 Notes: Similar to above; the Vikhr was almost never seen outside the hands of Russian special operations or certain bodyguard details, though in a few instances it turned up in Polish use. Only early-production versions of the Vikhr are available in the Twilight 2000 timeline.

Merc 2000 Notes: Being a rather expensive weapon for its size and weight, the Russian budget just didn't have the money to build all the Vikhrs the military was asking for. Most Vikhrs became weapons for the bodyguards – sometimes of government officials, sometimes for organized crime bosses.

Weapon	Ammunition	Weight	Magazines	Price
Vikhr (Early)	9mm SP-5, SP-6, and PAB-9	2 kg	10, 20	$942
Vikhr (Current)	9mm SP-5, SP-6, and PAB-9	2.04 kg	10, 20	$992

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Vikhr (Early, PAB-1)	5	4	2-Nil	3/4	5	11	12
Vikhr (Early, SP-5)	5	4	1-Nil	3/4	5	11	12
Vikhr (Early, SP-6)	5	4	1-2-Nil	3/4	5	11	14
Vikhr (Current, PAB-1)	5	4	2-Nil	3/4	3	8	12
Vikhr (Current, SP-5)	5	4	1-Nil	3/4	3	8	12
Vikhr (Current, SP-6)	5	4	1-2-Nil	3/4	3	8	14

Tula/KBP 9A-91

Notes: This was designed in response for a compact assault rifle for use at close ranges. Originally in competition with the Vikhr, both weapons were eventually selected; the Vikhr for very short ranges and the 9A-91 and A-91 for slightly longer-range operations. The 9A-91 began small-scale production at Tula in 1994, more to allow combat and operational testing than anything else. Prototypes were designed in 7.62mm Kalashnikov, 5.45mm Kalashnikov, 5.56mm NATO, and 9mm SP-5/SP-6/PAB-9, but only the 9mm version survived the development process and went into production. It was originally meant to be sort of a PDW and for special operations use, but instead was primarily issued to the MVD (Interior Ministry, sort of a Russian equivalent of the FBI) and Police SRT-type units.

The 9A-91 is gas-operated with a rotating bolt and a long-stroke gas piston; in this aspect it is similar, but not the same as, the AK-series' operation. Construction is largely of steel, with a stamped steel receiver and machined working parts. The pistol grip and handguard are of polymer, with a strut-type steel stock that folds over the top of the weapon. The fire selector is a thumb switch above the left side of the trigger guard. Flip-up aperture sights are provided calibrated for up to 200 meters on the long-range sight, though the short barrel, the ammunition, and the short sight base makes accurate shots at that range virtually impossible. The 9A-91 is also capable of mounting virtually all Russian optics, and can also mount an underbarrel GP-25 grenade launcher. The 9A-91 is designed for use with rifle grenades or bayonets. The 7.19-inch barrel is tipped with a spoon-type muzzle brake (which unfortunately also greatly increases the muzzle blast); this is mounted on threads which allow the use of a screw-on-type suppressor.

The A-91 (also called the A-91M) was introduced a few months later than the 9A-91. Though it uses the same basic operation and features of the 9A-91, the A-91 is a bullpup weapon with a polymer housing with steel reinforcement instead of being all-steel. The A-91 also has an integral GP-25 grenade launcher beneath the barrel of the weapon (though pre-production models used a clip-on GP-25 mounted *above* the barrel). The handguard also includes a foregrip, which may be used to stabilize the weapon when firing or as a pistol grip when firing the grenade launcher. Ejection carries the spent shells forward slightly to above the rear pistol grip and ejects them forward, which sort of allows left-handed shooting. Unfortunately, the fire selector is of the AK-type, and mounted at almost the end of the buttstock on the left side; this makes the selector lever particularly difficult to use when the weapon is shouldered. The rear sights are located on a top-mounted carrying handle/sight base, with a front post sight. The carrying handle also has a Russian equivalent of a Weaver rail, allowing the use of Russian optics as well as many Western optics. While one of the chamberings of the A-91 is 5.56mm NATO, proprietary magazines are used. The A-91 cannot use a bayonet or rifle grenades. The 7.6-inch barrel is tipped with a slot-type muzzle brake, mounted on threads which may also accept a screw-on type suppressor. This muzzle brake is unfortunately also known to increase muzzle blast more than most muzzle brakes. (The GP-25 portion is covered under Russian Grenade Launchers.)

In an apparently ill-considered move, Tula decided to pair an RMB-93 shotgun (with a 19.9-inch barrel) with the 9A-91. This was a bad idea for several reasons; the resulting combo weapon is heavy, long (defeating the purpose of a small assault rifle), and the RMB-93, fitted under the 9A-91, cannot be reloaded without removing the shotgun from under the 9A-91, which is not user-level work. This is because the magazine tube is on the top of the RMB-93's barrel, and loads from the top of the receiver, which is blocked under the

9A91's receiver and barrel. The RMB-93's forward pump slide action is a difficult reach for the shooter when it is paired with the 9A-91. The police forces to whom it was issued have an active dislike of the combo, and they mostly sit now in armories gathering dust.

Twilight 2000 Notes: This is another one of those rare weapons that found sometimes is found in Russian hands during the Twilight War; if your enemy is armed with these weapons, he is probably elite.

Merc 2000 Notes: Though more common, the story is much the same as the Vikhr.

Weapon	Ammunition	Weight	Magazines	Price
9A-91	9mm SP-5, SP-6, and PAB-1	1.75 kg	10, 20	$993
9A-91 (Silenced)	9mm SP-5, SP-6, and PAB-1	2.75 kg	10, 20	$1508
A-91	5.45mm Kalashnikov	3 kg	30	$453
A-91 (Silenced)	5.45mm Kalashnikov Subsonic	3.4 kg	30	$618
A-91	5.56mm NATO	3 kg	30	$503
A-91 (Silenced)	5.56mm NATO Subsonic	3.4 kg	30	$698
A-91	7.62mm Kalashnikov	3.79 kg	30	$747
A-91 (Silenced)	7.62mm Kalashnikov Subsonic	4.45 kg	30	$1122
9A-91/RMB-93	9mm SP-5, SP-6, and PAB-1, and 12 Gauge 2.75"	3.79 kg	10, 20 + 7 Tubular	
9A-91/RMB-93 (Silenced)	9mm SP-5, SP-6, and PAB-1, and 12 Gauge 2.75"	4.79 kg	10, 20 + 7 Tubular	

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
9A-91 (PAB-1)	5	4	2-Nil	3/5	4	9	12
9A-91 (SP-5)	5	4	1-Nil	3/5	4	9	12
9A-91 (SP-6)	5	4	1-2-Nil	3/5	4	9	14
9A-91 (PAB-1, Silenced)	5	3	2-Nil	6/8	3	7	10
9A-91 (SP-5, Silenced)	5	3	1-Nil	6/8	3	7	10
9A-91 (SP-6, Silenced)	5	3	1-1-Nil	6/8	3	7	11
A-91 (5.45mm)	5	2	1-Nil	3	2	4	12
A-91 (5.45mm, Silenced)	5	2	1-Nil	3	1	2	11
A-91 (5.56mm)	5	2	1-Nil	3	2	4	10
A-91 (5.56mm, Silenced)	5	2	Nil	4	1	2	9
A-91 (7.62mm)	5	3	2-Nil	3	2	4	12
A-91 (7.62mm, Silenced)	5	2	1-Nil	5	2	4	11
9A-91/RMB-93 (PAB-1)	5	4	2-Nil	7/9	3	7	12
9A-91/RMB-93 (SP-5)	5	4	1-Nil	7/9	3	7	12
9A-91/RMB-93 (SP-6)	5	4	1-2-Nil	7/9	3	7	14
9A-91/RMB-93 (PAB-1, Silenced)	5	3	2-Nil	7/9	2	6	10
9A-91/RMB-93 (SP-5, Silenced)	5	3	1-Nil	7/9	2	6	10
9A-91/RMB-93 (SP-6, Silenced)	5	3	1-1-Nil	7/9	2	6	11
9A-91/RMB-93 (Shotgun)	PA	4/1d6x28 or 2d6x4	2-3-Nil/Nil or 1-Nil	7/9	4	Nil	43

Tula/KBP A-91M

Notes: This weapon signaled a possible return in Russia to the 7.62mm Kalashnikov round; reports starting in the late 1990s indicate that Russian soldiers, especially those involved in special operations, were not happy with the 5.45mm Kalashnikov round, citing lack of stopping power and penetration. They also wanted a more-compact, more manageable weapon, particularly when deploying in helicopters. The A-91M was developed in response to this requirement, but there is no indication that it has been produced in quantity, nor any sure reports of it being issued to any particular unit. It has only actually been seen at various defense expositions and international arms shows. The GP-95 grenade launcher was specifically designed for use with this weapon, and is in fact an integral part of the rifle. The weapon is gas-operated with an almost totally enclosed receiver, and the weapon is designed to be equally usable by left and right-handed firers, despite its bullpup construction, as the cases are ejected towards the front of the weapon.

Twilight 2000 Notes: Full development was halted by the advent of the Twilight War, but small numbers of the A-91M appear to have been produced and issued. As such, this weapon was only issued to Spetsnaz, Alpha Teams, and KGB personnel, and even then only in small numbers.

Merc 2000 Notes: This has been a very little-seen weapon; it has had no foreign sales, and Russian inventories do not list the weapon as one that they issue. However, it has sometimes been seen in news footage shot in Chechnya and other former Russian republics.

Weapon	Ammunition	Weight	Magazines	Price
A-91M	7.62mm Kalashnikov	3.97 kg	30	$914

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
A-91M	5	4	2-Nil	3	3	8	39

ST Kinetics SAR-21

Notes: Introduced in 1999, the SAR-21 is intended to replace all of the current Singaporean assault rifles as well as several submachineguns and certain designated marksman and sniper rifles. ST Kinetics also hopes for international sales, and several countries are reportedly interested; there may possibly even have already been some sales to undisclosed parties. The SAR-21 was designed to meet the qualifications for NATO-compatible assault rifles as well as more general requirements and the needs of the Singaporean Armed Forces.

The SAR-21 is a bullpup weapon using gas operation. Virtually the entire exterior of the SAR-21 is made from high-strength polymers and composites. The SAR-21 is very well-balanced, and in fact (rather inaccurate) one-handed firing on full automatic is possible. Two barrels are available, one rifled for SS-109-type ammunition, and one designed for older M-193-type ammunition. The magazines designed for the SAR-21 are made from translucent polymer, but the SAR-21 may also accept STANAG-compatible M-16-type magazines as well as those designed for the Steyr AUG A1. The controls are ambidextrous, and the cocking handle is located over the receiver (under the sight/carrying handle), using a large handle for easy gripping; it also folds forward to prevent it catching on the surroundings. The standard SAR-21 includes a 1.5x optical sight in the sight/carrying handle tube; atop this tube are backup iron sights. In the forward upper handguard, the SAR-21 has an integral laser aiming module; the standard LAD (Laser Aiming Device) uses a visible red dot, but it may be exchanged for a LAD producing a dot visible only with night vision equipment or image intensifiers. Under the handguard is a small knob; this allows the user to keep the LAD switched on permanently, or be actuated by a switch near the rest of the fire control switches. The stock includes a padded cheekpiece covered by Kevlar. The standard handguard may be removed, allowing the mounting of a 40mm 40GL or M-203-type grenade launcher. In this case, a quadrant sight platform is installed where the LAD is normally placed, and the LAD relocated to this platform beside the quadrant sight. (In this guise, the SAR-21 is known as the SAR-21 GL.)

Variants include the SAR-21 P-Rail, which has the standard sight/carrying handle replaced by a MIL-STD-1913 rail and the charging handle relocated to the left side of the weapon. (This version is otherwise identical to the standard SAR-21 for game purposes, except for the game cost and the weight.) The SAR-21 Modular (also called the SAR-21 RIS) also has a MIL-STD-1913 rail in place of the sight/carrying handle and a relocated charging handle, but it also has shorter MIL-STD-1913 rails on the sides and the bottom of the fore-end. (This version is also virtually identical to the standard SAR-21 for game purposes.) The SAR-21 Sharpshooter uses a 3x scope in the carrying handle instead of the standard sight, and uses a heavier barrel.

Weapon	Ammunition	Weight	Magazines	Price
SAR-21	5.56mm NATO	3.81 kg	20, 30	$1135
SAR-21 P-Rail	5.56mm NATO	3.81 kg	20, 30	$991
SAR-21 Modular	5.56mm NATO	3.89 kg	20, 30	$1003
SAR-21 Sharpshooter	5.56mm NATO	3.84 kg	20, 30	$1190

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
SAR-21	5	3	1-Nil	5	2	6	50
SAR-21 Sharpshooter	5	3	1-Nil	5	2	6	52

CIS SAR-80

Notes: The SAR-80 was designed and built by Chartered Industries of Singapore based on experience within the M-16 and the Sterling Assault Rifle (a rare British-made version of the AR-18). The SAR-80 has been described as an AR-18 built more efficiently and inexpensively. It is rugged, reliable, and simple to use. Though the SAR-80 is the standard weapon in for the Singaporean military, no new ones have actually been manufactured since 1998, and enough were built that it is not a difficult weapon to find on the international market.

Operation of the SAR-80 essentially follows the Stoner gas system pattern, with a rotating bolt, short-stroke gas piston, and heavy bolt carrier group. However, the bolt carrier group rides on a pair of guide rods, each of which has its own recoil spring; in addition, the gas piston has its own spring. The gas system has a cutoff feature, allowing both older-type rifle grenades and the newer BTU-type rifle grenades to be fired. In addition, it can mount an underbarrel grenade launcher if fitted with a special adapter. Most of the metalwork is made from simple steel stampings, and the SAR-80 can feed from any magazine which will fit into an M-16. Furniture is of high-impact plastic; most were built with a solid stock, but some have a folding steel stock. The 18.07-inch barrel is tipped with an AR-18-type flash suppressor.

Twilight 2000 Notes: Though it is fairly easy to find in the Twilight 2000 world, especially in Africa and Southeast Asia, production of the SAR-80 during the Twilight War was hurt by the fact that the designers chose to use 40% imported parts. While these parts were cheap and easy to find before the war, that was not the case after a few years of fighting.

Merc 2000 Notes: This is a favorite among mercenaries; it is easy to find and acquire, and comes from a country that is not known for its involvement in international politics.

Weapon	Ammunition	Weight	Magazines	Price
SAR-80 (Fixed Stock)	5.56mm NATO	3.6 kg	20, 30	$584
SAR-80 (Folding Stock)	5.56mm NATO	3.7 kg	20, 30	$604

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
SAR-80 (Fixed)	5	3	1-Nil	6	2	6	48
SAR-80 (Folding)	5	3	1-Nil	5/6	2	6	48

CIS SR-88A

Notes: Chartered Arms Incorporated of Singapore (now ST Kinetics) hoped for sales of this weapon to the Singapore military, but Singapore decided to stick with their SAR-80s. There were some small sales to Burma and Malaysia, but most sales were made to mercenary groups and civilians. To some extent, the SR-88 is based on the SAR-80, but for the most part it is a new design. The SR-88 is easy to take care of and tolerant to dirt.

The lower receiver of the SR-88 is of an aluminum alloy, the 18.11-inch barrel of high-grade steel with a chromed bore and chamber, the upper receiver of stamped steel, the stock of fiberglass-filled plastic, and the handguard and pistol grip of plastic. The fixed stock version has a solid stock, and a folding-stock version is also available, with a skeletonized buttstock to lighten the weight. The SR-88 also has a folding carrying handle at the point of balance at the front of the receiver. The barrel is tipped with the same flash suppressor as that of the SAR-80, and is able to launch most types of rifle grenades used in the world today. Operation is for the most part an improved version of the SAR-80's action, but the gas regulator has three positions instead of two (normal, harsh conditions, and closed for the launching of older rifle grenades). The SR-88 can easily mount most of the Western-type 40mm grenade launchers in the world, and the rest with a bit of work by an armorer. An optional folding bipod can be attached.

The SR-88A fixes some very minor deficiencies in the SR-88A, but for game purposes it is identical to the SR-88. There is also an SR-88A carbine; this version has an abbreviated 11.6-inch barrel and a folding stock as standard. It has no bayonet lug and cannot mount an underbarrel grenade launcher but can fire rifle grenades. The SR-88A carbine was deliberately designed to be a relatively heavy weapon (heavier than the assault rifle versions), to minimize barrel climb and make it more controllable in automatic fire.

Twilight 2000 Notes: Rifles of this type were found on 52 Caucasian and Rhade bodies at the Cam Ranh Bay submarine base after a failed raid early in the Twilight War; though the Russians claimed these bodies were of CIA operatives and their mercenaries, this was never proven.

Weapon	Ammunition	Weight	Magazines	Price
SR-88A Rifle (Fixed Stock)	5.56mm NATO	3.45 kg	20, 30	$587
SR-88A (Folding Stock)	5.56mm NATO	3.58 kg	20, 30	$607
SR-88A Carbine	5.56 NATO	3.81 kg	20, 30	$540

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
SR-88A Rifle (Fixed Stock)	5	3	1-Nil	6	2	6	48
SR-88A Rifle (Folding Stock)	5	3	1-Nil	5/6	2	6	48
SR-88A Carbine	5	2	1-Nil	3/5	2	5	24

Armscor R-4/R-5/R-6

Notes: These weapons, along with the R-6 compact assault rifle, are the standard assault weapons of South Africa. They are based on the Israeli Galil, with some changes to suit local conditions: The buttstock is also lengthened, since the average South African soldier is bigger than the average Israeli soldier, and the fragility of the Galil has been fixed by using stronger plastics and a somewhat heavier 18.1-inch barrel. The sights and the gas tube have been likewise reinforced to prevent the damage that plagues the Galil. The R-4 is the standard assault rifle and comes with a bipod; the R-5 is a shortened carbine version, similar in concept to the Galil SAR. The R-6 is a compact assault rifle, radically shortened. There are three other versions, the LM-4, LM-5, and LM-6; these are semiautomatic versions of the R-4, R-5, and R-6 built for police and civilian use. The normal magazine for the R-4/5/6 series is a reinforced plastic 35-round magazine; steel 50-round magazines were also made when the R-4/5/6 series was first introduced, but production of them stopped a short while after South Africa began producing them; the troops dislike them as they prevent the use of the built-in bipod of the R-4.

A few years after introduction of the R-4, the South African government also gave the authorization to Armscor to create a civilian version of the R-4. This weapon, the LM-4, was not meant as a mere walking-around or hunting rifle; at the time, violence at the hands of foreign countries as well as domestic terrorist groups was a big problem for outlying South African ranchers and their large amounts of land to patrol. The LM-4 generally conforms to the R-4, but is a semiautomatic-only weapon with a few other quirks. The biggest difference, other than the operation, is the fire selector – the LM-4 has, in effect, two fire selectors. The first is the standard AK-type fire selector, inherited from its Galil heritage; the second is an ambidextrous switch-type selector near the pistol grip. For the switch to function, the AK-type selector must be set on “Fire;” a side effect of this arrangement is that the switch is backwards in operation compared to most rifles, with the switch pointing forward to fire and back to be on safe. The switch is said to be stiff, but there are workarounds to this problem. Production of the LM-4 stopped when Apartheid ended in South Africa. For game purposes, the LM-4 is identical to the R-4 except for the lack of automatic fire capability.

Twilight 2000 Notes: Similar to the Notes, but the 50-round magazines are more readily available in the Twilight 2000 timeline.

Merc 2000 Notes: Similar to the Notes, but the R-4/5/6 series has begun to appear on the international arms market in the past few years.

Weapon	Ammunition	Weight	Magazines	Price
R-4	5.56mm NATO	4.3 kg	35, 50	$1037
R-5	5.56mm NATO	3.7 kg	35, 50	$555
R-6	5.56mm NATO	3.675 kg	35, 50	$534

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
R-4	5	3	1-Nil	5/6	2	5	48
R-4 (With Bipod)	5	3	1-Nil	5/6	1	3	62
R-5	5	3	1-Nil	4/5	2	6	29
R-6	5	2	1-Nil	4/5	2	6	22

Truvelo Raptor

Notes: When I first saw pictures of the Raptor in the March 2010 issue of *Small Arms Review*, I thought to myself, “I’ve seen a rifle almost identical to that one before…” And then it occurred to me where I’d seen a rifle that looked very much like the Raptor: the Croatian APS-95. And then I thought, “The APS-95 is derived from the Galil, the R-4 series is derived from the Galil…it’s got to be more than a coincidence.”

However, this remains my own speculation at this point; I’ve found no documentation that the Raptor is based on the R-4/Galil or is inspired by APS-95. Just a thought at this point.

It does, however, look like a more-evolved version of the APS-96, with the light, built-in, low carrying handle about the point of balance and similar lines. The Raptor, however, has MIL-STD-1913 rails behind and in front of that carrying handle, atop the handguard and receiver. It also had three more MIL-STD-1913 rails, two short ones on the sides of the handguards near the front which extend halfway down the handguard, and a longer one under the handguard that extends the length of the handguard. The carrying handle looks like that of the APS-95, but it is shorter, and does not contain the optic sight that the APS-95’s carrying handle does. The flash suppressor is appears in most pictures to be an A2-type, though some pictures show it with a flash suppressor that has twisting openings, and some also show it with an open birdcage-type suppressor. The hooded front sight is on a triangular post and is fixed, while the rear sight is mounted on the MIL-STD-1913 rail, is adjustable, and removable. Most optics can be mounted on the receiver’s MIL-STD-1913 rail to clear the carrying handle, either in stock form or by use of low risers. The carrying handle, like the handguards, are polymer and has the same shape as an R-4’s pistol grip; it is also hollow. The side-folding stock is skeletonized and reinforced with a central spar. Controls are ambidextrous and mounted in front of and above the pistol grip instead of being AK-type. Listed magazine sizes are 30 and 35 rounds; presumably, these are the same 35-round magazines as used on the R-4 series, but I have not been able to discover if the Raptor can use NATO-standard or NATO-compatible magazines. The 7.62mm Kalashnikov chambering uses standard AK-type magazines. Three models are available: The Infantry Rifle, with a 17-inch barrel, the Carbine Rifle, with either a 9-inch barrel (for 5.56mm) or 12-inch barrel (for 7.62mm Kalashnikov), and the Support Rifle, a dual-purpose weapon designed both for limited supporting fires and as a designated marksman rifle. The Support Rifle uses a heavy 22-inch barrel and comes with a bipod as standard. The Raptor is normally issued with an Aimpoint Comp M2 ACOG-type sight, and this is included

in the cost of the rifle. The Raptor is a new weapon as of Spring 2010, and still being shopped around.

Twilight 2000 Notes: The Raptor is not available in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
Infantry Rifle	5.56mm NATO	4.6 kg	30, 35	$753
Infantry Rifle	7.62mm Kalashnikov	4.6 kg	30, 40	$1004
Carbine Rifle	5.56mm NATO	4 kg	30, 35	$670
Carbine Rifle	7.62mm Kalashnikov	4.23 kg	30, 40	$951
Support Rifle	5.56mm NATO	5.88 kg	30, 35	$1329
Support Rifle	7.62mm Kalashnikov	5.88 kg	30, 40	$1587

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Infantry Rifle (5.56mm)	5	3	1-Nil	4/6	2	5	43
Infantry Rifle (7.62mm)	5	4	2-Nil	5/6	3	8	49
Carbine Rifle (5.56mm)	5	2	1-Nil	3/4	2	5	16
Carbine Rifle (7.62mm)	5	3	2-Nil	4/5	2	6	29
Support Rifle (5.56mm)	5	3	1-Nil	5/7	2	5	65
With Bipod	5	3	1-Nil	5/7	1	2	84
Support Rifle (7.62mm)	5	4	2-3-Nil	6/7	3	8	68
With Bipod	5	4	2-3-Nil	6/7	2	4	88

Vektor CR-21

Notes: The CR-21 is a new bullpup design rifle of South African origin. Despite the looks of the weapon, the CR-21 is basically an R-4 modified to bullpup design and with improved operation. (Vektor also manufactures a kit to convert existing R-4 rifles into CR-21s.) The body is made entirely of polymer injection molding, and is designed to take up the shock of an accidental dropping to prevent unintended weapon discharges. The CR-21 has a reflex optical sight that offers no magnification, but provides a superior sight picture to iron sights whether day or night. This sight can be removed and replaced with a MIL-STD-1913 rail. 40mm grenade launchers of South African or Western design can be mounted under the barrel, but an interface kit is required. The weapon can uses plastic/nylon magazines designed for it, but the plastic 35-round magazines designed for the R-4 can also be used. The firing selector switch is separate from the safety switch; both are ambidextrous, but the safety is on the stock while the fire control switch is just above the trigger guard. The CR-21 itself is not ambidextrous; it can only be fired from the right shoulder, due to the position of its ejection port. The trigger guard is large enough to be used with fingerless mittens. The stock also has space for a small cleaning kit.

The South African National Defense Force has plans to replace the R-4 series with the CR-21 in the next few years, but they have had these plans for a while, with money being the stumbling block. It is produced in the three calibers commonly used in African militaries, but most CR-21s are built to fire 5.56mm NATO ammunition; the other two chamberings have been built only in small numbers mostly for experimental and evaluation purposes. Ejection of the spent round is very violent and the spent cases are normally not usable without considerable work.

A further variant, a carbine with a shorter barrel and slightly shorter stock, is under evaluation by SANDF and the South African Police. This model is some 100mm shorter and so far has been evaluated only in the 5.56mm NATO chambering. As of 2006, it is still considered only an experimental variant.

Twilight 2000 Notes: The CR-21 was adopted by South Africa in 1997 and saw limited international sales. Unfortunately, there was never enough money to replace anywhere near all the R-4 series rifles, and the polymer body was difficult to manufacture after 1999 or so. The carbine variant does not exist in the Twilight 2000 timeline.

Merc 2000 Notes: The CR-21 sold better on the international market than it did to SANDF; the South African government just didn't have much money for new assault rifles, and didn't see a need for them as long as R-4 series weapons were still functioning well.

Weapon	Ammunition	Weight	Magazines	Price
CR-21	5.56mm NATO	3.8 kg	20, 25, 35	$716
CR-21	5.45mm Kalashnikov	3.8 kg	20, 25, 30	$664
CR-21	7.62mm Kalashnikov	3.8 kg	20, 25, 30	$962
CR-21 Carbine	5.56mm NATO	3.65 kg	20, 25, 35	$685

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
CR-21 (5.56mm)	5	3	1-Nil	5	2	6	49

CR-21 (5.45mm)	5	3	1-Nil	5	2	5	55
CR-21 (7.62mm)	5	4	2-Nil	5	4	9	55
CR-21 Carbine	5	3	1-Nil	4	2	6	38

Daewoo K-2

Notes: This is the standard assault rifle of South Korea (though it has not entirely supplanted the M16A1). It borrows features from the M16, AK, and FAL, and looks very much like a Galil. Internally, the K2 is almost identical to the M-16, but also has some features of the AR-18. The extractor is an improvement over that of the M-16 and AR-18; it is longer and has a stronger spring, solving a problem with extraction which continues to plague the M-16 and AR-18 series. The three-round burst setting of the K-2 is unusual; if there is a stoppage for some reason or all three rounds do not fire, the next pull of the trigger (whether you have to clear a jam or not) will cause the weapon to continue where it left off, if it still set on three round burst. The magazines are the same as used in M-16-series weapons. The construction of the K-2 is largely from aircraft aluminum alloy, though the barrel and operating parts are of steel. The stock is solid and made from polymer, but is hinged and folds to the right. (The shape prevents it from getting in the way of the pistol grip and trigger.) Sights are similar to those of the M-16A2, but they also have tritium inserts for use at night.

The K-1A1 is a carbine variant of the K-2 assault rifle; despite the designation, production of the K-1A1 did not start until about 2 months after the start of production of the K-2, though it was designed concurrently with the K-2. Early production batches of the K-1A1 had a small problem; the production lines for the K-2 and K-1A1 were not quite in synch. This meant that parts of the two rifles that were supposed to be interchangeable often weren't, because the measurements were not quite the same. This was corrected a short time after production started, but every so often you will run into K-1A1 parts that cannot be used in a K-2. The K-1A1 uses a collapsible instead of a folding stock; this stock is actually a modification of the stock of the M-3 Grease Gun submachinegun, but has a more ergonomic buttplate. The K-1A1 is also equipped with muzzle brake instead of the M-16A2-type flash suppressor of the K-2.

The K-2 (but not the K-1A1) was also produced in civilian/police versions for export, primarily to the US. The DR-100 (also known in the US as the MAX-1) was produced until 1994; with the enactment of the Assault Weapons Ban, it was changed into the DR-200 (also known as the MAX-2). The DR-100 has become available again with the sunset of the Assault Weapons Ban. The DR-100 is virtually identical to the standard K-2, but its stock is polymer and does not fold, has no bayonet lug, and is limited to semiautomatic fire. The DR-200 has a wooden thumbhole-type stock, no bayonet lug, no flash suppressor, and was usually sold with 10-round magazines. Also after 1994, the DR-300 was introduced, chambered for 7.62mm Kalashnikov and otherwise the same as the DR-200 in form.

The newest member of the K-2 family is the DAR-21; it is essentially a K-2 turned into a bullpup configuration. This allows the use of a longer barrel than either the K-1A1 or K-2, while allowing the DAR-21 to be only a little longer than the K-2 is with its stock folded. The top of the receiver has a MIL-STD-1913 rail for use with optics or accessories, but the DAR-21 also has folding backup iron sights. The stock and most of the receiver are built mostly from high-strength polymer, while the rest of the receiver is aluminum alloy and the barrel and operating parts are of steel. The DAR-21 uses the standard M-16A2-type flash suppressor. While the rifling twist of the K-2 and K-1A1 are designed for use with SS-109-type ammunition, the DAR-21 uses an intermediate rifling twist rate of 1:9, allowing the use of SS-109-type and M-193-type ammunition. A carbine version of the DAR-21 is also under consideration for production; this version will have a shorter barrel, but otherwise be the same as the standard DAR-21. No firm plans have yet been announced for its production, however. (I have used the designation "DAR-21A1" below for this version, but the ROK Army has not yet announced what the designation of the carbine version would be if it were produced.) Fielding of the DAR-21 is not expected to be until 2009 at the earliest.

Twilight 2000 Notes: At the start of the war, the K-2 was pretty much a ROK-only weapon; by 2000, however, an estimated 3000 of them had been issued to US troops in South Korea. Not as many K-1A1s were issued to US troops, but some were. A large number of K-1A1s that were built with the wrong measurements actually made it into the hands of the ROK Army, which caused a lot of problems for ROK armorers. The DAR-21 and DAR-21A1 do not exist in the Twilight 2000 timeline.

Merc 2000 Notes: For the most part, the K-2 was not seen outside of South Korea, except in a form modified for civilian use. As with the Twilight 2000 Story, a lot of K-1A1s without the proper measurements made into the hands of the ROK Army. While in the Twilight 2000 world, this was done because they needed a lot of weapons quickly; this was done in the Merc 2000 world primarily for budgetary reasons. Also for budgetary reasons, DAR-21 production was greatly delayed, with first issue to troops not occurring until nearly 2013.

Weapon	Ammunition	Weight	Magazines	Price
K-2	5.56mm NATO	3.26 kg	20, 30	$791
K-1A1	5.56mm NATO	2.87 kg	20, 30	$754
DAR-21	5.56mm NATO	3.81 kg	20, 30	$767
DAR-21A1	5.56mm NATO	3.69 kg	20, 30	$743
DR-100	5.56mm NATO	3.26 kg	10, 20, 30	$589
DR-200	5.56mm NATO	3.33 kg	10, 20, 30	$573
DR-300	7.62mm Kalashnikov	3.61 kg	10, 30, 40	$817

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
K-2	3/5	3	1-Nil	5/6	2	4/6	49
K-1A1	3/5	2	1-Nil	4/5	2	3/5	20
DAR-21	3/5	3	1-Nil	5	2	3/6	50
DAR-21A1	3/5	3	1-Nil	4	2	3/6	42
DR-100	SA	3	1-Nil	6	2	Nil	49

DR-200	SA	3	1-Nil	6	2	Nil	49
DR-300	SA	4	2-Nil	6	4	Nil	54

Daewoo K-11

Notes: The K-11 composite infantry weapon was officially unveiled as the DSEI Military Expo in 2008, though some details of its design and development have been known since 2006. The K-11 was adopted by the ROK Army in 2008, despite criticism that the K-11 was not ready for issue, that it had too many bugs, and some reports that the troops who were to use it and who had tested it were rather unimpressed with the K-11, and would have preferred that the K-11 never made it into service. First service issue to the ROK Army was made in 2010, though it had undergone advanced field testing since its service acceptance. A March 2011 report said that 15 out of 39 K-11s (including 7 out of 20 K-11s issued to ROK troops in Afghanistan) had serious defects, including loosely-fitting barrels, defects in the striker mechanism, improper sealing and weatherproofing of the laser assembly, and problems when switching the assault rifle module from semiautomatic to automatic fire modes. Currently, issue has been suspended and the K-11s which were issued have been returned to Daewoo; production has temporarily ceased and the returned rifles are being used to try out concepts to improve the K-11.

It should be noted that the UAE has ordered 40 K-11s, but are justifiably distressed at early reports of failures of the weapon. Nonetheless, their order stands.

The K-11 could be easily mistaken for an American XM-29 OICW at first glance, though there are several differences. The K-11 has three modules (though they are not designed to be used apart): a 20mm multishot grenade launcher, a 5.56mm short-barreled assault rifle, and an electronic fire control unit, mounted atop the weapon. The K-11 is built in a semi-bullpup configuration; the assault rifle's magazine is in front of the trigger, but the grenade launcher's magazine is located behind the trigger, and the stock houses most of the mechanism for the grenade launcher. The K-11 has two selector levers; the first controls the assault rifle component and has standard safe, semi, and auto positions, while the second controls the grenade launcher and has safe and fire positions. The same trigger controls the rifle and grenade launcher, but interlocks prevent both from being switched into fire positions as the same time (one must be switched to safe before the other selector lever will function). As the K-11 is rather cumbersome, attempts have been made to lighten the weapon at least in a weight sense; the upper and lower receivers of the assault rifle module, as well most of the grenade launcher receiver components, are made from aircraft-quality aluminum. The barrels for the rifle and the grenade launcher are of titanium, with steel liners. The K-11's assault rifle component will work with any magazine which will fit into an M-16 or a K-1/K-2-series assault rifle, but polymer magazines have also been designed for it. The magazines for the grenade launcher component are also polymer.

The assault rifle component, also called the Kinetic Energy (or KE) module, is essentially a modified K-2 assault rifle, with a 12.2-inch barrel tipped by a standard K-2 flash suppressor. This is the lower module of the weapon; the grenade launcher barrel and part of the grenade launcher's mechanism are on top of the upper receiver of the assault rifle module. The gas block for the assault rifle module has an attachment for a simple bipod, with no adjustments for cant or height; this bipod is a commonly-issued accessory. The K-11 has no iron sights; the K-11's assault rifle module is sighted through the weapon's sight/computer module. The module has a modified polymer handguard which fits over both part of the assault rifle barrel and most of the grenade launcher's barrel; it wraps around the bottom of the rifle, and the handguard is ridged on the sides for grip.

The grenade launcher component is housed primarily inside the stock, with the barrel and some minor components being over the top of the assault rifle module's upper receiver. The grenade launcher's barrel is 15.95 inches, and it is tipped with a special flash suppressor. Though HEAT, HE, HE-FRAG, and HEDP ammunition is planned for the K-11's grenade launcher module, the only ammunition types currently available are TP and the heart of the grenade launcher's operation, programmable HE-Airburst (HEAB). It should be noted that the airburst capabilities of the ammunition are not useable without the K-11's sight/computer, which programs the special HEAB ammunition wirelessly an instant before firing. Unlike the US XM-29, the K-11's grenade launcher uses a simpler bolt action – and a rather awkward cocking motion is required before each shot, awkward because if the K-11 is at the shooter's shoulder, the charging handle for the grenade launcher is just forward of the shooter's face (on the other side of the weapon – the K-11 *must* be fired right-handed).

The third module is the computerized sight, with a dynamic aiming reticle and a laser rangefinder. The laser system is the one which is causing the biggest problem right now – condensation tends to form behind the laser lens, meaning that laser transmission gets diffused, and the return laser beam is often not detected by the laser rangefinder, particularly at night. When it's working correctly, the sight/laser combination gives the shooter a +2 to hit – without the laser, he has a +1 to hit. The shooter's range with the assault rifle module is increased to 46 with both the electronic sight and laser rangefinder working, or 35 if the laser is not working. In addition, proper ranging of the HEAB rounds depends upon information the computer receives from laser rangefinder, so if it's not working, the HEAB round works only by direct fire (in which it works like an HE-FRAG round, below), or the shooter can try to estimate the range to the target and put into the computer directly. (Impossible: Grenade Launcher). With the laser rangefinder functioning, the shooter can fire the HEAB round so that it explodes overhead, to the side of the target (such as when shooting at someone behind a wall), or into slits or windows (one level easier with the assistance of the laser/computer) and still have it explode at window/slit height. Fragments produced by the HEAB round are chunks of tungsten cubes and have a penetration of 1 in the hex they explode, in the surrounding squares, and the squares surrounding those. Further away, penetration is Nil. Damage from each fragment is 5d6 in the square they hit and the surrounding squares, and in other squares are resolved normally. When launched in airburst mode, the fragments spray in a 45-degree arc down or to other side (depending upon how the grenade is set by the computer); otherwise, it is resolved like any other grenade burst. The sight also provides a thermal imager and an image intensifier.

Twilight 2000 Notes: The K-11 is not available in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
K-11	5.56mm NATO and 20mm K-11 Grenades	6.1 kg	20,30 (5.56mm), 6 (Grenades)	$5936

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
K-11 (Assault Rifle Module)	3	3	1-Nil	6	2	3	26

Weapon	ROF	Round	SS	Burst	Pen	Range	IFR
K-11 (Grenade Launcher Module)	BA	HE	2	C1 B6	Nil	101	405
	BA	HEAB*	2	C1 B10	*	101	405
	BA	HEAT	2	C1 B5	17C	101	405
	BA	HEDP	2	C1 B3	8C	101	405
	BA	HE-FRAG	2	C1 B8	Nil	101	405

*See Notes above for special rules governing HEAB rounds.

CETME-L/LC

Notes: The standard issue weapon of the Spanish military, the CETME-L is an evolutionary design based on the earlier CETME (Model 58). It is supposed to be a sturdy, lightweight weapon for fighting in rugged areas, but the Spanish Army has had so many problems with stoppages and fragility that they started replacing them with German G-36s in 1998. Early models had a three-round burst setting in addition to the automatic and semiautomatic settings; it was quickly discovered that the rate of fire was low enough and controllable enough that the three-round burst setting was unnecessary. It had some foreign sales, especially in Latin America. The CETME-LC is a short-barreled, telescoping stock carbine version.

Twilight 2000 Notes: These weapons were never replaced by the G-36, though a lot of soldiers went back to the old CETME-58s.

Merc 2000 Notes: After the Spanish government felt sure they were going to get enough G-36s to replace the CETME-Ls and LCs, they began dumping the CETMEs on the international arms market, where they were bought mostly by African and Central American nations that need rifles fast and cheap.

Weapon	Ammunition	Weight	Magazines	Price
CETME-L	5.56mm NATO	3.4 kg	10, 20, 30	$562
CETME-LC	5.56mm NATO	3.25 kg	10, 20, 30	$550

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
CETME-L	5	3	1-Nil	6	2	6	39
CETME-LC	5	3	1-Nil	4/5	2	6	27

Bofors AK-5

Notes: Also known as the CGA-5, this standard assault rifle of Sweden was adopted in 1985 after long technical and troop trials, and type-standardized by the Swedish military as the AK-5. The weapon is a development of the FNC, heavily modified for use in cold climates, with stronger butt and bolt group and enlarged trigger guard and handguard for use with heavy gloves. Another difference between the AK-5 and the FNC is the addition of rail, similar to a MIL-STD-1913 rail, which allows for the mounting of most optics. Yet another difference is the deletion of the 3-round-burst setting; the Swedish military felt that a properly-trained soldier should be able to make 3-round bursts on the automatic setting and keep themselves from firing wastefully. Over this can be fitted a carrying handle that incorporates a simple low-power 1.5x optical sight with a red-dot-type aiming point. The handle also has a backup iron sight of a special design, easier to use than standard iron sights and incorporating inlays for night use. Plastic 30-round magazines were designed for the AK-5, but magazines that will fit into an FNC or M-16 will also fit into a AK-5.

There are several variants of the AK-5. The standard weapon is a basic folding-stock assault rifle with 17.7-inch barrel tipped with a flash suppressor/muzzle brake that is sized so that standard NATO/Western rifle grenade may be used. The stock not only folds, it is adjustable for length of pull. The handguard allows for the mounting of a bayonet, bipod, or various 40mm grenade launchers of Western-type design. The extractor and bolt carrier assembly of the basic FNC were also improved to grant greater reliability. The charging handle was repositioned slightly from the base FNC to make it more ambidextrous and to allow for a wider selection of underbarrel grenade launchers to be used. The three-round burst mechanism was also removed, the shape of the pistol grip revised, and various parts of the weapon re-done to make easier to use when wearing extreme cold climate clothing (particularly when wearing heavy gloves). A bullpup variant of the AK-5, called the AK-5C, was also demonstrated at the same time, but as far as I know, only one prototype of the AK-5C was built and it was never seriously considered by the Swedish military. The AK-5B version mounts the British SUSAT 3.5x sight on its sight rail, and is not equipped with iron sights of any kind. It was primarily used as a sharpshooter/designated marksman's weapon.

Later, another AK-5C was introduced as a modernized AK-5, and it later became the standard-issue version of the AK-5 in Swedish use. (The AK-5 and AK-5B were discontinued in production and put into storage.) For the most part, it is similar to the AK-5. However, it is much more reliable (Mean Rounds Between Stoppages of 3500+ rounds), barrel was shortened to 13.8 inches, and the weight reduced by re-engineering. And MIL-STD-1913 rails on the top of the receiver and handguard and on the bottom of the handguard. The stock is not only sliding, but folds to the right side, and on the rails are folding BUIS. A bolt catch keeps the bolt open when the magazine is emptied, and the controls are ambidextrous. The standard magazines issued with the AK-5C (and other AK-5s from this point) are of translucent plastic, though the AK-5C can still use any AR magazine. The pistol grip is slimmer and at a more ergonomic angle. The sides of the handguards have cutouts for pressure switches and cables for accessories. A detachable forward grip (also useable on other properly-equipped AK-5s) was added to the AK-5C. On the top rail was mounted the now-standard Aimpoint CS red dot sight with a 4 MOA reticle.

Another variant of the AK-5, called the AK-5D, was designed later (primarily at the request of Swedish special operations troops) and introduced late in 2001; this version has a genuine MIL-STD-1913 rail and can mount almost any sort of optical, night vision, or laser sight you could name. The AK-5D has four-point MIL-STD-1913 rails on its handguards. It is normally issued with a 3x sight, but can also use the standard 1.5x sight, and also has an ergonomic cheekpiece added to the stock. (If equipped with the 1.5x sight, subtract $50 from the game cost.) Some of the early AK-5Ds were in fact upgraded AK-5Bs, but most are purpose-built weapons. The AK-5D Polis (also known as the CGA-5P or, incorrectly, the AK-5P) is a semiautomatic version of this carbine; it does not have the MIL-STD-1913 rails, but is fitted with conventional FNC-type iron sights (modified for use with the shorter barrel). The automatic feature is disabled by the use of a hex screw in a certain spot, and can be restored by removing this hex screw. The AK-5D Polis is also colored all-black, instead of the OD green of military AK-5s.

The AK-5C2 is a short-barreled carbine variant used mostly by special operations forces, vehicle crews, and as sort of a PDW. It uses a short 9.8-inch barrel and a somewhat larger muzzle brake. It has no iron sights integral to the weapon, but is equipped with a MIL-STD-1913 rail atop the receiver. Vehicle crews and rear-area troops normally have either a laser aiming module or add-on iron sights mounted on the rail, but special ops troops could potentially have anything up there.

Twilight 2000 Notes: All of the rifle variants were in service during the Twilight War, except for (of course) the AK-5C. The AK-5D is the rarest variant.

Weapon	Ammunition	Weight	Magazines	Price
AK-5	5.56mm NATO	3.9 kg	20, 30	$797
AK-5C2	5.56mm NATO	3.3 kg	20, 30	$573
AK-5B	5.56mm NATO	4.1 kg	20, 30	$847
AK-5C	5.56mm NATO	4 kg	20, 30	$757
AK-5D	5.56mm NATO	4.14 kg	20, 30	$855
AK-5D Polis	5.56mm NATO	3.27 kg	20, 30	$567

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AK-5	5	3	1-Nil	4/6	2	4	46
AK-5C2	5	2	1-Nil	3/4	2	4	18
AK-5B	5	3	1-Nil	4/6	2	4	46
AK-5C	5	3	1-Nil	4/5	2	4	32

AK-5D	5	3	1-Nil	4/6	2	4	46
AK-5D Polis	SA	2	1-Nil	3/4	2	Nil	18

SIG Sauer MCX

Notes: The MCX was designed from the ground up as a military rifle (though there are civilian versions), and was further designed to be as modular as possible. SIG Sauer's website says that the MCX is "configurable in more than 500 combinations," from a pistol to a suppressed short-barreled rifle. The MCX uses the AR-15 chassis to grant most soldiers in the West the muscle memory to use the MCX and know the control layout. The operation is derived from that of the MPX submachinegun. The operation is by short-stroke piston. It should be noted that the high degree of modularity reflects the designers' aim of building the rifle for a special ops-type audience.

The MCX was originally supposed to be available in 5.56 NATO, .300 Blackout, and 7.62mm Kalashnikov, with the same magazines used for 5.56mm and .300, but a specially-designed magazine and lower receiver for 7.62mm. However, the 7.62mm version has yet to be seen, and the option to buy one has been removed from SIG's web site. Magazines sold with the MCX are smoked transparent magazines. The MCX can use a standard Colt M16 or M4 upper receiver, though an adapter is required.

The base model of the MCX line is the Virtus Patrol, with a 16-inch cold-forged nitrided barrel. The barrel is tipped with an open birdcage-type flash suppressor. The Virtus Patrol is not normally chambered for .300, and cannot be bought as a full product in such caliber, but a barrel can be bought for the Virtus Patrol to allow the use of .300 ammunition separately. The handguards are aluminum M-LOKs, and run just short of the flash suppressor to the rear of the receiver. Trigger pull weight is about 5 pounds, about standard for an assault rifle; it uses a SIG Custom Matchlite Duo two-stage trigger. The Virtus Patrol has a special internal recoil-dampening system. Receiver finishes are gray, with a matching grip, stock, and handguard color. The stock is an M-LOK sliding stock with five positions.

For the most part, the Virtus SBR is the same as the Virtus Patrol. However, the barrel of the 5.56mm version is 11.5 inches and the .300 version comes in two barrel lengths, 9 inches and 5.5 inches. All but the 5.5-inch-barrel version use the five-position sliding stock of the Virtus Patrol; the 5.5-inch .300 version used a side-folding paddle stock.

The MCX Rattler SBR is for the most part military or LE-only, though some countries will let you own one with special permits. It is designed primarily for close assault work and as a PDW. It uses a Virtus lower receiver, and the upper receiver from an MCX Pistol. The stock side-folds instead of being telescoping, and is a paddle-type stock. Unlike the Virtus, the Rattler comes in both 5.56 and .300 as standard. It has the same cold-forged nitrided barrel, though it is only 5.5 inches long; the Rattler uses the same flash suppressor, though it is almost hidden beneath the Rattler's shortened M-LOK handguard. The Rattler also uses a floating bull barrel. It is also shorter, but the Rattler also comes with a full-length Picatinny Rail. Though the flash suppressor of the 5.56mm version has a pinned and welded flash suppressor, the .300 version's flash suppressor may be removed and a muzzle brake or suppressor may replace the flash suppressor. Trigger pull weight for the 5.56mm version is about 6 pounds; the .300 version has a slightly lighter pull weight of 5.7 pounds. Finish is gray hard coat anodized.

Though technically a pistol, the Rattler Canebrake is one of those pistols made from assault rifles so they are pistols within US law. The Canebrake comes with an arm brace, but it is side-folding and either of the previous rifles' stocks can be attached to the Canebrake. It is available only in .300, and has an integral suppressor around it's 5.5-inch barrel. (Needless to say, it does not come with a flash suppressor.) Unlike other MCX firearms and for the same reason, the Canebrake does not have a bull barrel nor a floating barrel. It is finished in Cerekote E190, Flat Dark Earth in color. It has an M-LOK handguard as well as a full-length Picatinny Rail. The grip is shaped especially for use as a pistol.

The Virtus Pistol is essentially the same idea as the Canebrake, but without the suppressor, and in all-gray raiment. It also comes in a 5.56mm version (with an 11.5-inch bull, floating, cold-forged barrel). The .300 version has a 9-inch of the same quality. It is, basically, a Virtus made into a pistol. They have the short M-LOK handguards of the Canebrake and the full-length Picatinny rails.

The Rattler PCB is essentially the same as the Virtus Pistol, except for the finish, coming only in a 5.5-inch barrel version without the enhancements of the other versions of the MCX, and being a .300-only weapon. It too may have a stock attached.

The MCX is actually produced at SIG USA, in their subsidiary in New Hampshire.

In 2016, SIG recalled some of the MCXs that had the original bolt carrier group due to cracking during firing.

Weapon	Ammunition	Weight	Magazines	Price
Virtus Patrol	5.56mm NATO	3.6 kg	20, 30	$722
Virtus Patrol	.300 Blackout	3.6 kg	20, 30	$923
Virtus SBR	5.56mm NATO	3.4 kg	20, 30	$551
Virtus SBR (9" Barrel)	.300 Blackout	3.2 kg	20, 30	$703
Virtus SBR (5.5" Barrel)	.300 Blackout	2.59 kg	20, 30	$665
Rattler SBR	5.56mm NATO	3 kg	20, 30	$485
Rattler SBR	.300 Blackout	2.59 kg	20, 30	$665
Rattler Canebrake	.300 Blackout	2.9 kg	20, 30	$793
Virtus Pistol	5.56mm NATO	3.4 kg	20, 30	$547
Virtus Pistol	.300 Blackout	3.2 kg	20, 30	$700
Rattler PCB	.300 Blackout	2.7 kg	20, 30	$662

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Virtus Patrol (5.56mm)	5	3	1-Nil	4/6	2	5	43
Virtus Patrol (.300)	5	3	2-Nil	5/6	3	8	48

Virtus SBR	5	3	1-Nil	4/5	2	6	26
Virtus SBR (9" Barrel)	5	3	2-Nil	3/5	3	6	20
Virtus SBR (5.5" Barrel)	5	3	1-Nil	3/4	3	7	8
Rattler SBR (5.56mm)	5	2	1-Nil	2/4	2	6	7
Rattler SBR (.300)	5	3	1-Nil	3/4	3	7	8
Rattler Canebrake (No Brace or Stock)	5	2	1-Nil	2	4	10	9
Rattler Canebrake (Brace)	5	2	1-Nil	2/4	3	8	11
Rattler Canebrake (Stock)	5	2	1-Nil	4/6	2	6	14
Virtus Pistol (5.56mm, No Brace or Stock)	SA	3	1-Nil	4	4	Nil	17
Virtus Pistol (5.56mm, Brace)	SA	3	1-Nil	4/5	3	Nil	21
Virtus Pistol (5.56mm, Stock)	SA	3	1-Nil	4/5	2	Nil	26
Virtus Pistol (.300, No Brace or Stock)	SA	3	2-Nil	3	4	Nil	13
Virtus Pistol (.300, Brace)	SA	3	2-Nil	3/5	3	Nil	16
Virtus Pistol (.300, Stock)	SA	3	2-Nil	3/5	3	Nil	20
Rattler PCB (No Stock or Brace)	SA	3	1-Nil	3	4	Nil	5
Rattler PCB (Brace)	SA	3	1-Nil	3/4	3	Nil	6
Rattler PCB (Stock)	SA	3	1-Nil	3/4	3	Nil	7

SIG Sauer SIGM400

SIG describes the SIGM400 as "the first SIG to earn the M4 name." The SIGM400 was designed by SGM Kyle Lamb, noted firearms expert and war hero. The barrel is of legal length for most civilian rifles of the world (especially in the US, where most of them are expected to be sold). The SIGM400 is also known as the M400. Operation is by Stoner-type direct gas impingement.

There aren't really any base rifles of the SIGM400; each is highly evolved, diverging greatly from the M4 base. The SIGM400 Elite is sort of a middle of the road products, price-wise, though the RL price is now small. It features a SIG-designed telescoping stock similar to the Magpul CTR in design. The pistol grip is also SIG-designed, and has a slight flare to increase grip. The upper receiver is an A3-type, with a monolithic upper MIL-STD-1913 rail. The entire rifle has match-quality components throughout the rifle, from the match barrel to the 2-stage match trigger, to the free-float eight-sided SIG-designed M-LOK handguard, with M-LOK holes on four sides and wide cooling slots on the other four. The handguard is aluminum, and under the end of the handguard is SIG's Micro-Light Gas Block. The 16-inch barrel is nitrided and is a high-precision-type barrel, as noted above. (Originally, the SGM400 series came in 18-inch-barrel versions, but these are no longer found on SIG's site. I have included below as a point of interest.) The controls are ambidextrous. The SIGM400 Elite comes with a SIG ROMEO5 red dot sight.

The SIGM400 Elite Ti is essentially the same as the SIGM400 Elite, but the receivers, handguards, and MIL-STD-1913 rails are finished in a titanium coating. (They are not made of titanium themselves.) This makes the coated areas tougher, and more weatherproof than anodizing, and in general gives SIGM Elite Ti a good look. For game purposes, the two Elites are identical. Like the SIGM400 Elite, the polymer parts and other metal parts are either molded in black or metalwork finished black anodized.

The VTAC received the most input from Kyle Lamb; it is his conception of what he would like an AR-15/M4 rifle should be. The handguard, and may of the components, are of a standard that SIG calls "VTAC." The handguards, for example, are VTAC handguards; they are eight-sided and the sides and underside of the handguard have M-LOK rails, while the top of the handguard has a MIL-STD-1913 rail, which connects to the monolithic rail on top of the A3-derived upper receiver. They are also a free-float tube. BUIS are not provided, in favor of a ROMEO5 red dot sight. The VTAC uses a carbine-length gas system, and the low-profile gas block is well under the end of the handguard. The 16" stainless steel DLC barrel is of military profile and is tipped with a Taper-Lok flash suppressor; this has threads behind the flash suppressor for a suppressor, and the flash suppressor is itself removable to allow the attachment of other muzzle devices. The pistol grip is a BCM Gunfighter grip, and the stock, while smaller than usual, is telescoping and works better when wearing heavy body armor. The controls are ambidextrous, and the rifle comes with an VTAC Alpha Rail-13 sling and sling swivels.

I have not been able to determine whether the Predator is something coming up or no longer carried by SIG; it does not appear on SIG's web site, but there is plenty of recent information and reviews on the Predator. It was apparently introduced at the 2013 SHOT Show, then reintroduced at the 2016 SHOT Show, but as I said, does not appear on their site. Physically, it looks a lot like the Elite, and has many of the same components, but has an 18-inch stainless steel heavy-profile barrel. The barrel is not tipped with any sort of muzzle device, but it does have a target crown, and has a muzzle cap that has threads under it for a muzzle device. The SIG-designed handguards have been swapped out for ALG Defense's Ergonomic Modular Rail handguards. They are quite slim and have gripping surfaces on them. The stock looks a lot like the telescoping Magpul MOE stock, but is in fact fixed. The sides and undersides of the handguard have M-LOK slots, and the top has a medium-length MIL-STD-1913 rail attached to M-LOK slots. The new handguard is a free-float tube. The trigger pack is two-stage and match-quality. The pistol grip is a Hogue grip overmolded in rubber and has a pebble texture. The upper receiver is an A3-type, with a MIL-STD-1913 rail. It does not have the ROMEO5 sight, allowing the user to choose his own sight; it does have a set of BUISs.

The Hunter is designed to shoot medium to small game, up to the size of a coyote. The barrel is a long 20 inches tipped by a target crown/thread protector, and with a heavy profile and match-quality. It is 20 phosphated. The Hunter uses a low-profile gas block, with an upper receiver and handguard having a MIL-STD-1913 rail. (There are also short rails at the ends on the other three

sides.) The handguard is a Magpul MOE design, with a free-float tube and the gas block under the end of the handguard. The handguard is mostly aluminum, but over-coated with polymer. Though the controls are not ambidextrous, they can be reversed. Standard finish and molding is in various camo designs, but it can also be had in black. The stock, like the Predator, is fixed. The Hunter is not sold with a ROMEO5 sight, as most hunters prefer to mount their own optics. It does come with a set of BUIS.

SIG has always hoped for military and police sales for its SIGM400 Elite, and its first target customers were in fact military units and police SWAT/SRT teams. Though it has been tested by the US military amongst other countries, and is still being tested by some countries, most sales have been made to law enforcement and bodyguard concerns. The SIGM400 Patrol is made for military and police, and not sold to civilians. The Patrol is very similar to the Elite, but comes in longer and shorter barrels, may have suppressors, muzzle brakes, and flash suppressors of different types mounted by the shooter. (A flash suppressor-equipped version is listed below.) Instead of gas impingement, the Patrol uses a short-stroke gas piston operation. The gas block has a four-position gas regulator, allowing for continued use in dirty environments as well as use with rifle grenades. The Patrol has MIL-STD-1913 rails on four sides of the handguards as well as above the receiver. The barrels come in several lengths and are stainless steel, nitrided, match-quality, and of military profile. Military/LE versions are sold with a ROMEO5 red dot sight, and BUIS are provided.

Weapon	Ammunition	Weight	Magazines	Price
SIGM400 Elite (16” Barrel)	5.56mm NATO	3.31 kg	5, 10, 20, 30	$752
SIGM400 Elite (18” Barrel)	5.56mm NATO	3.43 kg	5, 10, 20, 30	$774
SIGM400 VTAC	5.56mm NATO	3.31 kg	5, 10, 20, 30	$748
SIGM400 Predator	5.56mm NATO	3.45 kg	5, 10, 20, 30	$602
SIGM400 Hunter	5.56mm NATO	3.54 kg	5, 10, 20, 30	$626
SIGM400 Hunter	.300 Blackout	3.54 kg	5, 10, 20, 30	$807
SIGM400 Patrol (9.5” Barrel)	5.56mm NATO	2.97 kg	5, 10, 20, 30	$678
SIGM400 Patrol (9.5” Barrel)	.300 Blackout	2.97 kg	5, 10, 20, 30	$859
SIGM400 Patrol (11.5” Barrel)	5.56mm NATO	3.1 kg	5, 10, 20, 30	$701
SIGM400 Patrol (11.5” Barrel)	.300 Blackout	3.1 kg	5, 10, 20, 30	$881
SIGM400 Patrol (14.5” Barrel)	5.56mm NATO	3.27 kg	5, 10, 20, 30	$733
SIGM400 Patrol (14.5” Barrel)	.300 Blackout	3.27 kg	5, 10, 20, 30	$914
SIGM400 Patrol (16” Barrel)	5.56mm NATO	3.36 kg	5, 10, 20, 30	$750
SIGM400 Patrol (16” Barrel)	.300 Blackout	3.36 kg	5, 10, 20, 30	$1021

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
SIGM400 Elite (16” Barrel)	SA	3	1-Nil	4/6	2	Nil	43
SIGM400 Elite (18” Barrel)	SA	3	1-Nil	5/6	2	Nil	53
SIGM400 VTAC	SA	3	1-Nil	4/6	2	Nil	42
SIGM400 Predator	SA	3	1-Nil	6	2	Nil	51
SIGM400 Hunter (5.56mm)	SA	3	1-Nil	6	2	Nil	57
SIGM400 Hunter (.300)	SA	4	2-3-Nil	6	4	Nil	61
SIGM400 Patrol (9.5”, 5.56mm)	5	2	1-Nil	3/4	2	6	18
SIGM400 Patrol (9.5”, .300)	5	3	2-Nil	3/4	3	7	21
SIGM400 Patrol (11.5”, 5.56mm)	5	2	1-Nil	3/5	2	6	25
SIGM400 Patrol (11.5”, .300)	5	3	2-Nil	3/5	3	7	29
SIGM400 Patrol (14.5”, 5.56mm)	5	3	1-Nil	4/5	2	6	36
SIGM400 Patrol (14.5”, .300)	5	3	2-Nil	4/5	4	9	40
SIGM400 Patrol (16”, 5.56mm)	5	3	1-Nil	4/6	2	6	42
SIGM400 Patrol (16”, .300)	5	3	2-Nil	4/6	4	9	47

SiG-Sauer SG540/543

Notes: This is a family of rifles including the SG540 assault rifle and the SG543 carbine. (The other rifle is the SG-542 battle rifle, not produced in quantity except in Chile.) The weapons come in fixed and folding-butt versions. The SG540 has an integral bipod. The SG543 cannot use a bayonet or rifle grenades. This weapon was not adopted by the Swiss military, but has found employment with a number of African nations. In 1988, the license for the SG540 series was sold to INDEP of Portugal, who sold it to FAMAE of Chile shortly later. Chile is now the only country that produces the SG540 series.

Weapon	Ammunition	Weight	Magazines	Price
SG540 (Fixed Stock)	5.56mm NATO	3.26 kg	20, 30	$1138
SG540 (Folding Stock)	5.56mm NATO	3.31 kg	20, 30	$1158
SG543 (Fixed Stock)	5.56mm NATO	2.95 kg	20, 30	$704
SG543 (Folding Stock)	5.56mm NATO	3 kg	20, 30	$724

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range

SG540 (Fixed Stock)	3/5	3	1-Nil	6	2	4/6	48
SG540 (Fixed Stock, Bipod)	3/5	3	1-Nil	6	1	2/3	62
SG540 (Folding Stock)	3/5	3	1-Nil	5/6	2	4/6	48
SG540 (Folding Stock, Bipod)	3/5	3	1-Nil	5/6	1	2/3	62
SG543 (Fixed Stock)	3/5	2	1-Nil	5	2	4/6	25
SG543 (Folding Stock)	3/5	2	1-Nil	4/5	2	4/6	25

SiG-Sauer SG550 Series

Notes: This weapon was developed in response to a Swiss need for a new service rifle to replace the STGW-57; in Swiss service, this assault rifle is called the StG-90. It was adopted in 1984. The weapon was designed for light weight, balance, and accuracy, using plastics for the buttstock, handguard, and pistol grip, as well as the magazines. The stock is folding and skeletonized to reduce weight. The magazines are clear so ammunition levels can be checked, and are equipped with studs and lugs so that up to three of them can be clipped together for rapid changing. The sights consist of day and illuminated night rear sights (one flips the sights to change between the two), and a hooded post-type front sight (also with a tritium inlay). The sights are adjusted for elevation and windage from the rear sight only, and when either the day or night sight is adjusted, the other sight is simultaneously adjusted. There is a STANAG-compatible sight mount for optics of the NATO sort, and this mount can also accept a MIL-STD-1913 rail. The SG550 is notable for its long 20.8-inch barrel; in addition, a bipod is standard equipment. Various Western-type 40mm underbarrel grenade launchers may be mounted.

The SG551 is a carbine version of the SG550, with a shorter 14.6-inch barrel, no bipod, and a rudimentary cheekpiece on the stock, but otherwise identical to the SG550. A variant of the SG551, the SG551 SWAT, is identical except for a redesigned stock and the addition of a permanently-mounted MIL-STD-1913 rail to allow a greater range of sights to be mounted. The SG551A1 is a civilianized version produced in SiG-Sauer's US facilities; it is identical to the SG551, except being semiautomatic only and having no bayonet lug.

The SG552 is a short-barreled carbine for use by special operations personnel; it also has a permanently-mounted MIL-STD-1913 rail, and can still mount an underbarrel grenade launcher or fire rifle grenades, despite the 10.7-inch barrel. A three-round burst mechanism has been added to the normal selector modes. The barrel is equipped with a muzzle brake instead of a simple flash suppressor. It also has a folding stock, and is known as the Commando. This version was not introduced until 1998.

In addition to these variants, semiautomatic versions of the SG550 and SG551 also exist for civilian sales. They are called the SG550SP and SG551SP; the SG551SP version is rarely found outside of Switzerland, however, due to the short length of its barrel and the plethora of government regulations in various countries. The SG550SP is often found outside Switzerland minus its flash suppressor and sold with 10-round magazines (particularly in the US prior to the sunset of the Assault Weapon Bans).

Finally, the SG556 is a version of the SG550 designed for sales in the US, and built in SiGArms' facilities in the US. Internally, the SG556 is virtually identical to the civilian versions of the SG550; however, they have some changes both to suit US firearms regulations and to suit the tastes of American shooters. The cold-forged barrel is 16 inches long, and it is tipped with a flash suppressor which is similar (but not exactly the same) as that of an M-16A2. The fore-end is coated with ribbed, non-slip rubber. The receiver is topped with a MIL-STD-1913 rail, and three more are on the front of the weapon. Both the front and rear iron sights are military-type and flip down if other optics are mounted. (They can also be removed entirely.) The SG556 is designed to use standard AR-15/M-16 magazines (the standard SG550 series uses proprietary magazines). Law enforcement versions have a removable rubber handgrip/fore-end, which can be replaced with a fourth MIL-STD-1913 rail. The SG556 was introduced at the 2006 SHOT show and began sales the following fall. Six versions are built: the Classic, the DMR (Designated Marksman Rifle), the Classic SWAT, the SCM (Sport Configuration Model), the Patrol Rifle, and the SWAT Patrol Rifle.

All SG556s use an almost identical action to the SG550 series, but are modified to make a conversion to automatic fire virtually impossible. The Classic is a basic-configuration that is, ironically, one of the newest versions of the SG556. The stock of the Classic may be a fixed, skeletonized stock adjustable for length of pull, a similar skeletonized stock that folds to the right, or a Vltor 5-position stock, similar in design to that used on the M-4 but more adjustable and with a compartment in the rear large enough to house a standard cleaning kit. The Classic is equipped with a small red-dot-type sight with a 1.5x magnification and a folding rear diopter sight. The front sight is fixed. The cold-forged barrel is 16 inches long, and it is tipped with a flash suppressor which is similar (but not exactly the same) as that of an M-16A2. The fore-end and pistol grip are coated with ribbed, non-slip rubber. The receiver is topped with a MIL-STD-1913 rail. The Classic SWAT is very similar, but has a handguard with four MIL-STD-1913 rails as well as one above the receiver.

The DMR uses a match-grade, cold hammer-forged 21-inch heavy barrel, tipped by a target crown instead of a flash suppressor. The handguards and fore-end are designed to be as non-slipped as possible; they have a flared area at the bottom that is ribbed to ensure a positive grip. The stock does not fold, but is adjustable for length of pull and has an adjustable cheekpiece. At the front end of the handguards are three short lengths of MIL-STD-1913 rail; the bottom rail is normally occupied with the equipped light bipod that is adjustable for height and cant. There is also a MIL-STD-1913 rail atop the receiver; the DMR does not normally come with iron sights, though it comes with a telescopic sight. The SCM is constructed in much the same way, but with no bipod, a telescopic sight is not included, and the barrel is 16 inches; the stock is also fixed. The Patrol Rifle is essentially a Classic with an option for quad-MIL-STD-1913-rail fore-end and a stock that both slides and side-fold; the SWAT Patrol Rifle is a patrol rifle with a skeletonized side-folding and sliding stock, more finely-adjustable sights, and a quad MIL-STD-1913 rail for the fore-end as standard.

In mid-2009, SiG-Sauer introduced the P556 – one of those "pistol" versions of a rifle. The P556 is for the most part an SG556

Classic with a short, 10-inch barrel and no stock, nor any attachments for a stock. The P556 has a MIL-STD-1913 rail above the receiver, and is tipped with a flash suppressor similar to that of the M-16A2/M-4 (a model often called the "A2" flash suppressor). Though the P556 does not have any stock attachments, shooters have quickly discovered that it is possible to add stock attachments and convert into a short-barreled rifle (it's legal in many places, including most of the US, if you pays the money and does the paperwork), and several kits are available to do this. Some generic figures for stocked P556s are presented below. The P556 could, of course, be tricked out even further.

Early in 2009, SiG-Sauer also introduced a version of the SG550 series in .22 Long Rifle, called the SIG552. The SIG552 comes in two rifle versions, the SIG552 Classic and the SIG552 SWAT, as well as a pistol version, the P522. The SIG552 Classic largely follows the lines of the SG550 series, and many parts of the SIG552 are interchangeable with those of the SG550 series, particularly the furniture and receiver halves. The folding stock is the same as that used on the SG556 Classic, as are the pistol grip, handguards, and trigger group. The furniture is almost totally of polymer, though the stock is light alloy encased in polymer with a non-slip buttplate. The upper receiver is topped with an integral MIL-STD-1913 rail, and short lengths of MIL-STD-1913 rail are attached to either side of the handguards near the front and above the gas block; backup iron sights which attach to the receiver's rail as well as the gas block's rail are available. The 16.6-inch barrel is tipped by a flash suppressor which is similar in design to a standard SG550-series rifle. Magazines are designed to look like standard 20 or 30-round 5.56mm magazines, but have inserts to fit the smaller rounds. The SIG552 SWAT is for the most part the same, but has a four-point MIL-STD-1913 rails on the handguards; the top rail forms a continuous rail with the MIL-STD-1913 rail atop the receiver. The pistol counterparts, the P522 Classic and P522 SWAT, essentially follow the lines of their rifle counterparts as well as the P556 pistol. Barrel length for the P522 versions is 10.6 inches, and as with the P556, kits exist to attach a stock to the P522 to turn it into a short-barreled rifle.

Appearing in 2014, the SG556R -- ahh, well, is it an SG556? The exterior looks pretty much looks any SG556, but internally -- the SG556R is an AK. And externally, there are also some changes to suit it to the AK internals, such magazine well. The controls are mostly AR, but it uses standard AK magazines. The charging handle is also AR. The flash suppressor can be removed, and replaced with any flash suppressor or muzzle brake that fits on a 7,62mm Kalashnikov or 7.62mm NATO rifle. It has a 16-inch barrel.

Twilight 2000 Notes: There are virtually no SG552s in existence in the Twilight 2000 timeline which were manufactured as such; however, Swiss gunsmiths often made *ad hoc* "SG552s" from existing SG550s and SG552s for CQB. The SG556 does not exist in the Twilight 2000 timeline in any form, nor does the SIG552 or P522.

Weapon	Ammunition	Weight	Magazines	Price
SG550	5.56mm NATO	4.08 kg	5, 10, 20, 30	$1119
SG551	5.56mm NATO	3.4 kg	5, 10, 20, 30	$570
SG552	5.56mm NATO	3.2 kg	5, 10, 20, 30	$758
SG556 Classic	5.56mm NATO	3.72 kg	5, 10, 20, 30	$745
SG556 DMR	5.56mm NATO	5.44 kg	5, 10, 20, 30	$1345
SG556 Classic SWAT	5.56mm NATO	3.76 kg	5, 10, 20, 30	$745
SG556 SCM	5.56mm NATO	3.63 kg	5, 10, 20, 30	$574
P556	5.56mm NATO	2.86 kg	5, 10, 20, 30	$499
P556 (Folding-Stock SBR)	5.56mm NATO	3.36 kg	5, 10, 20, 30	$525
P556 (Fixed-Stock SBR)	5.56mm NATO	3.36 kg	5, 10, 20, 30	$504
SIG552 Classic	.22 Long Rifle	2.9 kg	10, 25	$247
SIG552 SWAT	.22 Long Rifle	3 kg	10, 25	$250
P522 Classic	.22 Long Rifle	2.38 kg	10, 25	$136
P522 SWAT	.22 Long Rifle	2.44 kg	10, 25	$138
P522 Classic (Folding-Stock SBR)	.22 Long Rifle	2.88 kg	10, 25	$186
P522 Classic (Fixed-Stock SBR)	.22 Long Rifle	2.88 kg	10, 25	$166
P522 SWAT (Folding-Stock SBR)	.22 Long Rifle	2.94 kg	10, 25	$188
P522 SWAT (Fixed-Stock SBR)	.22 Long Rifle	2.94 kg	10, 25	$168
SG556R	7.62mm Kalashnikov	3.18 kg	10, 20, 30, 40, 75D	$1444

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
SG550	5	3	1-Nil	5/6	2	6	59
With Bipod	5	3	1-Nil	5/6	1	3	76
SG551	5	3	1-Nil	4/5	2	6	35

SG552	3/5	2	1-Nil	3/5	2	3/5	21
SG556 Classic	SA	3	1-Nil	4/6	3	Nil	41
SG556 DMR	SA	3	1-Nil	6	2	Nil	64
With Bipod	SA	3	1-Nil	6	1	Nil	83
SG556 Classic SWAT	SA	3	1-Nil	4/6	2	Nil	41
SG556 SCM	SA	3	1-Nil	5	2	Nil	43
P556	SA	2	1-Nil	3	2	Nil	16
P556 (Folding)	SA	2	1-Nil	3/4	2	Nil	19
P556 (Fixed)	SA	2	1-Nil	4	2	Nil	19
SIG552 Classic/SWAT	SA	1	Nil	4/6	1	Nil	34
P522 Classic/SWAT	SA	1	Nil	3	1	Nil	17
P522 Classic/SWAT (Folding)	SA	1	Nil	3/4	1	Nil	20
P522 Classic/SWAT (Fixed)	SA	1	Nil	4	1	Nil	20
SG556R	SA	4	2-Nil	5/6	4	Nil	44

T-65

Notes: The new standard Taiwanese assault rifle, the Type 65 is in large-scale issue only within Airborne, Special Forces, MP, and Marines. The Type 65 was also the standard Panamanian assault rifle until its replacement by the AKM; they used the K1 version. The Type 65 is produced on a production line set up for license production of the M-16A1.

The T-65 is basically an M-16 body with new dial-adjustable rear sights (with the rear sights mounted on a bracket where the rear sights would be on an M-16A1), wider, round handguards and no carrying handle. The bolt and gas system are modified versions of the AR-18 system. Early production T-65s had a receiver made of stamped steel, but this was quickly switched to aluminum alloy. The trigger guard is the same as an experimental M-16 arctic trigger guard. The K2 version differs from the K1 primarily in the burst-control mechanism and the shorter length of the barrel. The T-65K3 is basically the same as the T-65K2, except that it has a longer and heavier barrel than the T-65K2 (but shorter than the T-65K1's barrel).

A further modification of the T-65 (with no official designation I have been able to discover; I have tentatively called it the T-65K4 below, but it has in the past been erroneously called the T-68) uses a modification of the M-16A1's bolt and gas system, and has a significantly higher rate of fire. This model can use, in addition to standard M-16-type magazines, clear plastic 30-round magazines designed for the weapon.

The T-86 is essentially the equivalent of the M-4 carbine for the T-65 series. The T-86 uses a barrel only slightly longer than the M-4's (14.8 inches), and has a similar collapsible stock. The T-86 does have a carrying handle, but this carrying handle contains a 1.5x optical sight tube. There is a bracket underneath the barrel near the muzzle which can mount either a bayonet, laser aiming module, or various tactical lights. The T-86 is otherwise basically a re-done T-65K1 or K2, using the same hybrid M-16/AR-18 system. Reportedly, a version of the T-86 with a much shorter barrel has also been produced and issued in very small numbers to Taiwanese special operations troops, but I have no other information on that version.

Weapon	Ammunition	Weight	Magazines	Price
T-65K1	5.56mm NATO	3.31 kg	20, 30	$606
T-65K2	5.56mm NATO	3.17 kg	20, 30	$734
T-65K3	5.56mm NATO	3.27 kg	20, 30	$770
T-65K4	5.56mm NATO	3.31 kg	20, 30	$606
T-86	5.56mm NATO	3.18 kg	20, 30	$572

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
T-65K1	5	3	1-Nil	6	2	6	55
T-65K2	3/5	3	1-Nil	5	2	4/6	35
T-65K3	3/5	3	1-Nil	6	2	4/6	48
T-65K4	10	3	1-Nil	6	2	12	55
T-86	5	3	1-Nil	4/5	2	6	35

RPC Fort Vepr

Notes: The Vepr ("Wild Boar") was announced in 2003 as the rifle which will replace AK-series rifles in Ukrainian service; however, the date for complete replacement has slipped repeatedly, from 2007 to 2010 to 2013 to 2015, primarily due to budgetary reasons, but also because the Vepr is basically a poor design. Though the Vepr has been described as a major improvement over the AK-74, the Vepr is in fact little more than the AK-74 put in a bullpup form and the barrel tipped with an improved flash suppressor/muzzle brake. A cheek rest has been added above the receiver, and a new fore-end, heat shield, and pistol grip have been fitted. The bullpup stock has been made quite bulbous. The front sight is on a triangular post, and the rear sight is a low sight as to not interfere with any optics mounted. The Vepr has a standard AK-type optics mount on the left side of the front part of the receiver and the rear of the heat shield; this is normally occupied by a rather large 1.5x red-dot collimator sight (included in the cost below). A handicap of the Vepr being an AK converted to a bullpup configuration is that the selector lever is now well behind the magazine, three-quarters of the way to the butt, and awkward to manipulate by the shooter. The Vepr can mount the Ukrainian equivalent of the GP-25 or GP-30 grenade launchers.

It should be noted that while the Vepr can feed from the RPK-74's 75-round drum like an AK-74 can, its use would be *extremely* awkward.

Twilight 2000 Notes: The Vepr is not available in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
Vepr	5.45mm Kalashnikov	3.45 kg	20, 30, 40, 75D	$690

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Vepr	5	3	1-Nil	4	2	4	41

2 Vets Bravo

2 Vets is just what is sounds like -- run by Dean and Amber Brandly, both long-service veterans. (Dean jokes that he married above his pay grade.) They use a lot of proprietary hardware and specialist designs in their rifles, in what they call the B5 package -- handguards, rails, stock, pistol grip, and finish. The Bravo is not 2 Vets' (or 2VA) first design; it is merely the latest. The Bravo is on the base AR plan, but differs in many ways. Chief of these is the left-side charging handle, attached to a reciprocating nickel-boron bolt. The 16-inch barrel is cold hammer-forged barrel operating by direct impingement. It has not only a birdcage muzzle brake, but a target crown under it. It has perfectly-matched upper and lower receivers. It has an extended bolt release, standard AR controls. The receiver has a monolithic MIL-STD-1913 rail, and it retains the standard A2 front sight. The pistol grip is by Umbrella Corp, and it has self-designed handguards and six-position sliding stock. There is no forward assist; "the charging handle is the forward assist." The charging handle may be screwed into either side of the bolt, with case ejection on the right. The Bravo's receiver and handguards are deliberately made wider than normal -- this adds to weight, but increases strength and rigidity. It's a tough rifle.

Weapon	Ammunition	Weight	Magazines	Price
Bravo	5.56mm NATO	2.95 kg	10, 20, 30	$633

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Bravo	5	3	1-Nil	4/5	2	5	41

2A Armament BLR-16

Notes: The BLR-16 is an attempt to produce the best possible AR by combining as many off-the-shelf components as possible without getting redundant. The BALIOS-lite upper and lower receivers incorporate titanium alloy, and many of the internals are also of titanium alloy. Above the receiver, and locking into the rail above the handguard, is a MIL-STD-1913 rail variant called the BL-RAIL by 2A. This may use 2A's proprietary tension lock design for attachment, M-LOK, or KeyMod's locking solution. The 16-inch barrel is secured by a titanium barrel nut, with a titanium gas block, and titanium takedown pins. The barrel is made of 416R stainless steel and is tipped by a titanium T3 compact muzzle brake; however, this is on threads and may be replaced by any number of muzzle brakes or suppressors. The barrel uses the M16s thick/thin "government profile." The pistol grip is a MagPul MIAD, while the sliding stock is made by Mission First and is lighter than the standard M4's stock, and adjusts to six positions. The magazine well is flared for ease of loading. The bolt and bolt carrier is cryogenically-treated and has a BCM-Mod4 charging handle. In perhaps the only "standard" feature, a normal buffer and buffer spring is used. The trigger group is called an ALG-ACT group and may be adjusted for pull weight. The finish for the receivers is Type-III anodized. All that titanium makes for a light rifle. And an expensive one – nearly $2200 in real life, and even expensive by game terms.

I couldn't resist statting this out for automatic fire, though in fact it is a semiautomatic-only weapon.

Weapon	Ammunition	Weight	Magazines	Price
BLR-16	5.56mm NATO	2.27 kg	10, 20, 30	$649

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
BLR-16	5	3	1-Nil	4/6	2	6	42

556 Tactical Deathpunch

Notes: Like so many firearms companies, 556 Tactical started out as a company to produce limited runs of custom guns for friends and family. And the Deathpunch is decked out like a race car, with its fire-engine red receiver and barrel, yellow and black controls and dustcover (it is an AR clone), black charging handle, and a monolithic MIL-STD-1913 rail. The stock and handguards are checkered, and the top and bottom of the handguards also have rails, which are black. The flash suppressor is black, and the proprietary magazines have pull handles and are black with a yellow logo on the sides. It is visually very impressive; and based on the Ferrari. Only seven were produced, and members of the designer's rock band had dibs on them almost immediately. However, they are willing to produce more on special request.

The Deathpunch is a fully automatic SBR, with a 14.5-inch heavy fluted floating stainless steel barrel, tipped with a Tactical StrykerHype flash suppressor. The rifle comes with a telescopic sight and a foregrip along with a finger stop. The internal parts, including the bolt carrier, is chrome-plated. The upper and lower receiver is made from billets of 7076 aluminum and the trigger is a CMC 3.5-pound curved profile trigger that is gold-plated. The pistol grip is from Magpul, and the stock is a B5 systems SOPMOD sliding stock. There are folding adjustable Samsom LoPro sights. The receivers are all autographed by Zoltan, the band leader and designer.

When you have a Deathpunch, you don't just have an assault carbine, you have a work of art.

Weapon	Ammunition	Weight	Magazines	Price
Deathpunch	5.56mm NATO	3.13 kg	10, 20, 30	$576

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Deathpunch	5	3	1-Nil	4/5	2	6	37

AAC MPW

Notes: The aim of the MPW is to produce a carbine with more punch than the 5.56mm NATO in SBRs. Two versions of the MPW have a 9 and 12.5-inch barrel and are legally (in the US) an SBR, while the other is a standard-length carbine. (Note that the 9" barrel version is no longer produced and is not found on MPW's site anymore.) The MPW can take any straight or curved 5.56mm magazine, but not fancy ones such as the 75, 90, and 100-rounds ones made by third parties. The barrels are finished in black nitride inside and out, which for the bore yields better corrosion resistance. The muzzle is threaded, but sold with a standard A2-type flash suppressor. The barrel is free-floating. The handguards handguards are a full-length KAC URX III handguard with a MIL-STD-1913 rail, and there is also a short rail under the handguard near the front. Iron sights are not sold with the MPW, but BUIS are sold separately and BUIS of any type may be attached to the rail.

Operation is by direct gas impingement, and the bolt carrier is nickel-boron-coated for additional lubrication, meaning that the MPW requires less lubrication than most AR-15-type weapons. The interior of the receiver halves have a further high-phosphorus electroless nickel coating. The Bolt itself is phosphated shot-peened steel Carpenter 158 bolt. The special o-ring on the extractor is designed to fuction up to 150 degrees and down to -40 degrees F. The extractor spring is of premium material and winding. The extractor pin is made of S2 tool steel, superior to most AR-15-type rifles. The gas key is properly staked with Permatex gasket-seal compound. The trigger group is a Geissele single-stage trigger with a low pull weight, and the stock and pistol grip are from MagPul.

Weapon	Ammunition	Weight	Magazines	Price
MPW (9" Barrel)	.300 Blackout	2.74 kg	5, 10, 20, 30	$701
MPW (12.5" Barrel)	.300 Blackout	2.89 kg	5, 10, 20, 30	$740
MPW (16" Barrel)	.300 Blackout	3.04 kg	5, 10, 20, 30	$777

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
MPW (9" Barrel)	5	3	1-Nil	4/5	3	Nil	19
MPW (12.5" Barrel)	SA	3	2-Nil	4/5	3	Nil	32
MPW (16" Barrel)	SA	3	2-Nil	5/6	4	Nil	46

Adams Arms COR Ultra Lite

Notes: The COR (Competition Optics Ready) is a rifle designed for competition, especially 3-Gun Matches, incorporating a lot of input from 3-Gun shooters and other competition shooters.

It has a Picatinny Rail above the receiver, and a longer length down the top of the handguard (though non-continuous), and one below the handguard. It has Diamond micrometer-adjustable rear sights and a folding post sight with protective ears. The COR is well balanced, especially when optics are installed, though it is a bit heavy, but this contributes to its light recoil. The front of the lower handguard rail comes with a hand stop.

The 16.5-inch barrel is of medium profile with a slotted VDI Jet muzzle brake. The barrel is perhaps too light for a competition rifle, and in competition you want a nice, stiff barrel, and the skinny barrel has seriously compromised accuracy beyond 100 meters. (It cannot be simulated in game terms, however.) Most shooters find difficulties beyond 100 meters, but some have been able to score consistent hits at 500 meters with a scope installed. The barrel is finished in Melonite.

The COR uses a Magpul MOE stock, a fixed stock instead of the sliding stock of most ARs these days. This does lighten the rifle. It also has a Magpul MOE K2 pistol grip, with a compartment inside to store batteries for optics. The Hyperfire trigger pulls at the same weight and pull distance whether the top or bottom of the trigger is pulled. The trigger is double-sprung to ease the pull weight, and it is only 3.5 pounds.

Most internal parts are sprung for positive engagement. (Adams does not recommend dry firing the COR for that reason.) The bolt carrier has several deep lightening cuts in it, but is mostly an AR bolt group with extra springs in the firing pin and a stronger spring in the extractor (and, as many readers of these pages will know, my biggest problem with the M16 and AR-15 is extraction failure). The light bolt is also easier for the light piston to move, and allows for a less beefy recoil spring and recoiling mass. Operation is by short-stroke piston rather than direct gas impingement. This, especially on the COR, keeps the chamber and innards much cleaner. The action cycles smoothly and felt recoil is light. The receivers are Type III Class II Hard-Coat Anodized.

Weapon	Ammunition	Weight	Magazines	Price
COR Ultra Lite	5.56mm NATO	3.23 kg	5, 10, 20, 30	$662

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
COR Ultra Lite	SA	3	1-Nil	6	2	Nil	42

Adams Arms Tactical EVO

Notes: This is another AR-15 clone. Many gun experts feel that the AR-15 platform has gotten a bit stale, that everything that can be done with an AR-15/M4 has been done, and only minor cosmetic changes differentiate the various AR-15 clones. Most manufacturers seem to take one part from one manufacturer, another from another manufacturer, have their barrels made by a few expert barrel makers, etc.

Adams Arms distinguishes itself by it's gas piston system, designed from the ground up for a mid-length system. Adams makes its own working parts, from the recoil spring and buffer mass to the precision barrel and low-profile gas block. The EVO is capable of digesting almost all sorts of ammunition, use any lubrication, and feeds from virtually any AR-15-compatible magazine. In addition,

the magazine well is beveled. The EVO comes in a carbine-length and SBR-length rifle, as well as a pistol; the barrels are government contour and free-floating. The rifle has an upper MIL-STD-1913 rail that extends from the receiver and interlocks with the full-length rail atop the handguard. Below the handguard is another short section of rail, able to take any number of accessories as well as a bipod. Barrels include a 14.5-inch-barrel SBR and a 16-nch carbine barrel. Other SBR-length barrels include 7.5 inches, 12.5 inches and 11.5 inches. These are also the pistol barrel lengths. The barrel itself is made from 4150 Chrome Moly Vanadium Steel. Barrel finish is Black Nitride with a QPQ Melonite coating. Finish for the receiver is a Hard-Coat Anodization. The barrel and working parts have been treated with Adams Arms' Salt Nitriding Melonite process, with the piston coated with a Nickel-Boron composition. The EVO does not normally come with sights, but BUIS can be added to the upper rail, and the EVO in this entry is treated as such. The stock is a sliding skeletonized 6-position stock.

The Adams Arms gas piston system has an Achilles Heel – it gets dirty fast, and the piston can lock up in dirt and carbon. Note that to get that dirty, it takes a while – and the gas piston system is nickel boron coated to help keep the gas piston going, even when it is black with grunge. The gas system is contained in a small space, limiting the amount of gas and dirt that can go into the piston area. It can take thousands of rounds before the EVO locks up due to fouling. The gas piston system is a short stroke system that appears to be a hybrid of the SKS and M1 Carbine. The result is that more gas exists from the ejection port after each shot. The gas system is adjustable, allowing for adjustments as fouling increases and for use with a suppressor or a muzzle brake. (For game purposes, the EVO below has a flash suppressor, which is normal for an EVO.) The trigger is described by one gun writer as a "meh trigger," meaning it has the same squishy feel as most AR-15 clones and is not conducive to tight groups. The EVO is a combat rifle and not a competition rifle. Perhaps the most damning comment of the EVO is the one made about all Adams Arms products – absolutely abysmal customer service.

The EVO seems to lend itself to military/SRT/automatic use. This has been included in the stats below as a "what-if."

Weapon	Ammunition	Weight	Magazines	Price
Tactical EVO (16" Barrel)	5.56mm NATO	3.22 kg	5, 10, 20, 30	$599
Tactical EVO (14.5" Barrel)	5.56mm NATO	3.12 kg	5, 10, 20, 30	$583
Tactical EVO (12.5" Barrel)	.300 Blackout	3.86 kg	5, 10, 20, 30	$742
Tactical EVO (11.5" Barrel)	5.56mm NATO	2.89 kg	5, 10, 20, 30	$551
Tactical EVO (7.5" Barrel)	5.56mm NATO	2.57 kg	5, 10, 20, 30	$507
Tactical EVO Pistol (12.5" Barrel)	.300 Blackout	2.7 kg	5, 10, 20, 30	$691
Tactical EVO Pistol (11.5" Barrel)	5.56mm NATO	2.72 kg	5, 10, 20, 30	$500
Tactical EVO Pistol (7.5" Barrel)	5.56mm NATO	2.61 kg	5, 10, 20, 30	$456

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Tactical EVO (16" Barrel)	5	3	1-Nil	4/6	3	6	43
Tactical EVO (14.5" Barrel)	5	3	1-Nil	4/5	3	6	37
Tactical EVO (12.5" Barrel)	5	3	2-Nil	4/5	2	6	33
Tactical EVO (11.5" Barrel)	5	2	1-Nil	3/5	3	6	26
Tactical EVO (7.5" Barrel)	5	2	1-Nil	3/4	3	7	12
Tactical EVO Pistol (12.5" Barrel)	5	3	2-Nil	4	4	9	28
Tactical EVO Pistol (11.5" Barrel)	5	2	1-Nil	3	3	8	21
Tactical EVO Pistol (7.5" Barrel)	5	2	1-Nil	2	3	8	10

Adcor A-556

Notes: The A-556 is based closely on the M16/M4-series of assault rifles and carbines – with good reason. The A-556 was one of the contenders in the US Army Individual Carbine Competition meant to replace the M4 Carbine. (The competition was cancelled in 2013 without finding a new carbine.) The Army did say that the A-556 produces tight groups, outstanding accuracy, and outstanding functioning. Part of the competition included combat testing in Afghanistan, where is performed quite well. Also noted was the high

rate of production that Adcor was able to produce, one that Adcor said they could maintain for any length of time. After this competition, the A-556 was offered on the civilian market. The A-556 differs from the M16/M4 in using a short-stroke gas piston instead of the Stoner-type direct impingement system. This drastically reduced fouling, especially on the barrel extension, chamber, and bolt carrier group. In addition, the A-556 has a proprietary ejection port cover with a wiper to reduce the intake of external crud, an ambidextrous charging handle placed forward on either side of the handguard (this was noted by the Army as limiting the usefulness of the handguard rail on the side the charging handle is mounted on, and breaking the "muscle memory" of troops used to the M16/M4), and a "key-locked, highly rigid" MIL-STD-1913 rail system, with a receiver rail and four-way handguard rails. Barrel lengths are 10.5, 14.5, 16, 18, and 20 inches; the 10.5-inch and 14.5-inch are not generally sold to civilians, but are sold to police. The military/police versions also have automatic fire functions, while civilian versions generally do not; simply use an "SA" ROF and the "Single Shot" recoil for civilian versions. The A-556 uses an M4-type telescoping stock.

The A-556 was otherwise a plain-vanilla M4/M16 variant. Current models include the A-556 Elite and A-556 Elite GI (Gas Impingement). The barrel is free-floating, and like the M16/M4, field stripping is toolless. A-556 Elites with a 16-inch barrel can be had chambered in .300 Blackout and 7.62mm Kalashnikov.

The A-556 GI uses direct gas impingement instead of a gas piston. It is available only in 16-inch and 18-inch barrel versions. It is otherwise the same as the standard A-556 Elite for game purposes.

Weapon	Ammunition	Weight	Magazines	Price
A-556 (10.5" Barrel)	5.56mm NATO	2.93 kg	5, 10, 20, 30	$717
A-556 (14.5" Barrel)	5.56mm NATO	3.11 kg	5, 10, 20, 30	$759
A-556 (16" Barrel)	5.56mm NATO	3.2 kg	5, 10, 20, 30	$775
A-556 (18" Barrel)	5.56mm NATO	3.45 kg	5, 10, 20, 30	$795
A-556 (20" Barrel)	5.56mm NATO	3.54 kg	5, 10, 20, 30	$817
A-556 Elite (10.5" Barrel)	5.56mm NATO	2.93 kg	5, 10, 20, 30	$721
A-556 Elite (14.5" Barrel)	5.56mm NATO	3.11 kg	5, 10, 20, 30	$763
A-556 Elite (16" Barrel)	5.56mm NATO	3.2 kg	5, 10, 20, 30	$595
A-556 Elite (16" Barrel)	.300 Blackout	3.2 kg	5, 10, 20, 30	$775
A-556 Elite (16" Barrel)	7.62mm Kalashnikov	3.2 kg	5, 10, 20, 30, 40, 75D	$846
A-556 Elite (18" Barrel)	5.56mm NATO	3.45 kg	5, 10, 20, 30	$617
A-556 Elite (20" Barrel)	5.56mm NATO	3.54 kg	5, 10, 20, 30	$638

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
A-556 (10.5" Barrel)	3/5	2	1-Nil	3/4	2	4/6	20
A-556 (14.5" Barrel)	3/5	3	1-Nil	4/5	2	4/6	34
A-556 (16" Barrel)	3/5	3	1-Nil	4/5	2	4/6	40
A-556 (18" Barrel)	3/5	3	1-Nil	4/6	2	4/6	47
A-556 (20" Barrel)	3/5	3	1-Nil	5/6	2	4/6	55
A-556 Elite (10.5" Barrel)	3/5	2	1-Nil	3/4	2	4/6	21
A-556 Elite (14.5" Barrel)	3/5	3	1-Nil	4/5	2	4/6	35
A-556 Elite (16" Barrel, 5.56mm)	SA	3	1-Nil	4/5	2	Nil	41
A-556 Elite (16" Barrel, .300)	SA	3	2-Nil	5/6	4	Nil	46
A-556 Elite (16" Barrel, 7.62mm)	SA	4	2-Nil	5/6	4	Nil	46
A-556 Elite (18" Barrel)	SA	3	1-Nil	4/6	2	Nil	49
A-556 Elite (20" Barrel)	SA	3	1-Nil	5/6	2	Nil	57

Adcor DI/GI

Notes: The DI and GI are almost the same rifles – the DI uses Stoner Direct Gas Impingement, while the GI uses a gas piston. While this makes the GI a mark more reliable, this is not accounted for in game rules, and for game purposes, they are otherwise the

same carbines. They are essentially AR-15s built to a higher standard, with tight tolerances and carefully shaped parts, including a chromed bolt carrier group and bolt. The GI version has a gas regulator which can be manually adjusted for things like dirt, fouling, and grenade launching. The sliding stock is an Adcor design, but is very similar to one of Magpul's designs. The grip is also custom, including what Adcor calls "aggressive texturing." It can be had with a forward charging handle, on the bolt carrier; if it does have this option, it will still retain the rear charging handle as well. The upper receiver has a key-locked rigid MIL-STD 1913 rail system, and this continues onto the upper handguard; this is in addition to the three other handguard rails. Unlike an AR-15, opening the halves of the receiver requires only a pinch on the retaining pins, instead of pushing the pin out. Construction is largely of polymer and 7076-T6 aluminum, though of course the barrel and most of the internal parts are of steel. The barrel has a "GI profile," which means that the muzzle end is heavy to support the weight of an M-203 grenade launcher (which otherwise, cannot be mounted, as the rifle lacks the mounting hardware).

Weapon	Ammunition	Weight	Magazines	Price
DI (16" Barrel)	5.56mm NATO	3.08 kg	10, 20, 30	$589
DI (18" Barrel)	5.56mm NATO	3.11 kg	10, 20, 30	$611

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
DI (16")	SA	3	1-Nil	4/6	2	Nil	41
DI (18")	SA	3	1-Nil	5/6	3	Nil	49

ADM Universal Improved Carbine Mod II

Notes: The ADM UIC is designed for trackers -- those who must go ahead of the unit and find the traces of any an enemy's passage, no matter how small. These persons need a quiet but powerful weapon to fell enemies without giving their position or presence away, The ADM UIC is therefore lightweight, silenced, and camouflaged to the user's needs, and with a scope to allow long shots if necessary, and angled adjustable iron sights. These are attached to a flattop MIL-STD-1913 rail. The controls are fully ambidextrous, including the magazine release. The controls are furthermore oversized. The pistol grip has a small compartment, as does the stock. There is a further rail down the handguard, as well as small ones down the sides and the length of the underside of the handguard. The charging handle has no latches, having a "force to be overcome" feature. The suppressor is made for the rifle and helps give the rifle a neutral sense of balance. The telescopic sight is included in the cost.

Weapon	Ammunition	Weight	Magazines	Price
UIC Mod II (12.7" Barrel)	5.56mm NATO or 5.56mm NATO Subsonic	2.81 kg	10, 20, 30	$1031
UIC Mod II (16" Barrel)	5.56mm NATO or 5.56mm NATO Subsonic	3.14 kg	10, 20, 30	$1095

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
UIC Mod II (12.7" Standard)	SA	3	1-Nil	7/8	3	6	23
UIC Mod II (12.7" Subsonic)	SA	2	1-Nil	5/6	1	3	21
UIC Mod II (16" Standard)	SA	3	1-Nil	8/9	2	6	33
UIC Mod II (16" Subsonic)	SA	2	1-Nil	8/9	1	3	27

AKU-94

Notes: This is a bullpup version of the various AK-series weapons, generally sold as a kit to convert existing AKs rather than a full weapon. It was not a Russian weapon, but instead was sold in the US and Europe, as well as some other parts of the world, by a couple of American companies. It was one of the few bullpup rifles available to the general public before the war, most bullpup weapon being produced exclusively for military and police forces. The conversion from standard AK to AKU-94 configuration takes about 2 hours and takes an Easy: Gunsmith or Difficult: Small Arms (Rifle) roll. The resulting weapon is over 25 centimeters shorter, but has a creepier trigger pull. In addition, the construction of the AKU-94 is such that left-handed firers tend to have the charging handle hitting their face during firing, so it is definitely a right-handed weapon. The new weapon is also not as well balanced as a standard AK.

Production of this weapon stopped with the Brady Gun Bans, but picked up again in the late 2000s using imported parts under Century International Arms. These were designated the Century 1975, and built only in 7.62mm Kalashnikov. For game purposes, this is identical to the AKU-94 in 7.62mm Kalashnikov.

Twilight 2000 Notes: Though there were some reports of Russian and Chinese troops using these weapons, the reports of Russians using them are probably misidentified OTs-14s, and the Chinese weapons were probably locally-manufactured weapons of similar design and characteristics. Though there were some civilians who had this modification done to their weapons, the AKU-94 was never a widely-used weapon, and most of them were made from AK-47s or AKMs. There were most likely almost no conversions of AKMRs to this standard, but such a modification will exist only in the Twilight 2000 world.

Merc 2000 Notes: This is mainly just a novelty type of conversion.

Weapon	Ammunition	Weight	Magazines	Price
AKU-94 (AK-47/AKM/AK-103-Based)	7.62mm Kalashnikov	3.96 kg	30, 40, 75D	$782
AKU-94 (AKMR-Based	5.45mm Kalashnikov	2.95 kg	30, 40, 45, 60, 75D	$490
AKU-94 (AK-74/AK-100 Based)	5.45mm Kalashnikov	2.95 kg	30, 40, 45, 60, 75D	$490
AKU-94 (AK-101 Based)	5.56mm NATO	2.75 kg	30	$540
AKU-94 (AK-102 Based	5.56mm NATO	2.55 kg	30	$500
AKU-94 (AK-104 Based)	7.62mm Kalashnikov	3.76 kg	30, 40, 75D	$742
AKU-94 (AK-105 Based)	5.45mm Kalashnikov	2.3 kg	30, 40, 45, 60, 75D	$450
AKU-94 (AK-107 Based	5.45mm Kalashnikov	2.7 kg	30, 40, 45, 60, 75D	$565
AKU-94 (AK-108 Based)	5.56mm NATO	2.95 kg	30	$615
AKU-94 (Kit Only)	NA	3.03 kg	NA	$380

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AKU-94 (AK-47/AKM/AK-103-Based)	5	4	2-Nil	4	3	9	40
AKU-94 (AKMR-Based)	5	3	1-Nil	4	3	7	35
AKU-94 (AK-74/AK-100 Based)	5	3	1-Nil	4	3	7	41
AKU-94 (AK-101 Based)	5	3	1-Nil	4	3	7	37
AKU-94 (AK-102 Based)	5	3	1-Nil	3	3	7	24
AKU-94 (AK-104 Based)	5	3	2-Nil	3	2	6	27
AKU-94 (AK-105 Based)	5	2	1-Nil	3	3	7	27
AKU-94 (AK-107 Based)	5	3	1-Nil	4	2	6	41
AKU-94 (AK-108 Based	5	3	1-Nil	4	2	5	37

Alexander Arms AR-17

Notes: Though the AR-17 recognizably uses the AR-15-type as its base, it departs from the AR-15 in many ways, not the least of which is its chambering in .17 HMR. Like most rimfire rifles, the .17 HMR round does not develop enough gas to reciprocate an operating system that uses gas; instead, the AR-17 uses straight blowback operation. The AR-17's barrel has a heavy profile and is free-floating, but the barrel is lightened without losing strength by the cutting of spiral grooves into it. The barrel is 18 inches long and tipped by a flash suppressor which doubles as a rebar cutter, though the manufacturer admits that the flash suppressor doesn't really do anything to stop the almost-nonexistent flash, and the .17 HMR round is probably not strong enough to cut rebar; the flash suppressor is for the most part simply there for looks, and protect the target crown. The handguards are of round composite with lots of cooling holes in either side, underneath the front of the handguard is an attachment point for a bipod. The rest of the AR-17 is strongly-built, with a bolt-carrier group of ETD-150 high-strength steel; this bolt-carrier group is chromed for reliability. The bolt-carrier group itself is clearly stamped ".17 HMR" in large letters to avoid accidental placement in a non-rimfire rifle. The extractor is hardened stainless steel. The upper and lower receiver are of aircraft aluminum. Atop the upper receiver is a MIL-STD-1913 rail; there are no iron sights, as the AR-17 is designed to be used with optics. Though a standard trigger group is normally supplied with the AR-17, Alexander Arms will ship the rifle with a special trigger pack that can be tuned in any way by a knowledgeable individual. Magazines for the AR-17 are proprietary and made of polymer; the pistol grip is also polymer and is shaped like that of an AR-15A2. Though current AR-17 magazines hold only ten rounds, Alexander Arms has high-capacity magazines in the works. The AR-17 is equipped with a sliding M4-style stock.

Twilight 2000 Notes: The AR-17 is not available in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
AR-17	.17 Hornady Magnum Rimfire	3.08 kg	10	$373

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AR-17	SA	2	1-Nil	4/5	1	Nil	57

Alexander Arms Grendel

Notes: This is another development of the AR-15 series by Alexander Arms. Again, the modifications to existing AR-15s basically consist of replacing the upper receiver and barrel unit with a new one of Alexander Arms manufacture. It was designed to address shortcomings in the 5.56mm NATO round, by replacing the round with a new one which has superior ballistics and stopping power. As with the Beowulf, the Grendel is *rumored* to be testing with the US military. They have a collapsible stock, MIL-STD-1913 rail instead of a carrying handle, and a muzzle brake to reduce felt recoil. Civilian versions do not have the MIL-STD-1913 rail or the muzzle brake, nor do they normally have a bipod.

Like it's big brother the Beowulf, the Grendel got a makeover in the mid-2000s. The Grendel line split into several versions, each with several barrel lengths. The Advantage or the Tactical may be equipped with up to five MIL-STD-1913 or Weaver rails (four on special handguards, and one above the receiver). Others simply have a rail above the receiver, and some have one on a low-profile gas block at the front (primarily for a BUIS). These rails are monolithic, being machined to be a part of the rifle and from the same billet as the upper receiver. The base version of the Grendel is now the Grendel Tactical, which has either a 10.5, 14.5 or 16-inch barrel. Other than being match-quality, the barrel is standard profile and of standard quality. The barrel for the Tactical is of chrome-molybdenum-steel alloy, with the bore being chromed. The muzzles are threaded to allow the use of a muzzle brake or a silencer

instead of the standard flash suppressor. (Versions with muzzle brakes and silencers are not included below.) The surface of the bolt has a color-case hardened finish, and has been peened and phosphated; an optional bolt has a triple-tempered surface, which is refined by hand and hardened and peened. The bolt's finish is a thin-but-dense chrome plating. The ejection port, learning from lessons past, is designed specifically for positive ejection of the 6.5mm Grendel round. Most stocks for the Grendel are M4-type sliding stocks, though some versions have fixed A2-type stocks.

The Grendel Advantage is essentially equivalent to the original Grendel, using a choice of 19.5-inch of 24-inch barrels. Roughly equivalent in size, but in most ways, the Advantage is more related to the "made over" Grendels. Many of the Advantage's features are the same as those of the Tactical. Advantage barrels are made from stainless steel, and are chromed inside the bore. They are of heavy profile and match-quality. Though essentially designed as a rifle just short of a DMR-type rifle, the Advantage also has handguards with four-point MIL-STD-1913 rails. Another rail is above the receiver, and a low-profile gas block with folding BUIS. Also standard with the Advantage is a light alloy bipod designed to be adjustable for height, cant, and allowing for 20 degrees on either side of pivoting. The Advantage does come equipped with a low-power scope (about 3-5x). The Advantage is also known as the AWS (Advantage Weapon System).

The Grendel GDMR (Grendel Designated Marksman Rifle) is in fact an actual Designated Marksman Rifle. The core of the rifle is as per its predecessors, but the trigger is a match-quality trigger, and the 16, 20, or 24-inch barrels are match-quality, floating, and of a heavy profile. The Grendel GDMR has only one MIL-STD-1913 rail above the receiver and another very short rail above the gas block; the GDMR also has rear and front folding BUIS. The GDMR comes with a bipod as per the Advantage above. Along with a telescopic sight which is normally of 2.5-7x power. Construction is generally heavier and most parts are hand-fitted.

The Grendel GSR (Grendel Sniper Rifle) is sort of like the GDMR, but more so. It was designed from the ground up as a sniper rifle. The GSR uses a fixed A2-type stock, with a heavier buffer to somewhat reduce recoil. The chromed-bore barrel features precision-cut rifling, with match-quality, free-floating, heavy-profile barrels; though they are normally tipped with an A2-type flash suppressor, a plain barrel with a target crown can also be had. These barrels can be 20 inches long, 24 inches, or an astounding 28 inches in length. A light alloy bipod (usually one of the Harris makes) is standard; this bipod is normally chosen with adjustments for can, height, and some amount of pivoting in mind. Though it is a semiautomatic rifle, the GSR has a charging handle attached to the bolt instead of the normal AR-type rear-mounted bolt handle. The handguards are composite and round but otherwise plain, and are well ventilated. The upper receiver retains its MIL-STD-1913 rail; BUIS are not normally sold with the GSR. The trigger pack is a match-quality pack. One of several scopes are sold with the GSR.

There are also some versions of the Grendel that are meant for, shall we say, the more discriminating buyer. The Grendel Entry has a 19.5-inch stainless steel barrel that is match-grade and free floating. The buyer may specify a standard Alexander Arms barrel or a Shilen barrel. The upper receiver has a MIL-STD-1913 rail, but a round composite handguard. Finishes include black and a variety of camouflage patterns. Though meant primarily for civilian hunters, it also has a barrel length that lends itself to use by a designated marksman or a sniper.

The Grendel Overwatch (also known as the Grendel OWS) is, as the name indicates, a rifle designed for Designated Marksmen, and uses a longer 24-inch, stainless steel, free floating, match-grade barrel. The barrel may be tipped with a target crown or a flash suppressor (or at the buyer's option, a muzzle brake or even a silencer/suppressor). The barrel may be an Alexander Arms barrel or a Shilen barrel. As with the Entry (and indeed, most of these premium Grendels), the finish may be basic black or one of a variety of camouflage patterns. The handguards are virtually identical to those of the Entry, but is made of composite material; the upper receiver retains its MIL-STD-1913 rail; the Overwatch also has a low-profile gas block topped with a small section of rail (generally for use with a BUIS sight). In design, it is similar to the Grendel GDMS with a 24-inch barrel, but in details it is very different.

Alexander Arms also makes gas-piston-driven versions of the Tactical. For game purposes, these are identical to the Tactical; however, as far upkeep is concerned, the GM may want to keep that in mind.

Magazines for the new version of the Grendel are standard AR-15/M16 magazines with the proper guts to hold and feed the 6.5mm Grendel round. This allows for more magazine capacity choices.

Twilight 2000 Notes: The Grendel does not exist in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
Grendel (19.5" Barrel)	6.5mm Grendel	3.07 kg	10, 17	$1190
Grendel (24" Barrel)	6.5mm Grendel	3.19 kg	10, 17	$1328
Grendel Tactical (10.5" Barrel)	6.5mm Grendel	2.95 kg	5, 10, 17, 20, 30	$609
Grendel Tactical (14.5" Barrel)	6.5mm Grendel	3.07 kg	5, 10, 17, 20, 30	$650
Grendel Tactical (16" Barrel)	6.5mm Grendel	3.28 kg	5, 10, 17, 20, 30	$665
Grendel Advantage (19.5" Barrel)	6.5mm Grendel	3.62 kg	5, 10, 17, 20, 30	$1386
Grendel Advantage (24" Barrel)	6.5mm Grendel	4.12 kg	5, 10, 17, 20, 30	$1515
Grendel GDMR (16" Barrel)	6.5mm Grendel	4.2 kg	5, 10, 17, 20, 30	$1265
Grendel GDMR (20" Barrel)	6.5mm Grendel	4.64 kg	5, 10, 17, 20, 30	$1405
Grendel GDMR (24" Barrel)	6.5mm Grendel	4.9 kg	5, 10, 17, 20, 30	$1539
Grendel GSR (20" Barrel)	6.5mm Grendel	4.24 kg	5, 10, 17, 20, 30	$1408
Grendel GSR (24" Barrel)	6.5mm Grendel	4.46 kg	5, 10, 17, 20, 30	$1543
Grendel GSR (28" Barrel)	6.5mm Grendel	4.63 kg	5, 10, 17, 20, 30	$1676
Grendel Entry	6.5mm Grendel	3.63 kg	5, 10, 17, 20, 30	$689
Grendel Overwatch	6.5mm Grendel	3.89 kg	5, 10, 17, 20, 30	$940

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Grendel (19.5")	SA	3	1-2-Nil	5/6	2	Nil	71

With Bipod	SA	3	1-2-Nil	5/6	1	Nil	91
Grendel (24")	SA	3	1-2-Nil	6/7	2	Nil	88
With Bipod	SA	3	1-2-Nil	6/7	1	Nil	114
Grendel Tactical (10.5" Barrel)	SA	3	1-1-Nil	3/5	3	Nil	29
Grendel Tactical (14.5" Barrel)	SA	3	1-1-Nil	4/5	3	Nil	48
Grendel Tactical (16" Barrel)	SA	3	1-2-Nil	4/6	3	Nil	55
Grendel Advantage (19.5" Barrel)	SA	3	1-2-Nil	6	3	Nil	73
With Bipod	SA	3	1-2-Nil	6	1	Nil	95
Grendel Advantage (24" Barrel)	SA	3	1-2-Nil	7	3	Nil	91
With Bipod	SA	3	1-2-Nil	7	2	Nil	118
Grendel GDMR (16" Barrel)	SA	3	1-2-Nil	6	2	Nil	59
With Bipod	SA	3	1-2-Nil	6	1	Nil	77
Grendel GDMR (20" Barrel)	SA	3	1-2-Nil	7	2	Nil	77
With Bipod	SA	3	1-2-Nil	7	1	Nil	101
Grendel GDMR (24" Barrel)	SA	3	1-2-Nil	8	3	Nil	94
With Bipod	SA	3	1-2-Nil	8	2	Nil	122
Grendel GSR (20" Barrel)	SA	3	1-2-Nil	7	2	Nil	78
With Bipod	SA	3	1-2-Nil	7	1	Nil	101
Grendel GSR (24" Barrel)	SA	3	1-2-Nil	8	3	Nil	94
With Bipod	SA	3	1-2-Nil	8	2	Nil	123
Grendel GSR (28" Barrel)	SA	4	1-2-Nil	8	3	Nil	94
With Bipod	SA	4	1-2-Nil	8	2	Nil	146
Grendel Entry	SA	3	1-2-Nil	7	3	Nil	74
Grendel Overwatch	SA	3	1-2-Nil	7	3	Nil	110

Alexander Arms Genghis

Notes: This is basically an AR-15 carbine modified to fire 5.45mm Kalashnikov ammunition (which Alexander Arms calls the .21 Genghis round; Alexander Arms' round does differ in several ways from the 5.45mm Kalashnikov, but not in any way that can be simulated with Twilight 2000 game mechanics). The Genghis features a 16-inch barrel; it is not typically equipped with a flash suppressor, being designed primarily for the civilian market, but does have a MIL-STD-1913 rail instead of a carrying handle, and is built to otherwise meet or exceed military and police specifications. (Versions with carrying handles instead of MIL-STD-1913 rails are also available.) Ten-round magazines are normally supplied with the Genghis, but modified AR-15/M16 magazines with larger capacities are also available.

It should be noted that of the time of this writing (Aug 2012), the Genghis is no longer found on the Alexander Arms web site.

Twilight 2000 Notes: This rifle is not available in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
Genghis	5.45mm Kalashnikov	3.4 kg	10, 20, 30	$509

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Genghis	SA	3	1-Nil	5	2	Nil	44

Alex Pro Econo Carbine

Notes: This carbine is designed to be inexpensive in price, but not cheap in quality. Though it lacks many of the features of other ARs, it is not a bare-bones carbine, with some nice add-ons and features.

The 16-inch military-profile barrel is phosphated, and finished in M16 Nitride. It is tipped with an AR-15A2-type birdcage flash suppressor. The barrel is of 4140CM steel. The chambering uses a .223 Wilde chamber, which means that it can use military and civilian ammunition interchangeability. It uses a carbine-length gas system (direct impingement). The trigger is a single-stage Milspec trigger, which is like a standard AR trigger, but has less of a pull weight. The bolt carrier group is finished in slick nickel/boron which is otherwise Milspec.

It uses a Magpul MOE handguard, with a design similar to an AR-15A2 pistol grip. The handguard is roughly rectangular and has several cooling slots. It is fairly short, and there is a long length of exposed barrel. It has a six-position M4-type sliding stock. The Econo is designed specifically for Magpul P-MAG polymer magazines, it can also feed from standard AR-type metal magazines or polymer magazines.

The Econo comes with a Vortex Strikefire II red dot sight; though it does not come with iron sights, they are available from Alex Pro Firearms, and it can mount almost any sights and optics on its receiver-top Picatinny rail. Though it has no handguard rails, the front of the handguard has a short length of rail for a BUIS front sight or laser or white light device.

The Alex Pro 5.56mm Carbine Rifle is similar to the Econo Carbine, but fires only military ammunition, and is even less expensive (RL) than the Econo Carbine. It has a skeletonized Magpul MOE sliding stock, and a 12.5-inch APF T-MOD handguard with a long Picatinny rail on top continuous with the rail atop the receiver. At the front of the handguard at the bottom is a very short length of Picatinny rail, meant to be used with optics such as a laser or flashlight, or accessories like a bipod. It has BUISs, but no red-dot sight. A version of this rifle is finished in one of several colors, ranging from simple Flat Dark Earth to a camouflage pattern or even an American flag job.

The Tactical Varmint is designed not only for varmint shooting, but competition. It used the .223 Wilde chamber of the Econo

Carbine, with the nickel/boron treatment of the bolt carrier group, but has an 18-inch medium contour barrel. It has a 14-inch Quad-Rail handguard, with a top full-length Picatinny rail, continuous with the receiver rail, and further short lengths of rail on each side at the rear end of the handguard and one short length at the front. This rifle too comes with the red dot sight. A variant of the Tactical Varmint, the Long Range varmint, has a 24-inch heavy contour tipped with a target crown instead of a flash suppressor., with the bolt carrier based on the AR-10 instead of the AR-15. The gas system is rifle-length. The trigger is a CMC 3.5-pound trigger. The Field has a barrel of 20 inches, and is a 4140cm medium contour barrel. The Long Range Varmint and the Field do not have the red dot sights.

Weapon	Ammunition	Weight	Magazines	Price
Econo Carbine	5.56mm NATO	3.36 kg	5, 10, 20, 30	$721
5.56mm Carbine Rifle	5.56mm NATO	3.18 kg	5, 10, 20, 30	$577
Tactical Varmint	5.56mm NATO	3.63 kg	5, 10, 20, 30	$748
Long Range Varmint	.243 Winchester	4.16 kg	5, 10, 20, 30	$817
Econo Field	.243 Winchester	4.01 kg	5, 10, 20, 30	$767

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Econo Carbine	SA	3	1-Nil	4/6	2	Nil	40
5.56mm Carbine Rifle	SA	3	1-Nil	4/6	2	Nil	40
Tactical Varmint	SA	3	1-Nil	4/6	2	Nil	54
Long Range Varmint	SA	3	2-Nil	6/7	2	Nil	69
Econo Field	SA	3	2-Nil	5/6	2	Nil	53

American Tactical Industries AT-47

Notes: ATI is actually an American company, however,though most of the parts are sourced from Zastava in Serbia through German Sport Guns, the AT-47 is assembled in Summerville, South Carolina, and has a US-made barrel and receiver, so determining what nationality the AT-47 is was a bit difficult. The receiver is milled and is made of 4140 hardened steel which has a Parkerized finish. The rear sight is adjustable for elevation, and the front for elevation and windage; oddly enough, the AT-47 also has a grenade sight for rifle grenades, though the barrel has no attachment for launching rifle grenades. The AT-47 also has bayonet lugs, though it is not sold with a bayonet. It can use steel, light alloy, or polymer magazines; the one supplied with the rifle from the factory is polymer. The internals have been appropriately de-miled; the parts were kept together has a parts kit until their assembly in the US. Furniture is beech except for the polymer pistol grip, with a rubber non-slip cap on the butt. An underfolding stock is an option. The barrel is 16.5 inches, and the barrel is not chrome-lined, like an actual AK-type rifle (except the newer ones). The barrel is tipped by an AK-74-type brake/flash suppressor. Controls are all AK.

American Tactical also makes a .22 Long Rifle version. Changes are those appropriate to the new caliber, such as a change to blowback operation and special magazines designed to look like AK magazines. The .22 version is otherwise the same as the AT-47 in game terms. Weight is nearly identical, but the buttstock is a bit shorter than an AT-47; the rifle is intended as a trainer for both teenagers and adults for an AK-type platform.

Weapon	Ammunition	Weight	Magazines	Price
AT-47 (Fixed Stock)	7.62mm Kalashnikov	3.63 kg	5, 10, 20, 30, 40, 75D	$845
AT-47 (Folding Stock)	7.62mm Kalashnikov	3.63 kg	5, 10, 20, 30, 40, 75D	$875
AT-47 22	.22 Long Rifle	3.5 kg	10	$295

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AT-47 (Fixed Stock)	SA	4	2-Nil	6	3	Nil	47
AT-47 (Folding Stock)	SA	4	2-Nil	5/6	3	Nil	47
AT-47 22	SA	1	Nil	6	1	Nil	34

American Tactical Industries Omni Hybrid

Notes: The Omni Hybrid is an AR-15 clone; however, it is unusual on several counts. It is a switch upper/barrel weapon, but one of the choices for caliber is unusual -- .410 2.5-inch shells, which can be loaded into an AR-15 magazine (though ATI does not recommend this, asking buyers to use the magazines they designed for this caliber). The .410 chambering, however, is also available as a purpose-built shotgun (this is how I'm statting it here), an upper, or a barrel kit. Much of the receivers and the charging handle and trigger guard are actually made of high-strength polymer (and this is getting complaints from shooters who shoot in very cold weather – the polymer can get brittle in very cold weather).The polymer is in fact backed up by aluminum rods in strategic places. The front sight is also made of polymer. The upper receiver is flattopped and has a Picatinny Rail running from above the charging handle housing to the front of the handguard, and there are two short ones on the side. The stock is an M4-type sliding stock, and the handguards are round in profile.

The 5.56mm version is essentially a stock AR-15, with the differences I noted above.

However, all is not rosy with the Omni Hybrid, ranging from bad fit and finish to poor accuracy with anything but standard 55-grain bullets. Reports say that that the Omni Hybrid will not always lock back after the last shot. Some say the controls are loose and sometimes get knocked or vibrated out of position. The magazines tend to sit a bit loose in the magazine well.

So is it a good weapon, or a novelty? It needs more user reports to tell for sure. It *will* do what it is designed to do – you just may have some problems with it.

Weapon	Ammunition	Weight	Magazines	Price
Omni Hybrid	5.56mm NATO	2.95 kg	5, 10, 20, 30	$590
Omni Hybrid	.410 Gauge 2.5”	3.02 kg	3, 6, 12, 16	$278

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Omni Hybrid (5.56mm)	SA	3	1-Nil	4/5	3	Nil	40
Omni Hybrid (.410)	SA	2/1d6x8	1-Nil/Nil	4/5	2	Nil	23

Anderson M4 Carbine

Notes: The Anderson M4 Carbine, an AR clone, is advertised as a “no-lube” carbine; the reason is that is permanently treated with R585, a process that bonds calcium into the metal at the molecular metal. (I have found through experience that rifles that say they are “no lube” need lubing; pretty much every rifle needs some level of lubing, so I am suspicious of Anderson’s claims.) The receiver is made of 7075-T6 aluminum (the standard for ARs), as stated, bonded to calcium molecules. The receiver halves have additionally a hard anodized 8625 F finish. The receiver top has a monolithic Picatinny rail, and the Zombie Green handguard has an upper Picatinny rail and a bottom add-on half-length rail (as sold). The handguards are round and polymer, with handguard-length rows of cooling slots and attachment points for Picatinny or Weaver rails on three sides (the top already has a rail). The rifle has no mounted sights, though AR-15-type BUIS are provided. The stock is a Magpul MOE telescoping stock, and the pistol grip is a Hogue grip. The barrel is 16 inches, has a heavy profile, is of 4140 steel, is in a free-float handguard, and is tipped with an Anderson Phantom flash suppressor shaped for blasting rebar. The gas block is low profile and is under the end of the handguard. The M4 Carbine is not sold with magazines included, but any sort of 5.56 NATO (or 6.8mm SPC) magazines are usable. The 5.56mm version has a 16-inch barrel, while the .410 gauge version has an 18.5” barrel. The shotgun version does not have a flash suppressor, and is not made for interchangeable chokes.

Weapon	Ammunition	Weight	Magazines	Price
M4 Carbine 5.56	5.56mm NATO	2.86 kg	5, 10, 20, 30	$597
M4 Carbine 6.8	6.8mm SPC	2.86 kg	5, 10, 20, 30	$738

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
M4 Carbine 5.56	SA	3	1-Nil	4/6	3	Nil	42
M4 Carbine 6.8	SA	3	1-2-Nil	4/6	3	Nil	57

AR-57

Notes: Produced by a company called, appropriately enough, AR57, the AR-57 is an AR-15A2 with a new upper receiver and barrel which allows the weapon to fire the 5.7mm FN cartridge. Certain parts of the AR-15A2 (or A3) version (with or without a sliding stock) are required to use this modification; it will not work on a stock AR-15 or AR-15A1, as it will not cycle properly, and essentially produces a bolt-action rifle. The new upper receiver comes in a version with 16.04-inch barrel or (where legal) an 11-inch-barrel SBR configuration. Both FNH and AR57 produce proper magazines for use with this configuration; though aftermarket magazines are produced by ATI and KCI, these magazines have proven prone to failure in the AR-57 conversion. The 5.7mm FN round performs quite well in the longer barrels, increasing range, stopping power and penetration (unfortunately, not measurable in Twilight 2000 terms), and the resulting conversion is slightly lighter than the standard AR-15A2 or A3. The AR-57 conversion is primarily sold as an upper receiver set and magazine well conversion and not as a complete rifle.

Weapon	Ammunition	Weight	Magazines	Price
AR-57 (Fixed Stock, 16.04” Barrel)	5.7mm FN	2.15 kg	10, 20, 30	$425
AR-57 (Fixed Stock, 16.04” Barrel)	5.7mm FN	2.15 kg	10, 20, 30	$445
AR-57 (Fixed Stock, 11” Barrel)	5.7mm FN	1.95 kg	10, 20, 30	$372
AR-57 (Fixed Stock, 11” Barrel)	5.7mm FN	1.95 kg	10, 20, 30	$392
AR-57 16.04” Upper	N/A	0.82 kg	N/A	$204
AR-57 11” Upper	N/A	0.75 kg	N/A	$179

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AR-57 (Fixed Stock, 16.04”)	SA	2	1-Nil	5	3	Nil	42
AR-57 (Fixed Stock, 16.04”, HV)	SA	2	1-1-Nil	5	3	Nil	50
AR-57 (Folding Stock, 16.04”)	SA	2	1-Nil	4/5	3	Nil	42
AR-57 (Folding Stock,	SA	2	1-1-Nil	4/5	3	Nil	50

16.04", HV)							
AR-57 (Fixed Stock, 11")	SA	2	1-Nil	4	2	Nil	25
AR-57 (Fixed Stock, 11", HV)	SA	2	1-1-Nil	4	2	Nil	30
AR-57 (Folding Stock, 11")	SA	2	1-Nil	3/4	2	Nil	25
AR-57 (Folding Stock, 11", HV)	SA	2	1-1-Nil	3/4	2	Nil	30

Armalite AR-18

Notes: This weapon was designed in the 1970s with experience gained from the M16 series. Armalite found that there were a lot of countries that wanted to license-produce the M16, but did not have the modern facilities required to produce the more complicated M16. The AR-18 was designed to be simple and cheap to produce, as well as being relatively "soldier-proof." The US Army tested it, but did not produce it; it was then licensed to Howa Machinery in Japan, NWM in the Netherlands, and Sterling in Great Britain. They also got virtually no military contracts, and Sterling sold its license to a company in the Philippines (who also got no military sales). Much more lucrative was a semiautomatic civilian version, the AR-180; tens of thousands of AR-180s were sold to civilians in various countries. The AR-18S is a shortened AR-18, similar in concept to the CAR15. Bayonets and rifle grenades can be used, if the flash suppressor is removed.

A later civilian version, the AR-180B, is somewhat different than the standard AR-180 and bears some elaboration. The AR-180B uses a lower receiver made from polymer strengthened with a steel liner. The shape of this lower receiver mimics the original lower receiver exactly, so that an upper of an AR-180 may be placed on a lower from an AR-180B and vice versa. The trigger group of the AR-180B is borrowed from the AR-15 instead of being the original AR-180 design. The front and rear sights are also borrowed from the AR-15A2, though the protective ears are different from those of the AR-15A2, and there is no elevation adjustment wheel on the AR-180B (elevation adjustments are done on the front sight). The scope mount is of original AR-180 design. There is a new design magazine well which allows the use of AR-15, M16, and AR-18 magazines. The magazine release button is thus the same as on an AR-15, and there is a small protrusion to prevent its being pressed accidentally. The AR-15 has a sort of "half-pepperpot" muzzle brake instead of the original flash suppressor. The barrel is slightly longer at 19 inches.

Twilight 2000 Notes: Starting in 1995, production of military AR-18s started again in the Philippines and Great Britain, who managed to sell a large amount of them to African and Southeast Asian countries. Sterling later produced more for issue to local militia units loyal to the Crown. NWM in the Netherlands also produced some AR-18s, and they were used by Dutch and Luxembourg resistance fighters against the French. In the US, many as Russian or Mexican soldier (or sometimes, Milgov, CivGov, or New American soldier) discovered that their enemy was a local militia soldier armed with an AR-180 converted to automatic fire.

Merc 2000 Notes: This was surprisingly common in issue to people working for US or British intelligence, due to the problem with tracking down exactly who made the weapon, and the ease with which its parts could be made.

Weapon	Ammunition	Weight	Magazines	Price
AR-18	5.56mm NATO	3.04 kg	20, 30, 40	$608
AR-18S	5.56mm NATO	2.78 kg	20, 30, 40	$524
AR-180B	5.56mm NATO	2.72 kg	5, 10, 20, 30, 40	$639

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AR-18	5	3	1-Nil	5/6	2	6	48
AR-18S	5	2	1-Nil	3/4	2	6	19
AR-180B	SA	3	1-Nil	6	2	Nil	51

Armalite Defensive Sporting Rifles

Notes: This is a collection of three rifles primarily designed for home defensive, but can double as hunting rifles. They are similar in design and philosophy. The RL price is rather inexpensive (though of course the game price may not concur). The DSR is based on Armalite's M15 series.

The DEF-10 is a 5.56mm version with a MIL-STD-1913 rail atop the receiver and another very short one atop the gas block. It has round M4-length handguards and an M4-type 6-position sliding stock. The upper and lower receivers are also Milspec. Though it ships with a Magpul 20-round polymer magazine, the DEF-10 can take other sorts of military, steel, and polymer magazines. The DEF-10 does not come with BUIS; you must buy them separately. A variant, the DEF-10F, has a conventional A2 front sight instead of the railed gas block. Both are identical for game purposes. The barrel is 16 inches and tipped by an A2 flash suppressor. It is made from 4140 chrome/moly steel, and the barrel is hand-lapped twice. The bore is hard-chromed. The barrels have been compared in quality to Krieger-made barrels, but are all Armalite. The barrels are free-floating and Melonite-finished. The trigger is two-stage, but is very crisp and without a lot of takeup. However it is stiff: Robert Jordan, a noted gun expert, has measured it at 10.94 pounds primary pull weight, and many shooters trade out the trigger block for a better one. Controls are not ambidextrous, unless you include the charging handle. Felt recoil is manageable, though muzzle jump is pronounced. Some have experienced the rounds sticking on what appears to be a burred feed ramp; however, this is easy to fix, if you know what you're doing.

The DSR-10 is essentially the same as the DEF-10, but in 7.62mm. It does not have a lot of extra features, similar to the DEF-10. Barrels, handguards, Mil-STD-1913 rails, are all similar, if not identical.

Though it is sort of a secret at Armalite, it is rumored that the DEF-10 and DSR-10 can be fitted with an M-203 grenade launcher.

The DSR-10 is technically a Battle Rifle, but is included here for completeness.

Weapon	Ammunition	Weight	Magazines	Price
DEF-10	5.56mm NATO	2.88 kg	5, 10, 20, 30, 35	$591
DSR-10	7.62mm NATO	3.58 kg	5, 10, 20, 25	$1021

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
DEF-10	SA	3	1-Nil	4/6	3	Nil	42
DSR-10	SA	4	2-3-Nil	5/7	4	Nil	47

Armalite LEM15A4

Notes: Unlike most of ArmaLite's AR-15 clones and models, the LEM15A4 was designed with law enforcement in mind, and its sale to US civilians is restricted. It is very much like a semiautomatic version of the M16A4, with its flattop receiver and MIL-STD-1913 sight rail; however, the barrel is only 16 inches, and is heavier than that of the M16A4. The handguards are specially made; they are the same length as an M4's handguards, and include a mount for a full-sized flashlight on top and offset to the left. The LEM15A4 comes with an Elcan Optical Sight, but will accept any sort of NATO-compatible sight or scope.

Twilight 2000 Notes: This weapon could sometimes be found as a substitute standard among US troops, particularly among those raised by CivGov forces after the November Nuclear Strikes. Most of these were modified for automatic fire.

Weapon	Ammunition	Weight	Magazines	Price
LEM15A4	5.56mm NATO	3.18 kg	7, 10, 20, 30	$739

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
LEM15A4	SA	3	1-Nil	4/5	2	Nil	47

Armalite M15

Notes: The M15 is essentially a modernized version of the AR-15, and may also be regarded to some extent as a smaller version of Armalite's New AR-10 Series. The M15 comes in four basic versions: the M15A2, basically very similar to the AR-15A2, but with a heavy barrel, muzzle brake, carrying handle a la AR-15, and round handguards and a stock similar to those of the AR-15A2. The standard barrel is 20 inches, but there is also a carbine version with a 16-inch barrel. The M15A4 is basically the same weapon as the M15A2, but uses a flattop upper receiver with a MIL-STD-1913 rail. The M15A4 is meant to be used with various optics, but there is a very short MIL-STD-1913 rail in front of the handguards, and iron sights may be attached to the two rails. The A-15A4 is a little lighter than the M15A2. The M15A4(T) is a target version of the M15A4; the rifle version uses a 24-inch heavy barrel which is target crowned and designed for accuracy, and it has no muzzle brake or flash suppressor. The upper receiver is flattop and has a MIL-STD-1913 rail, and the handguards are round and made from aluminum. There is also a carbine version of this weapon; this has the heavy target barrel, but it does have a muzzle brake and the barrel is only 16 inches. The trigger of these two versions is a National Match two-stage trigger. The M15A2 and A-4 Carbines are special models designed for military and police use; they may have automatic fire capability as options, use an M4-style folding stock, and may have a 14.5-inch or 16-inch barrel with a flash suppressor instead of a muzzle brake. The M15A4 LE Carbine is flattop; the M15A2 LE Carbine has a carrying handle.

The M15 Light Tactical Carbines (LTCs) are…well…*light*. They are perhaps the lightest full-sized AR carbines on the market. This is partially due to the skeletonized KeyMod handguards, a low-profile gas block, and to lighter, yet stronger metal. Their 16-inch barrels are free-floating in their handguards, and have the standard thick-thin government M16 profile. They are made of Chrome/Moly steel, and are tipped by an A2-type flash suppressor that sits on threads and can be replaced. They have a MIL-STD-1913 rail above the receiver, connected to one above the handguards. The finish is anodized for the upper and lower receivers and a manganese phosphated barrel.

Weapon	Ammunition	Weight	Magazines	Price
M15A2 Rifle	5.56mm NATO	3.67 kg	10, 20, 30	$655
M15A2 Carbine	5.56mm NATO	3.18 kg	10, 20, 30	$614
M15A4 Rifle	5.56mm NATO	3.58 kg	10, 20, 30	$655
M15A4 Carbine	5.56mm NATO	3.18 kg	10, 20, 30	$614
M15A4(T) Rifle	5.56mm NATO	4.17 kg	10, 20, 30	$653
M15A4(T) Carbine	5.56mm NATO	3.22 kg	10, 20, 30	$618
M15A2/A4 LE Carbine (14.5" Barrel)	5.56mm NATO	3.18 kg	10, 20, 30	$569
M15A42/A4 LE Carbine (16" Barrel)	5.56mm NATO	3.18 kg	10, 20, 30	$585
M15 LTC	5.56mm NATO	2.72 kg	10, 20, 30	$596

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
M15A2 Rifle	SA	3	1-Nil	6	2	Nil	57
M15A2 Carbine	SA	3	1-Nil	5	2	Nil	41
M15A4 Rifle	SA	3	1-Nil	6	2	Nil	57
M15A4 Carbine	SA	3	1-Nil	5	2	Nil	41
M15A4(T) Rifle	SA	3	1-Nil	7	2	Nil	73
M15A4(T) Carbine	SA	3	1-Nil	6	2	Nil	43

M15A2/A4 LE Carbine (14.5" Barrel)	5	3	1-Nil	4/5	2	6	34
M15A2/A4 LE Carbine (16" Barrel)	5	3	1-Nil	4/5	2	6	40
M15 LTC	SA	3	1-Nil	4/6	3	Nil	42

Arms Tech Compak-16

Notes: The idea behind this weapon was to produce a compact version of the M16 while avoiding the massive muzzle blast and firing signature that such a weapon normally produces. To this end, Arms Tech used a standard M16 lower receiver and paired it with a modified upper receiver using a specially designed barrel shroud/muzzle brake. The standard buttstock was replaced with a sliding wire stock, and the carrying handle was replaced with a MIL-STD-1913 rail (the stock Compak-16 comes with an Occluded Eye Sight licensed-produced from a South African design). The cyclic rate has also been reduced to 600 rpm (though this has no effect game-wise). The rifling allows for the effective use of either SS-109-type or M193-type ammunition, as well as subsonic rounds. Arms Tech has also designed a silencer for use with the Compak-16, which is easily attached and removed, as well as one which replaces the barrel assembly and becomes an integral part of the Compak-16.

Twilight 2000 Notes: Though it had little success with the military or police, survivalists and militia members in the US liked the Compak-16, especially female members.

Merc 2000 Notes: This is mostly a civilian niche weapon, though there has been some experimentation by the US military, the CIA, and various Federal agencies.

Weapon	Ammunition	Weight	Magazines	Price
Compak-16	5.56mm NATO	2.5 kg	20, 30	$873

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Compak-16	5	2	1-Nil	2/4	2	4	23

Atlantic Arms AA Pol47

Notes: As the designation might indicate to some, the AA Pol47 is an AK-47-type rifle built mostly using Polish parts kits, with enough American-made parts (primarily the barrel) so as to not run afoul of US firearms regulations. The Polish parts kits parts have been cleaned up by careful machining and hand work.

The 16-inch Green Mountain barrel is chrome-lined, unlike most AK-47s, and the rifle has a nickel-plated bolt and carrier. The barrel is tipped by Tapco slant muzzle brake, baffled at the top, and designed to allow the fitting of a suppressor without removing the brake. (Many shooters do not think that the muzzle brake takes away any barrel climb.) The brake is removable, revealing a standard AK-47 muzzle, but a suppressor cannot be attached without the muzzle brake in place. The Pol47 comes with a standard AK-type optics mount. The Pol47 has a manganese phosphate finish to the metalwork, including the exterior of the barrel and the muzzle brake. It uses standard wooden stocks and handguards; depending on the parts kit, the type of wood may vary, but is typically beech or walnut. The wood color and pattern are also essentially arbitrary; the wood is refinished by Atlantic Arms, but may show signs of usage, and Atlantic Arms will only guarantee that the stocks and forearms are from Fair to Good condition. The pistol grip is wood, though it may not be the same kind of wood as the stock and forearm; it will be, however, roughly the same color as the stock and forearm. Most buyers say that the fit and finish are from good to excellent. The Pol47 does have a bayonet lug, as well as sling swivels. Atlantic Arms tests the assembled rifles, including laser boresighting and by putting rounds through the rifle.

The RL cost of this rifle is very reasonable.

Weapon	Ammunition	Weight	Magazines	Price
AA Pol47	7.62mm Kalashnikov	3.18 kg	10, 20, 30, 40, 75D	$839

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AA Pol47	SA	4	2-Nil	6	3	Nil	44

Atlantic Arms AKX-9PT

Notes: This 9mm Carbine is also available in pistol form, though the pistol is much more rare. This carbine was first shown at the 2017 SHOT Show, and it is only beginning sales at the time of this writing (early-July 2017). At the time, it was placed in the Coming Weapons display. It uses primarily polymer furniture, except for the Manticore metal-covered-in-polymer folding stock. The stock is attached via a trunnion, which allows it to be removed and replaced with a stock of the shooter's choice. Operating handles, paddles, charging handle, and buttons remain AK, though the operation is changed to blowback, with no gas piston. The gas block is simulated. The magazine well is modified to take the 9mm magazines, and magazines directly into the well. Sights are AK. The bolt hold-open device is a departure from the AK series. The AKX-9PT was designed to use Colt 9mm submachinegun magazines; steel, light alloy/aluminum, and polymer versions are available. The AKX-9PT is an SBR, with an 11.125-inch barrel tipped with a long flash suppressor, which is removable and threaded, and replaceable with a different muzzle device. (There is also a non-SBR version, which has a 16.125-inch barrel.) The carbine has a side rail for optics; this side rail can be equipped with a MIL-STD-1913 or Weaver rail interface. Finish is in black, with Black KG Gun Kote for the metal parts and black polymer for the polymer parts.

Weapon	Ammunition	Weight	Magazines	Price
AKX-9PT (Short Barrel)	9mm Parabellum	3.08 kg	20, 30, 32	$252

AKX-9PT (Long Barrel)	9mm Parabellum	3.39 kg	20, 30, 32	$302

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AKX-9PT (Short Barrel)	SA	2	1-Nil	2/4	1	Nil	24
AKX-9PT (Long Barrel)	SA	2	1-Nil	3/5	1	Nil	36

Auto-Ordnance M1 Carbine

Notes: The M1 Carbine (in development referred to the Winchester Light Rifle) was designed in response to a 1940 US Army request for a weapon to replace the pistol and submachinegun in rear area troops. However, a lot of M1 Carbines were actually used by infantry leadership personnel, paratroopers, commanders, and suchlike; it was modified, reworked, and put into uses far different than it's intended role as a weapon for support troops. It continued in service until well into the Vietnam War, where it was often issued to ARVN troops and strikers working for US Army Special Forces. Most troops in World War 2 and Korea took the M1 Carbine only if no other weapon them; however US Marines and US Army Paratroopers actually preferred the M1 Carbine due to its light weight of both weapon and ammunition. The weapon was more effective than an M1911, but still a lighter rifle and allowed them to carry more often. Marines preferred the M1; paratroopers preferred the M1A1. Before military production stopped, almost 6.5 million of them had been built in the US and Italy (by Beretta). M1 Carbines are still in use in 2010; they were sold and given away by the US government to civilians, bought by police departments, and given to Third World armies supporting the US cause during the Cold War. There are still some civilian arms companies manufacturing the M1 in small numbers, and they also have been modified for many different calibers by both manufacturers and individual weaponsmiths. Today, virtually all M1 Carbines are in the hands of private owners; it seems to have never lost its cachet. As with the M1 Garand, the M1 Carbine was produced by a large number of companies during World War 2, and later copies were also produced by several countries (both licensed and unlicensed manufacture).

There were four variants of the M1 Carbine built by the US government: the basic M1, a standard format rifle; the M1A1, an M1 with a folding metal stock built for World War 2 paratroopers; the M-2, a selective-fire version of the M1; and the M-3, an M1 built specifically to mount the then-new IR sniper scopes being experimented with at the end of World War 2. (Only 2100 M-3's were made, and most of them were converted back to the M1 specification later.) Construction of the M1 was deliberately kept as simple as possible without sacrificing quality, and most World War 2-era M1 Carbines will still function today with standard maintenance. The balance is good, and the 18-inch barrel wears well despite a relatively long length of exposed barrel. The stocks have a space for a small cleaning kit in them accessed through the buttplate, except on the M1A1, where an abbreviated version was built into a part of the folding stock. Various changes were made during production to simplify production; most of these alterations revolved around the amount of wood used on the handguards and their configuration, though the magazine catch was also modified from a button to a lever. Some versions also had a muzzle device for the launching of rifle grenades. The M1 Carbine was well liked by most troops, despite complaints about its relatively-anemic cartridge.

In 2005, Auto-Ordnance began making a new version of the M1 Carbine, and later introduced three other versions. Their version, the AOM130, is not an exact reproduction; the stock is of stained birch instead of the linseed oil-finished walnut of the original version. The Auto-Ordnance Carbine has some later M-2-style features, such as a safety which consists of a rotary switch instead of a crossbolt safety; an M-2 style bolt instead of the original "flat" bolt (though it does not contain an auto sear); the rear sight is of the improved M-2 variety; the front sight is protected instead of being open; and the weapon has a bayonet lug. Furthermore, the rear sight is more adjustable than the standard M-2 sight. There is also a slight weight difference; the Auto-Ordnance M1 Carbine is heavier than the standard M1 Carbine. The AOM130 is shipped with 15-round magazines, but can also take 30-round magazines (if you can find one). The AOM140 is identical, except for a modification that allows it to take only a 10-rund magazine specially designed for it; it is designed for sale in California. The 10-round magazine will not fit in any other of the new Auto-Ordnance M1 Carbine versions. For game purposes, it is otherwise identical to the AOM130.

The other versions are the AOM150, which is a copy of the M1A1 folding-stock version; again, there is a weight difference, and the AOM150 has the same modifications as the AOM130. The AOM160 is a sort of modern version of the M1 Carbine; it has black polymer furniture, a black oxide finish on the external metalwork, and a side-folding polymer stock mounted on a steel frame. The polymer of the pistol grip is rubber-coated and checkered, and has a small finger stop at the bottom. The barrel shroud is steel and perforated for cooling (though I wouldn't think it would really be necessary). Despite all the polymer, it is the heaviest of the new Auto-Ordinance M1 Carbines.

Fulton Armory makes a faithful copy of the M1 Carbine, accurate in almost every detail despite modern production techniques. Chiappa M1-22 makes a similar weapon, but it is even more faithful to the original with most construction details and methods identical to the original except for some updating and re-sizing for caliber fired. The stock is Italian Hardwood which is varnished and weatherproof, and which has the side-mounted sling with a slot in the side of the stock that takes an oil bottle. At the buyer's option, the stock may be polymer instead of wood; this may be black or Muddy Girl camo. Instead of the gas operation of the M1 or M-2, the M1-22 uses blowback operation, which is more reliable with rimfire cartridges. The Polymer rear sight is removable and adjustable for windage and elevation. The trigger guard, barrel band, the front sight post, and bayonet lug are also of polymer; and external metalwork is blued. The trigger itself is zinc alloy.

Some 50% of parts of the M1-22 are interchangeable with those of an Auto-Ordnance M1. This includes the entire stock of both types. Though relatively few have been made, a variant, the M1-9, is chambered for 9mm Parabellum. Barrel lengths, like the original, are 18 inches, with no muzzle device.

Twilight 2000 Notes: The Auto-Ordnance versions of the M1 Carbine are not available in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
M1 Carbine	.30 Carbine	2.36 kg	15, 30	$316
M1A1 Carbine	.30 Carbine	2.53 kg	15, 30	$341
M2 Carbine	.30 Carbine	2.36 kg	15, 30	$316
AOM130	.30 Carbine	2.45 kg	15, 30	$311
AOM150	.30 Carbine	2.44 kg	15, 30	$342
AOM160	.30 Carbine	2.64 kg	15, 30	$342
Chiappa M1-22 (Wood Stock)	.22 Long Rifle	2.27 kg	10, 15, 30	$280
Chiappa M1-22 (Synthetic Stock)	.22 Long Rifle	2.49 kg	10, 15, 30	$290
Chiappa M1-9 (Wood Stock)	9mm Parabellum	2.68 kg	10, 15, 30	$390
Chiappa M1-9 (Synthetic Stock)	9mm Parabellum	2.68 kg	10, 15, 30	$400

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
M1 Carbine	SA	2	1-Nil	6	2	Nil	50
M1A1 Carbine	SA	2	1-Nil	4/6	1	Nil	50
M-2 Carbine	5	2	1-Nil	6	2	4	50
AOM130	SA	2	1-Nil	6	1	Nil	50
AOM150/AOM160	SA	2	1-Nil	4/5	1	Nil	50
Chiappa M1-22 (Wood Stock)	SA	1	Nil	5	1	Nil	31
Chiappa M1-22 (Synthetic Stock)	SA	1	Nil	5	1	Nil	31
Chiappa M1-9 (Wood Stock)	SA	2	1-Nil	5	1	Nil	45
Chiappa M1-9 (Synthetic Stock)	SA	2	1-Nil	5	1	Nil	45

Barrett M468 Carbine

Notes: This modification of the M16/M4 series was designed specifically for use by US special operations forces. The weapon was initially tested in very limited quantities in Afghanistan starting in 2002, and some are also being used in Iraq. The M468 is essentially a stock M4 or M16 lower receiver with a new upper receiver and barrel designed by Barrett, and firing new ammunition designed by Remington. The new upper receiver has a bolt carrier group designed for the new cartridge, and the weapon is fed from modified M16-style magazines. The upper receiver is fitted with a MIL-STD-1913 rail in lieu of a carrying handle, there are four further such rails on the handguard, which is similar to that of the M4 SOPMOD. Folding iron sights are fitted to allow clear use of optics and accessories.

Recently, a version with a short 12.5" barrel and the capability to mount a suppressor has been designed. This version is primarily aimed at military users (particularly special operations), and a civilian version is not planned, as the barrel is too short for legal civilian sales in the US. In this version, the muzzle brake is much more beefy, and a sliding stock is standard.

The model number "468" refers to the year 2004 (the official date of entry into military stocks) and the caliber (6.8mm). Barrett also produced a semiautomatic version for civilian use, without all the bells and whistles.

In 2008, Barrett released the REC-7 (Reliability Enhanced Carbine, designed in 2007) carbine. This is essentially an M468 with the operation changed to use a gas piston system instead of a straight Stoner-type gas impingement system. More of the key components are of stainless steel, particularly the innards. The gas regulator is adjustable, allowing for the removal of the flash suppressor and attachment of a silencer. The iron sights are folding types. Barrel length is 16 inches with a heavy barrel. The stock is an M4-type sliding stock. In 2010, Barrett introduced the REC-7 in 5.56mm NATO. At the same time, the stock for all REC-7s was changed to a Magpul MOE sliding stock, an adjustable gas regulator was added for suppressed fire, and the upper receiver has a MIL-STD-1913 rail as well as four-point rails on the handguards. The top rail forms a continuous rail, including one above the gas block.

Twilight 2000 Notes: This weapon does not exist.

Weapon	Ammunition	Weight	Magazines	Price
M468 (Fixed Stock)	6.8mm SPC	3.86 kg	5, 10, 28	$747
M468 (16" Barrel, Folding Stock)	6.8mm SPC	3.86 kg	5, 10, 28	$767
M468 (12.5" Barrel)	6.8mm SPC	3.88 kg	5, 10, 28	$881
REC-7	6.8mm SPC	3.46 kg	5, 10, 28	$736
REC-7	5.56mm NATO	3.46 kg	5, 10, 20, 30	$591

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
M468 (Fixed)	5	3	1-2-Nil	6	2	5	45
M468 (16", Folding)	5	3	1-2-Nil	4/6	2	5	45
M468 (12.5")	5	3	1-1-Nil	4/5	1	4	31
REC-7 (6.8mm)	5	3	1-2-Nil	5/6	3	6	46
REC-7 (5.56mm)	5	3	1-2-Nil	4/6	2	6	40

BF1 Vindicator

Notes: Introduced in 2004, this is a truly *weird* small-caliber weapon: a *belt-fed,* rimfire carbine. It is normally only available in semiautomatic form, but an automatic version is available to Class III dealers or police, military or certain government agencies. Currently, the stocks are made of laminated walnut, but other stock options are promised for the future. The BF1 can take clip-on and bolt-on bipods without modification, but a bipod is not provided as standard equipment. The sights are a proprietary design and consist of a combination of a post rear sight and a front sight called a "spade" (due it's shape being reminiscent of a spade in a deck of playing cards). This system helps cut down on target obstruction from the sights themselves. Current BF1's are chambered for .22 Long Rifle and .17 Mach 2 Rimfire, but in the future, Eric Graetz (the designer) plans to chamber the weapon for .22 Winchester Magnum Rimfire and .17 Hornady Magnum Rimfire.

Twilight 2000 Notes: This weapon does not exist.

Weapon	Ammunition	Weight	Magazines	Price
BF1 Vindicator	.17 Hornady Magnum Rimfire	3.59 kg	25 Belt, 50 Belt, 100 Belt	$438
BF1 Vindicator	.17 Mach 2 Rimfire	3.51 kg	25 Belt, 50 Belt, 100 Belt	$362
BF1 Vindicator	.22 Long Rifle	3.58 kg	25 Belt, 50 Belt, 100 Belt	$240
BF1 Vindicator	.22 Winchester Magnum Rimfire	3.79 kg	25 Belt, 50 Belt, 100 Belt	$282

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
BF1 Vindicator (.17 Hornady)	5	2	1-1-Nil	5	1	2	49
BF1 Vindicator (.17 Mach 2)	5	2	1-1-Nil	5	1	2	43
BF1 Vindicator (.22 Long Rifle)	5	1	Nil	5	1	1	33
BF1 Vindicator (.22 Magnum)	5	1	Nil	5	1	2	41

BCM Recce-16 KMR-LW

Notes: BCM (Bravo Company Manufacturing) is well known for its custom versions of ARs and its drop-in upper and lower receivers, but its complete ARs are less well known. One of these is the Recce-16 KMR-LW, a lightweight version of some of their

other ARs. The rifle is of high-quality; the 16-inch barrel is made of 1159E Certified steel, inside a KMR-Alpha 13 free-float handguard, and tipped by a compact muzzle brake. The barrel profile is described as “enhanced light weight,” about like a medium-weight barrel in game terms. The Recce-16 uses an M4 feed ramp barrel extension, and the bore and chamber are chromed. The barrel finish is Manganese Phosphate. The bolt is an HPT (High Pressure Tested) bolt, which is also MPI (Magnetic Particle Inspected), and shot-peened. The bolt carrier and gas key are chromed. The extractor is of tool steel and has an insert to ensure positive extraction. The receiver halves are of standard M4-type aluminum alloy, hardcoat anodized. The buffer and spring are a standard M4 assembly, except that one of the weights in the buffer tube is of tungsten instead of steel. The Recce-16 has a match-quality trigger and an M4-type sliding stock. Atop the receiver and handguard is a long length of Picatinny rail.

An automatic version is included below for general interest, though the actual Recce-16 is semiautomatic-only.

Weapon	Ammunition	Weight	Magazines	Price
Recce-16 KMR-LW	5.56mm NATO	2.63 kg	10, 20, 30	$642

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Recce-16 KMR-LW	5	3	1-Nil	4/6	2	5	42

Blackheart International AK Civilianized Rifles

Shooters in the US and the West will believe the builder of these rifles is Blackheart International; however, they are merely the importers and assemblers, and the most of the parts kits are made in Romania from AK-63 and AK-86 bases, though the Romanian parts are actually new-manufacture parts. (The forged bolt carrier and stainless steel gas piston are made by US Hammer in the US.) They basically have enough US psts (and some others have more American parts) to satisfy US BATF regulations. It was therefore a tough call whether to put them under US Assault Rifles or Romanian Assault Rifles. They are also known as SAAKs, (SemiAutomatic AKs).

The BFV762-101 is basically a copy of the AKM-63, without the full-auto parts, and modifications to make unlikely that a gunsmith will be able to convert it to automatic fire. The handguards are of wood, and they enclose and aluminum heat shield. It does not have the foregrip of the AKM-63. The pistol grip is polymer, and the stock is a side-folding strut-type stock. The receiver is stamped steel. The 16.25-inch barrel has an AK-47-type muzzle, and overall finish is Parkerized matte black. Magazines sold with the BFV762-101 are polymer.

The BFV762-B10A is essentially the BFV762-101 with polymer-furniture, including a mostly-polymer M4-type Phoenix Kick-Lite stock, with further Phoenix pistol grip and handguards. The recoil spring is by Wolff. The barrel is also 16.25 inches and made of 4150 steel, but is also chrome-lined. It has a bayonet lug and short sections of MIL-STD-1913 rail on either side of the end and bottom of the handguards, for small accessories such as lasers, small flashlights, bipods, etc. The stock has a recoil pad on the butt. The BFV762-B10B is essentially the same, except for an AK-74-type stock that is hollow and can be used to store a variety of items.

The BFW762-B10W is a more basic, AK-like version of the BFW762, having beechwood handguards, a beechwood stock, an AK-shaped polymer pistol grip, and no unnecessary accouterments. It is a semiautomatic variant of the AK-86 Romanian assault rifle. It does, however, use a light alloy steel receiver.

Weapon	Ammunition	Weight	Magazines	Price
BFV762-01 SAAK	7.62mm Kalashnikov	3.13 kg	5, 10, 20, 30, 40, 75D	$821
BFV762-B10A	7.62mm Kalashnikov	3.36 kg	5, 10, 20, 30, 40, 75D	$975
BFV762-B10B	7.62mm Kalashnikov	3.26 kg	5, 10, 20, 30, 40, 75D	$814
BFV762-B10W	7.62mm Kalashnikov	2.99 kg	5, 10, 20, 30, 40, 75D	$796

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
BFV762-01 SAAK	SA	4	2-Nil	4/6	4	Nil	46
BFV762-B10A	SA	4	2-Nil	4/6	3	Nil	46
BFV762-B10B	SA	4	2-Nil	6	4	Nil	46
BFV762-B10W	SA	4	2-Nil	6	4	Nil	46

Bushmaster Carbon-15

Notes: This has been described as an improvement over the original Carbon-15 by Professional Ordnance. (Bushmaster acquired the Carbon-15 after Professional Ordnance declared bankruptcy in 2002.) It is, in appearance and operation, quite different from the AR-15, from the lightened stock to the “miniaturized” bolt carrier group. The biggest difference is the use of light carbon-fiber construction in the new stock, handguards, and even the upper and lower receiver housings. The bolt carrier group is much shorter than the standard AR-15 bolt carrier group due to the deletion of the forward assist; it is felt by Bushmaster that its Carbon-15 design, together with improvements in ammunition, make the forward assist unnecessary. The selector controls are ambidextrous. The Carbon-15 uses a flattop receiver; a MIL-STD-1913 rail extends from the rear of the upper receiver to the end of the handguards. The barrel is heavy, but made of lighter alloys and is fluted, further driving down the weight without compromising accuracy. The Carbon-15 has a new muzzle brake that is extremely effective, actually driving the barrel down when firing. At present, the Carbon-15 is available only in a semiautomatic version, but an automatic version is contemplated for the future for law enforcement and military use.

A post-ban variant of the Carbon-15, the C-15M4 (Carbon-15 Model 4) is an M4-style Carbon-15 which still has the carbon-fiber upper and lower receiver and handguards, but there is also a partially-synthetic collapsible stock. The barrel is similar to that of the standard Carbon-15, but is not fluted. Unlike the Carbon-15, the C-15M4 will accept standard M16/AR-15/M4 parts. The C-15M4 uses standard AR-15/M16/M4 magazines; automatic versions are sold only to military or law enforcement concerns. Another post-ban variant of the Carbon-15 is the Carbon-15 in 9mm Parabellum; this version is basically a C-15M4 rechambered for 9mm, with appropriate changes in the sights. Though technically a submachinegun instead of an assault rifle, it is included here for completeness.

Twilight 2000 Notes: This weapon does not exist.

Weapon	Ammunition	Weight	Magazines	Price
Carbon-15	5.56mm NATO	2.02 kg	10, 20, 30	$764
C-15M4	5.56mm NATO	2.49 kg	10, 20, 30	$614
Carbon-15	9mm Parabellum	2.59 kg	10, 30	$301

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Carbon-15 (5.56mm)	5	3	1-Nil	5	2	5	41
C-15M4	5	3	1-Nil	4/5	2	5	34
Carbon-15 (9mm)	5	2	Nil	3/5	1	3	35

Bushmaster Minimalist-SD

Notes: The Minimalist-SD is a new for 2017 compact and lightweight version of the AR-15. It accomplishments by carefully-placed lightening cuts and a carbon-fiber lower receiver, pistol grip, and handguards. It also has a chrome-moly-steel barrel tipped by an AAC 51T flash suppressor. The upper receiver is an AR-15A3's flattop receiver, complete with a full length Picatinny Rail, and M-LOK holes down the other sides of the six-sided handguards. The stock is the lightweight Mission First Tactical with a rounded rubber buttpad. The barrel is normally 16 inches, though a version with a 14.5" barrel is made for LE and Military concerns. The short version is light and handy for assault purposes, and the standard length version is light enough to be carried all day. The Minimalist-SD can take most AR-15-compatible magazines.

Weapon	Ammunition	Weight	Magazines	Price
Minimalist-SD (16" Barrel)	5.56mm NATO	2.72 kg	5, 10, 20, 30	$954
Minimalist-SD (14.5" Barrel)	5.56mm NATO	2.65 kg	5, 10, 20, 30	$938

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Minimalist-SD (16" Barrel)	SA	3	1-Nil	4/6	2	Nil	42
Minimalist-SD (14.5" Barrel)	SA	3	1-Nil	4/5	3	7	36

Bushmaster M17S

Notes: This weapon was originally designed in Australia by a company named Edenpine, and meant for sale on the civilian market. Edenpine realized that Australia's rather restrictive civilian firearms laws would severely limit its sales in that country; therefore, Edenpine reached an agreement that Bushmaster would build and sell the M17S under the Bushmaster name, with Edenpine receiving royalties from each sale as well as money from the licensing of the design.

The M17S is basically a bullpup version of the AR-18 in a semiautomatic version. The Bushmaster company made no apologies for the fact that it would use any magazine that would fit in the AR-18, AR-15, or M16 series, nor the fact that it could be very easily converted to automatic fire. The operating parts of the M17S are largely made from stainless or chrome-plated steel, with the upper receiver being made almost entirely of a single aircraft-grade aluminum extrusion and the lower receiver from fiberglass-filled nylon composites. Because of the bullpup layout, Bushmaster was able to lengthen the barrel to 21.5 inches, giving the M17S greater accuracy than most assault rifles. The M17S has a carrying handle topped with a MIL-STD-1913 rail. The M17S is specifically meant for use with optical sights or other aiming accessories, but it does have rudimentary backup iron sights. The M17S is no longer in production, but when it was, it was primarily built as a semiautomatic rifle, with a flash suppressor for police/military use or without one for civilian sales. (Rumors state that a small number were also built with automatic fire capability, but this is not confirmed. I have included stats below for automatic fire just in case.)

Twilight 2000 Notes: There was some limited military and police use, but this was mostly a weapon used by civilians and militia forces. Most were found in the US, but some were also found in the UK.

Weapon	Ammunition	Weight	Magazines	Price
M17S	5.56mm NATO	3.72 kg	10, 20, 30, 40	$601

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
M17S	5	3	1-Nil	5	2	6	55

Bushmaster XM15E2S Dissipator Carbine

Notes: The Dissipator is a carbine variant of the M16A2 that uses standard-length M16A2 handguards and a front sight placed further forward than most carbine variants of the M16A2. This means that despite the shorter length, the sight radius is almost identical to the standard M16A2, which allows a little better accuracy. It also allows better dissipation of heat than a normal M16A2 carbine (hence the name), and means that the Dissipator can mount the M-203 using a standard M16 interface rather than having to have a custom-made interface.

Other versions of the Dissipator include the Shorty, which has a fixed stock, the Target Model, which is almost identical to the M16A3 and A4 except for the burst/automatic selector, and semiautomatic-only versions of the weapon for civilian use (these do not have flash suppressors or bayonet lugs, and cost $6 less than their military counterparts). Other than civilian sales, the only large-scale users of the Dissipator series as of 2002 were the US Department of Energy.

Twilight 2000 Notes: As the Twilight War intensified, the US company of Bushmaster became, along with Colt, Armalite, and a few other companies, a major supplier of M16 series weapons to the US military and its allies. (Some US soldiers were actually equipped with the Dissipator Target Model instead of the M16A3 or A4.) They did not have much luck with the Dissipator before the war, but as Bushmaster was one of the weapons manufacturers that survived the November Nuclear Strikes, the MilGov asked them to distribute some of their Dissipator Carbines to some of the militia units formed in the aftermath of the nuclear strikes. MilGov thought the carbine would be especially suited to female militia members, and some of the younger members (some militia members were as young as 12 in some places). Bushmaster complied and even manufactured a limited extra quantity, hampered only by irregular supplies of raw materials.

Merc 2000 Notes: As the Notes, except that the Dissipator is also routinely supplied to CIA-equipped mercenaries.

Weapon	Ammunition	Weight	Magazines	Price
Dissipator Carbine	5.56mm NATO	2.98 kg	20, 30	$766
Dissipator Shorty	5.56mm NATO	2.98 kg	20, 30	$746
Dissipator Target Model	5.56mm NATO	3.19 kg	20, 30	$788

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Dissipator Carbine	3/5	3	1-Nil	4/5	3	4/6	40
Dissipator Shorty	3/5	3	1-Nil	5	3	4/6	40
Dissipator Target Model	3/5	3	1-Nil	6	3	4/6	55

Bushmaster XM15LE Superlite Carbine

Notes: This is basically an M16 with a collapsible stock, shorter barrel, and otherwise made as light as possible and still maintain the tactical utility of an M4. The handguards have 4-way MIL-STD-1913 rails to allow the mounting of as wide a variety of accessories as possible; there is another MIL-STD-1913 rail on top of the receiver, which does not have the usual carrying handle. There are two versions; the military model, as described, and the civilian model, which is semiautomatic only, has no flash suppressor or bayonet lug, and does not have the special handguards.

Twilight 2000 Notes: This weapon does not exist.

Weapon	Ammunition	Weight	Magazines	Price
Superlite Carbine	5.56mm NATO	2.99 kg	10, 20, 30	$585

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Superlite Carbine	5	3	1-Nil	5/6	3	6	40

Bushmaster XM15 Varmint Rifle

Notes: This is a version of Bushmaster's AR-15 clone optimized for accurate shooting at small targets like squirrels, gophers, rats, field mice – small mammal pests (though some shooters report that it well accurate enough to pick off toads as well, and that it can take down something as large as a small wolf – or possibly put down a human to a point where he won't want to get up again). The XM15 Varmint Rifle is also known as the XM15 V-Match Varminter, due to the V-Match handguard and other V-Match parts, or simply the XM15 Varminter. It is equipped with a 24-inch DCM match-quality which is of heavy profile and fluted to save weight. (An option is a 26-inch barrel.) There is no muzzle device, but the barrel is tipped with a target crown. It is not threaded, but is free-floating. The barrel is made of Chrome/Moly/Vanadium steel alloy. The 1:9 rifling is capable of stabilizing most .223 Remington rounds, and most 5.56mm NATO round loads; the Varmint Rifle is capable of firing both .223 and 5.56mm rounds. The Rock River trigger's pull is smooth, with only a 4.55-pound pull weight, is a competition two-stage trigger. Atop the receiver is a receiver-length MIL-STD-1913 rail, and these are further topped with very short MIL-STD-1913 rail blocks to raise any BUIS to the level of a standard AR-15 sight line. In front of the gas block is another short section of rail for a front BUIS. The stock is a standard A2 stock; the handguards are round, textured, ventilated aluminum handguards. The pistol grip is rubberized for a positive grip. They have not bayonet lug, or MIL-STD-1913 rails of any king, though the front sling attachment point can also be used as a bipod attachment point.

The XM15 Stainless Varmint Special, also known as the XM15 Stainless Varminter, is essentially the same rifle, but with a 24-inch stainless steel rifle of otherwise the same quality of the barrel of the Varmint Rifle. The pistol grip is largely the same, but has a palm

swell. (Some shooters, particularly those with smaller hands, find it a bit big.) A light bipod is provided that is adjustable for height and cant, as well as a very short section of MIL-STD-1913 rail as an attachment point, and the sling attachment is moved to behind this attachment point.

Standard magazines sold with the Varmint Rifle are 5-rounders, but the Varmint Rifle is capable of using other Bushmaster XM15-compliant magazines (which is most AR-15/M16-compatible magazines and drums). Metal finish is uniformly black, as it the furniture.

Weapon	Ammunition	Weight	Magazines	Price
XM15 Varmint Rifle (24" Barrel)	5.56mm NATO	3.81 kg	5, 10, 20, 30	$662
XM15 Varmint Rifle (26" Barrel)	5.56mm NATO	3.94 kg	5, 10, 20, 30	$698
XM15 Stainless Varmint Special	5.56mm NATO	4.01 kg	5, 10, 20, 30	$1282

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
XM15 Varmint Rifle (24" Barrel)	SA	3	1-Nil	7	2	Nil	75
XM15 Varmint Rifle (26" Barrel)	SA	3	2-Nil	7	2	Nil	82
XM15 Stainless Varmint Special	SA	3	1-Nil	7	2	Nil	76
With Bipod	SA	3	1-Nil	7	1	Nil	99

CAV-15

The CAV-15 is an unusual sort of M4/M16 clone; the lower receiver, stock, and pistol grip are made of one piece of composite material, specifically Nylon 6 filled with glass fiber. The handguards are made of the same material. This material is very strong and totally resistant to corrosion. It can also be molded in virtually any color and even to a specific shape if the user is willing to pay, allowing for cheekpieces, individual hand shapes and sizes, etc. The manufacturer, Cavalry Arms, offers a lifetime guarantee on the lower receiver and handguards that they will not break. The company makes the composite components in several different colors: black, green, tan, and even yellow, blue, and pink. The usual M16/M4 carrying handle is eschewed in favor of a flat top with a MIL-STD-1913 rail. Four models are available: the Commando, a military carbine not available to civilians; the Trooper, a civilianized Commando; the Scout, a semiautomatic carbine with a longer barrel; and the Rifleman, a full-sized rifle.

Twilight 2000 Notes: This weapon does not exist.

Weapon	Ammunition	Weight	Magazines	Price
Commando	5.56mm NATO	2.77 kg	10, 20, 30	$548
Trooper	5.56mm NATO	2.72 kg	10, 20, 30	$543
Scout	5.56mm NATO	2.85 kg	10, 20, 30	$563
Rifleman	5.56mm NATO	3.06 kg	10, 20, 30	$605

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Commando	5	3	1-Nil	5	3	7	34
Trooper	SA	3	1-Nil	5	3	Nil	34
Scout	SA	3	1-Nil	5	3	Nil	40
Rifleman	SA	3	1-Nil	6	3	Nil	55

Century Arms C39

Notes: At the time of its introduction at the SHOT Show in 2014, the C39 was the first AK produced entirely in the US. (It is actually made by a “well-known” firearms manufacturer, but that is all I have been able to find out.) Century Arms, a weapons importer and reseller, makes the C39, which is advertised as being “completely US-Made;” Century Arms contracts with an unnamed factory in Vermont. They did this because under US Law import restrictions on foreign AK parts kits began to tighten, and American manufacturers picked up the slack. For the most part, the C39 follows the AKM lines, but has some differences, such as a laminated dark ash stock and lower handguard, polymer upper handguard, and a polymer ergonomic pistol grip. (Magpul stocks and lower handguards are also available to replace the wooden units.) The barrel is 16.5 inches, tipped with a three-slot muzzle brake. The rear sight is adjustable for windage and elevation. The trigger pack is by TAPCO, and is lighter than an AKM’s pull weight and gunsmith-adjustable for pull weight and pull length. The magazines are American-made, but duplicate the original AKM magazines; the C39 can also take polymer magazines and most original AKM magazines. The C39 has a gray polymer side-mounted ATI AK-47 Strikeforce scope mount. (This goes well with the metal’s color.) The C39 proves to be as tough as the original AKM. The C39v2 is essentially a modernized C39, with a 16.5-inch chrome/moly 4150 steel barrel tipped by a muzzle brake, treated with nitride. The receiver is 4140 ordnance steel, also nitride. The trigger group is a RAK-1 Enhanced Trigger Group, which is single stage but has a relatively light pull weight. The magazine release is made T-shaped, with the top of the T protruding on either side of the forward trigger guard; many test shooters have apparently requested this, being easier to actuate. Sights are standard AK sights, and there are attachments for a side mount for sights. This is a Century Arms proprietary mount that can be used with eastern and western sights. The furniture is beech, except for the ergonomic polymer pistol grip. Finish for the metalwork is black.

The C39v2 is an SBR, which means that additional paperwork and taxes are required in the US and several other countries for ownership. The barrels for the C39v2 include 10.6 and 12.4 inches. The barrel is of chrome/moly 4150 steel, treated with nitride for corrosion resistance and better heat dispersion. The barrel is tipped with a birdcage-type flash suppressor, which can be removed by anyone with armorer skill and replaced with other muzzle devices. The receiver is 4140 ordnance-quality steel, also nitride-treated. The trigger group is a RAK-1 Enhanced Trigger Group, which is single stage but has a relatively light pull weight. The magazine release is made T-shaped, with the top of the T protruding on either side of the forward trigger guard; many test shooters have apparently requested this, being easier to actuate. Sights are standard AK sights, and there are attachments for a side mount for sights. This is a Century Arms proprietary mount that can be used with eastern and western sights. Most of the furniture is standard AR-15-type furniture, but modified specifically for an AK. This includes a Magpul MOE AK pistol grip, MOE AK handguard, and a Zhukov-5 side-folding stock. The stock is in line with the axis of the barrel. Unfortunately, with the stock folded, the safety bar and the trigger are a bit difficult to manipulate, so fire with the stock open is best. Muzzle blast can be described as…one writer called it “howitzer-like,” and recommended full ear muffs, especially the sound cancellation type. He recommends that the extra money and paperwork to mount a suppressor. Muzzle blast likewise can be blinding, especially when dark. As this rifle has easy-to-see military and police uses, I have included automatic fire stats for a “what-if.”

The C39v2 is unusual for a modern assault rifle in that it comes with no Picatinny or Weaver rails.

The C39v2 MOE is sometimes called the “Magpul MOE,” or the “C39 Tactical” due to the large amount of accouterments used on this version of the C39v2 that are made by Magpul, including the handguards, the trigger pack, the folding, skeletonized stock (with a

recoil pad), the pistol grip, and the magazines sold with the rifle. The Chrome/Moly 4150 steel barrel is 16.5 inches, tipped with a muzzle brake; a flash suppressor was not used, nor bayonet lugs, as the MOE was designed to be California-legal. (Special 10-round magazines were also sold with the rifles sent to California.) It was equipped with the first AK side rail that has a "return to zero" capability. The metalwork is nitrided, though the receiver is milled 4140 ordnance steel. The magazine release is enlarged and shaped like a T. Though the MOE uses much Magpul furniture, all of it may be removed and replaced with other parts if desired. The bolt carrier is heat-treated to increase strength.

Weapon	Ammunition	Weight	Magazines	Price
C39	7.62mm Kalashnikov	3.63 kg	5, 10, 20, 30, 75D	$844
C39v2	7.62mm Kalashnikov	3.65 kg	5, 10, 20, 30, 75D	$846
C39v2 (10.6" Barrel)	7.62mm Kalashnikov	3.64 kg	5, 10, 20, 30, 75D	$772
C39v2 (12.4" Barrel)	7.62mm Kalashnikov	3.72 kg	5, 10, 20, 30, 75D	$791
C39v2 MOE	7.62mm Kalashnikov	3.67 kg	5, 10, 20, 30, 75D	$1026

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
C39	SA	4	2-Nil	6	3	Nil	47
C39v2	SA	4	2-Nil	6	3	Nil	47
C39v2 (10.6" Barrel)	5	3	2-Nil	4/5	2	6	24
C39v2 (12.4" Barrel)	5	3	2-Nil	4/5	2	6	30
C39v2 MOE	SA	4	2-Nil	5/6	2	Nil	47

Century Arms N-PAP

Notes: The N-PAP is basically a copy of the Yugoslavian M70 assault rifle, with just enough American parts to skirt by US arms regulations. One of these US parts is the receiver – it is heavy and based on that of the RPK instead of the M70. The N-PAP has a bolt hold-open feature after the last shot, and a bolt catch. It has an American-made chromed bolt and bolt carrier. The trigger group is the superb TAPCO Intrafuse AK G2 group. Though it has no rails, it can mount AKM and SVD side sight mounts. (The N-PAP comes with a rail that is neither AK or SVD, but can accommodate optics for both.) Unlike most such rifles, the furniture is teak instead of beech, with a synthetic pistol grip; the finish is blued. The stock has a raised comb, making use with a sight easier, and has three cooling slots instead of most AK-based rifles two. Note that the 16.33-inch barrel is not chrome-lined; this is like most AKs. The barrel is also tipped with a muzzle brake.

Owners recommend gloves to switch the stiff selector lever – it bites! All of the controls need breaking in on a new N-PAP – one shooter described them as "stiff as Hugh Heffner with a mouthful of little blue pills." Aftermarket parts the N-PAP will accept is also very limited. Early N-PAPs were designed at the time of the Brady Gun Bill, and would take only single-stack ten-round magazines. This was rectified in later production, but if you have one of these older N-PAPs, they will take only the special 10-round magazines.

Weapon	Ammunition	Weight	Magazines	Price
N-PAP	7.62mm Kalashnikov	3.63 kg	5, 10, 20, 30, 40, 75D	$842

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
N-PAP	SA	4	2-Nil	6	3	Nil	46

Century Arms RAS47

Notes: The RAS47 series is a 100% American-made version of the AKM, built using the AKM design but using US manufacturing methods and materiel standards. The base member of the series, the RAS47 (Red Army Standard) is essentially a copy of the AKM, with a receiver stamped out of 16-gauge 4140 steel; the metalwork has a black nitride finish. The selector lever is positioned further back than on an AKM, a position that offers the shooter more leverage; this is important since the lever has been made easy to actuate with the shooting hand. On the left side is a 10.16-centimeter optics rail, which is supplied with the rifle. Parts have higher tolerances than on the AKM, and do not rattle or shift during movement or shooting. The bolt carrier, front trunnion, and gas block are cast instead of being machined. The trigger group is a Century Arms design, the RAK-1 Enhanced Trigger Group, which has a lighter pull weight than most assault rifles and is slightly adjustable. Though it is not a two-stage trigger, shooters can be fooled, as the takeup is short and the trigger pull weight is light. The trigger guard is sheet steel, along with a T-shaped magazine release. The RAS47 includes a bolt hold-open device, something absent from most eastern AKs and civilianized AKs. The 16.5-inch chrome/moly 4150 steel and finished in Green Mountain black nitride. It is tipped with an AKMstyle muzzle device, which is threaded under the device and replaceable with a muzzle brake or flash suppressor. Sights are standard AKMtype iron sights. Unlike the beech stocks of the AKM, the RAS47 uses a solid blond maple stock and handguards, with the butt having a ribbed non-slip rubber end. The pistol grip is an ergonomic polymer grip. The RAS47 is compatible with other AK-type add-ons if the owner wants to switch things out. The RAS47 can take AK/RPK magazines, polymer magazines, aftermarket magazines of varying capacities, and light alloy or aluminum magazines of various sorts; it is not picky about magazines. In fact, the magazines supplied with the RAS47 from Century Arms are Magpul polymer PMAG AK MOE 30-round magazines.

The RAS47 MOE, also known as the RAS47 Magpul and RAS47 Magpul MOE, is essentially a RAS47 with Magpul MOE polymer

furniture, including a skeletonized right folding stock with a recoil pad on the butt. To match the metalwork, the polymer furniture is molded in black. The RAS47 Zhukov is essentially the same, but wears a different Magpul Zhukov-S furniture package; the handguards are longer, almost to the gas block, and the right-folding stock is a paddle-type stock shape. The grip is not ergonomic. It is a bit heavier than the MOE, but fires on the same firing table.

The RAS47 SBR is essentially the same, but it has a short 10.6-inch barrel tipped with a birdcage-type flash suppressor. Since it has obvious police and military uses, auto fire stats have been included below; the SBR *is* for sale only to police and military concerns.

Weapon	Ammunition	Weight	Magazines	Price
RAS47	7.62mm Kalashnikov	3.54 kg	5, 10, 20, 30, 40, 75D	$797
RAS47 MOE	7.62mm Kalashnikov	3.34 kg	5, 10, 20, 30, 40, 75D	$830
RAS47 Zhukov	7.62mm Kalashnikov	3.67 kg	5, 10, 20, 30, 40, 75D	$830
RAS47 SBR	7.62mm Kalashnikov	3.45 kg	5, 10, 20, 30, 40, 75D	$777

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
RAS47	SA	4	2-Nil	6	4	Nil	47
RAS47 MOE/Zhukov	SA	4	2-Nil	4/6	4	Nil	47
RAS47 SBR	5	3	2-Nil	4/5	3	7	24

Century Arms WASR-10

Notes: The WASR-10 (Wassenaar Arrangement Semiautomatic Rifle) is not to be confused with the Egyptian Wasr rifle, though both are AK-derived rifles. WASR-10s are sourced using parts kits from Romania at the Cugir Arms Factory, and largely assembled in the US by Century Arms. The WASR-10 is based on the Romanian AKM63 and AKM75 rifles, suitably modified to civilianize them and make them difficult to make back into an automatic assault rifle.

The receivers are Romanian, but lack the dimple above the magazine well (used to center the magazine), as this centering device now consists of internally welded spacer plates. This allows for a number of makes and models of magazines to be used instead of just the standard steel AK/RPK-type magazines. The arrangements of the rivets on the receiver and the rear trunnions are also different, allowing the use of many makes of left-side sight rails and receiver-mounted MIL-STD-1913 and Weaver rails, as well as conventional scope rails. The rear trunnion layout allows for a number of stocks to be mounted, though the standard stock is a wooden AKMtype beech stock.

At first, Century Arms used a Romanian-made trigger group; this was not a standard AKM63/75 group, as those groups were made for automatic fire. The Romanian trigger group tended to cause trigger slap, where the bolt slammed backward into the trigger assembly and caused significant pain to the shooter's trigger finger. They have since been replaced with the TAPCO Intrafuse AK G2 group, which is of much better quality and designed to eliminate the trigger slap problem. Some early WASR-10s also exhibited canted front sight/gas block combinations, making zeroing nearly impossible. This has since been corrected by greater product quality control. In both cases, shooters were able to return their rifles to Century Arms for replacement of the trigger group and/or front sight/gas block. The barrel is 16.125 inches, tipped by an AKM63/75-type muzzle device. The barrel is of Chrome/Moly steel with a chromed bore and metalwork is treated with black Manganese Phosphate.

Furniture as sold by Century Arms is standard AKM63 beech furniture, though many parts kits have been made over the years to give the WASR-10 synthetic furniture, folding stocks, different sight rails and other Picatinny rails, etc. None of these are present on the Century Arms-sold rifle.

The GP WASR-10 is a WASR-10 designed to cater to the Brady Gun Bill of the early 1990s, and can accept only a magazine that, though it looks like 30-round magazine, accepts only 10 rounds. It also often had a thumbhole stock, often put on by gun dealers to comply with local gun laws. After 1994 with the sunset of the Brady Gun Bill, these rifles morphed into the standard WASR-10 in manufacturing. GP WASR-10 can accept normal AK/RPK magazines, if the machined-in burrs are cut and sanded down; a Dremel tool is ideal for this. For game purposes, the GP WASR-10 is the same as the WASR-10.

The WASR-22 is chambered for the .22 Long Rifle cartridge. Their magazines look like 20-round magazines, but accept only 10 rounds, and they are meant to be used as trainers or for older teens. There are reports of jams caused by an expended shell casing lodging in the receiver cover and blocking the action. Replacing the top cover with a military receiver cover will usually fix this problem, and these covers are available from Century Arms. Externally, except for the magazine, they look identical to the WASR-10.

The WASR-2 is as the WASR-10, but chambered for the 5.45mm round. It does not have the normal AK-74-type muzzle brake or any sort of muzzle device, nor is there room in front of the standard front sight/gas block to add one.

The WASR-3 is chambered for 5.56mm, and comes in the same configuration as the WASR-2. The WASR-3 has known problems with failure to feed; the WASR-3 appears to be highly particular about what magazines it will feed from. It will reliably feed from Romanian magazines, but not Russian magazines. Robinson magazines with the follower switched with one from the AK-100 series works very well. Bulgarian Circle magazines as well as Polish Beryl magazines also work well in the WASR-3. Some gunsmiths have also modified other magazines successfully for use in the WASR-3.

The RH-10, also known as the WASR Magpul or AK-47 Magpul, is essentially a WASR with its furniture replaced by a Magpul parts

kit. The 16.5-inch cold-hammer forged barrel is chromed down the bore and is tipped with a removable birdcage-type flash suppressor similar to that of the AR's A2. The front sight is a standard AK/RPK-type hooded post, while the rear sight is a fully adjustable RPK-type sight. It comes with a sight rail on the left side, as is standard for a scope rail on the AK-series. The MOE handguards are Magpul, the MOE grip, and MOE side-folding stock are Magpul; the Zhukov-S stock is solid and well-made, and is collapsible as well as side-folding. All are polymer. Century Arms sells the RH-10 with one 30-round polymer magazine. Finish is black, including the polymer.

Weapon	Ammunition	Weight	Magazines	Price
WASR-10	7.62mm Kalashnikov	3.4 kg	10, 20, 30, 40, 75D	$790
WASR-22	.22 Long Rifle	3.06 kg	10	$211
WASR-2	5.45mm Kalashnikov	3.4 kg	10, 20, 30, 45, 90D	$498
WASR-3	5.56mm NATO	3.4 kg	5, 10, 20, 30	$548
RH-10	7.62mm Kalashnikov	3.4 kg	10, 20, 30, 40, 75D	$830

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
WASR-10	SA	4	2-Nil	6	4	Nil	45
WASR-22	SA	1	Nil	6	1	Nil	33
WASR-2	SA	3	1-Nil	6	2	Nil	45
WASR-3	SA	3	1-Nil	6	2	Nil	40
RH-10	SA	4	2-Nil	4/6	4	Nil	48

CMMG Mk 4

Notes: The Mk 4 is chambered in the 5.56mm cartridge, as well as some in .300 Blackout, which is gaining popularity and has been tested by special operations. Though it is one of the lesser-known AR-15 clones, it is regarded highly by those who know it.

The receivers, like most AR-15 clones from a given company, are basically identical. Receivers for the Mk 4 are of 7075-T6 aluminum – forged and not stamped. They typically have an upper receiver with a MIL-STD-1913 rail, with a folding BUIS that may be attached to it. Triggers are Mil-Spec, as are the pistol grips and stocks (or the sliding type). Barrels have chromed bores, and most have a "government profile."

The Mk 4 was the first of the series for CMMG. It's chrome-moly-vanadium barrel uses a trick to get around the laws in the US – the 14.5-inch barrel has an extended flash suppressor, giving it a "sort-of" 16.25-inch barrel. It uses an M4-type stock, pistol grip, and handguards. The Mk 4A4 is their full-size rifle, with a 4150 (4140 for the .22 version) Chrome-Vanadium Steel barrel 20 inches long coated with a Nitride finish for extra wear resistance.

The Mk 4LE is designed primarily for law enforcement. It comes in two versions: the basic Mk 4LE, and the Mk 4LE (OR) or Optics-Ready. The OR version has no front sight, having a low-profile gas block and a short length of MIL-STD-1913 rail above it. It also has a MIL-STD-1913 rail above the receiver, M4-type handguards, and an M4-type stock. For game purposes, the basic LE and OR are the same, except for the above. Available in four calibers, it is useful in many situations. The Mk 4LEM, is also similar to the LE, except that it has mid-length handguards and a front sight further out, which gives a better sight picture and smoother operation and reliability (which unfortunately has no effect in game terms). The barrel is of "government profile" and medium taper, which does help accuracy a little (a *very* little). The barrel is slightly shorter at 16 inches. There is also an LEM (OR) version.

The Mk 4T is a version of the Mk 4 designed to use silencers as well as flash suppressors, and they have a threaded barrel to make this happen. The 16.1-inch barrel has a government profile, a medium taper, and can be 416 stainless steel or nitrided 4140 Chrome-Moly steel (this makes no difference in game terms). The handguards are designed by CMMG, and are called RKM KeyMod handguards. It is a one-piece handguard with up to four MIL-STD-1913 rails, as well as an interlocking one atop the receiver. The gas block is low-profile and is below the muzzle end of the handguard, not touching the handguard. There are no front or rear iron sights, though the rifle comes with a pair of BUISs. The handguard creates a free-floating barrel. The Mk 4RCE is similar to the Mk 4T, but is aimed primarily at competitive shooters. Instead of a flash suppressor, the RCE's 16.1-inch barrel is tipped with A CMMG muzzle brake called the SV. The trigger is a Geissele Automatics SSA match trigger, which is two-stage. The stock and pistol grip are Magpul MOE pieces. The same RKM14 KeyMod Free-Float Handguard, but it is longer, so that only about an inch and a half of the barrel is exposed.

The Mk 4D is designed to be tough, yet accurate; this means that parts are put together with great precision and sometimes hand-fitting. The 16.1-inch barrel has a government profile, with the RKM14 Handguard and a free-floating barrel. The pistol grip and stock are by Magpul. The trigger guard is also Magpul, designed to take a gloved finger. The Mk 4S is much the same, but with an 18-inch barrel, standard A2 sliding stock, pistol grip, and trigger guard.

The Mk 4 3GR is designed specifically for use in 3-Gun Competition. It uses a stainless steel 18-inch medium tapered barrel, which is inside an RKM14 KeyMod handguard, and is tipped by a compact muzzle brake. It has a Geissele 2-stage trigger inside a Magpul trigger guard designed for use with gloves. The Magpul MOE stock is not sliding, but is adjustable for length and has a recoil pad as well as a hollow in the stock for cleaning kits. The pistol grip also has a small compartment, normally used for batteries for optics. Tolerances are tight and precise. The Mk 4 3GR is designed for precise shooting and rapid engagement, using a variety of optics.

The Mk 4HT is one of the specific versions around which rumors swirl of possible military use or testing. It comes in a variety of chamberings, including one specifically for training use. The barrel is of heavy profile and is threaded on the end to allow a silencer to

be fitted. A special cap can be fitted to protect the threads when not in use, or a flash suppressor or muzzle brake may be mounted. The 5.56mm and .300 versions can have a 416 stainless steel barrel, or nitride 4140 Chrome-Moly barrel, 16.1 inches long and heavy profile. (The .22 version comes only with a 4140 Chrome-Moly barrel.) An HTP versions made, which is piston driven instead of by direct gas impingement. The HT uses an RKM11 KeyMod free-float handguard; the HTP uses an RKM9 handguard, which fits better with the pistol system. The pistol grip, trigger guard, and stock are M4-types, Mil-Spec. I have included some figures for automatic versions and for use with silencers, just in case. For game purposes, the HT and HTP are identical.

The Mk 4V is a hunter's weapon, optimized for varmints and small game. Key for the performance necessary is a 24-inch fluted barrel, made from 416 stainless steel and floating in an RKM14 KeyMod handguard, with the associated rails. The barrel also has a target crown. The pistol grip is an A2 grip, but the stock is A1.

Designed primarily for military and police use, the Mk 4K is also popular among those who have the proper paperwork and permissions. It has a 12.5-inch medium-weight barrel with a fixed compact muzzle brake. The barrel is a Chrome-Moly steel which is nitrided. The stock, trigger guard, and pistol grip are Magpul MOE designs, with the stock heavily skeletonized. The Handguard is an RKM11 KeyMod free-float handguard; the barrel quality gives the Mk 4K a bit more accuracy than a normal barrel of this short length. The rifle is otherwise quite light and handy, and rumors also are in the wild of military testing and use. The Mk 4K is clearly thought of with the military in mind. The Mk 4PDW is similar in concept, having a short 8.2-inch barrel. Like most PDWs, it is meant to be used by vehicle vehicle crews and rear-area personnel who do not need a full-length rifle, but more than a pistol, as well as personnel who expect a lot of CQB, It has a short RKM7 KeyMod free float tube. The Mk 4PDW has a Magpul sliding stock, pistol grip, and trigger guard. The cartridges used work better in a short package than the 5.56mm round.

Weapon	Ammunition	Weight	Magazines	Price
Mk 4	5.56mm NATO	2.95 kg	10, 20, 30	$573
Mk 4A4	5.56mm NATO	2.95 kg	10, 20, 30	$611
Mk 4A4	.22 Long Rifle	2.67 kg	10, 20, 25	$267
Mk 4LE	.300 Blackout	3.04 kg	10, 20, 30	$769
Mk 4LE	5.56mm NATO	3.04 kg	10, 20, 30	$590
Mk 4LE	9mm Parabellum	3.04 kg	10, 25, 32	$306
Mk 4LE	.22 Long Rifle	3.04 kg	10, 20, 25	$246
Mk 4LEM	.300 Blackout	2.95 kg	10, 20, 30	$772
Mk 4LEM	5.56mm NATO	2.95 kg	10, 20, 30	$593
Mk 4LEM	9mm Parabellum	2.95 kg	10, 25, 32	$309
Mk 4LEM	.22 Long Rifle	2.95 kg	10, 20, 25	$249
Mk 4T	.300 Blackout	2.86 kg	10, 20, 30	$778
Mk 4T	5.56mm NATO	2.86 kg	10, 20, 30	$598
Mk 4T	9mm Parabellum	2.86 kg	10, 25, 32	$315
Mk 4T	.22 Long Rifle	2.86 kg	10, 20, 25	$254
Mk 4RCE	.300 Blackout	3.04 kg	10, 20, 30	$821
Mk 4RCE	5.56mm NATO	3.04 kg	10, 20, 30	$645
Mk 4D	5.56mm NATO	2.9 kg	10, 20, 30	$594
Mk 4S	5.56mm NATO	3.04 kg	10, 20, 30	$615
Mk 4 3GR	5.56mm NATO	3.18 kg	10, 20, 30	$721
Mk 4HT (Flash Suppressor)	.300 Blackout	3.4 kg	10, 20, 30	$772
Mk 4HT (Muzzle Brake)	.300 Blackout	3.6 kg	10, 20, 30	$813
Mk 4HT (Silenced)	.300 Blackout	6.05 kg	10, 20, 30	$1293
Mk 4HT (Flash Suppressor)	5.56mm NATO	3.4 kg	10, 20, 30	$592
Mk 4HT (Muzzle Brake)	5.56mm NATO	3.6 kg	10, 20, 30	$637
Mk 4HT (Silenced)	5.56mm NATO	6.05 kg	10, 20, 30	$908
Mk 4HT (Flash Suppressor)	.22 Long Rifle	3.4 kg	10, 20, 25	$248
Mk 4HT (Muzzle Brake)	.22 Long Rifle	3.6 kg	10, 20, 25	$297
Mk 4HT (Silenced)	.22 Long Rifle	6.05 kg	10, 20, 25	$292
Mk 4V	5.56mm NATO	3.4 kg	10, 20, 30	$657
MK 4K	.300 Blackout	2.72 kg	10, 20, 30	$772
Mk 4K	5.56mm NATO	2.72 kg	10, 20, 30	$596
Mk 4PDW	.300 Blackout	2.4 kg	10, 25, 32	$733
MK 4PDW	9mm Parabellum	2.4 kg	10, 20, 25	$277
Mk 4PDW	.22 Long Rifle	2.4 kg	10, 25, 32	$217

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Mk 4	SA	3	1-Nil	4/5	3	Nil	35

Mk 4A4 (5.56mm)	SA	3	1-Nil	6	3	Nil	57
Mk 4A4 (.22)	SA	1	Nil	6	1	Nil	42
Mk 4LE (.300)	SA	3	2-Nil	4/6	4	Nil	46
Mk 4LE (5.56mm)	SA	3	1-Nil	4/6	3	Nil	42
Mk 4LE (9mm)	SA	2	1-Nil	4/6	1	Nil	37
Mk 4LE (.22)	SA	1	Nil	4/6	1	Nil	34
Mk 4LEM (.300)	SA	3	2-Nil	4/6	4	Nil	48
Mk 4LEM (5.56mm)	SA	3	1-Nil	4/6	3	Nil	43
Mk 4LEM (9mm)	SA	2	1-Nil	4/6	1	Nil	37
Mk 4LEM (.22)	SA	1	Nil	4/6	1	Nil	35
Mk 4T (.300)	SA	3	2-Nil	4/6	4	Nil	50
Mk 4T (5.56mm)	SA	3	1-Nil	4/6	3	Nil	45
Mk 4T (9mm)	SA	2	1-Nil	4/6	1	Nil	39
Mk 4T (.22)	SA	1	Nil	4/6	1	Nil	36
Mk 4RCE (.300)	SA	3	2-Nil	4/6	3	Nil	50
Mk 4RCE (5.56mm)	SA	3	1-Nil	4/6	2	Nil	46
Mk 4D	SA	3	1-Nil	4/6	3	Nil	43
Mk 4S	SA	3	1-Nil	5/6	2	Nil	51
Mk 4 3GR	SA	3	1-Nil	6	2	Nil	53
Mk 4HT (Flash Suppressor, .300)	5	3	2-Nil	4/6	4	9	47
Mk 4HT (Muzzle Brake, .300)	5	3	2-Nil	4/6	3	7	47
Mk 4HT (Silenced, .300)	5	3	2-Nil	7/8	2	5	29
Mk 4HT (Flash Suppressor, 5.56mm)	5	3	1-Nil	4/6	2	6	43
Mk 4HT (Muzzle Brake, 5.56mm)	5	3	1-Nil	4/6	2	4	43
Mk 4HT (Silenced, 5.56mm)	5	2	1-Nil	7/8	2	2	29
Mk 4HT (Flash Suppressor, .22)	5	1	Nil	4/6	1	1	35
Mk 4HT (Muzzle Brake, .22)	5	1	Nil	4/6	1	1	35
Mk 4HT (Silenced, .22)	5	1	Nil	7/8	1	1	29
Mk 4V	SA	3	1-Nil	7	3	Nil	74
Mk 4K (.300)	5	3	2-Nil	4/5	2	5	31
Mk 4K (5.56mm)	5	3	1-Nil	4/5	2	5	28
Mk 4PDW (.300)	5	3	2-Nil	3/4	2	6	18
Mk 4PDW (9mm)	5	2	1-Nil	3/4	1	2	18
Mk 4PDW .22)	5	1	Nil	3/4	1	2	17

Cobb MCR

Notes: The MCR is a development of Cobb's entry in the US military's SCAR program (which is itself a vastly-improved AR-15/M16-type rifle). The MCR (Multi-Caliber Rifle) is a precision-built version of the SCAR, with a better barrel, tighter tolerances for the parts, more features, and in general far better accuracy than its rather distant predecessor. Of course, the feature that gives the MCR its name is its ability to be easily and quickly changed between calibers fired – generally requiring only a swap of the upper receiver and the magazine adapter module (and the magazines, of course). The MCR is also capable of being greatly-customized, from the amount of MIL-STD-1913 rails to the stock configuration used. (Figures below are for an "average" MCR – if there really is an MCR configuration that can be considered "average.") It should be noted as of the Fall of 2007, Cobb Manufacturing is a subsidiary of Bushmaster Arms.

In general, the MCR series is of very tough construction, using upper and lower receivers machined from solid billets of T6-6061 aircraft-grade aluminum alloy. The barrel is made by Lothar Walther (well-known for the high-quality of their barrels), and is free-floated, available in several lengths (including custom lengths upon request), and may or may not be tipped with a target crown, flash suppressor, or muzzle brake upon request. The MCR comes standard with a MIL-STD-1913 rail above the receiver, and (depending

upon the handguards chosen) may have up to six more MIL-STD-1913 rails, and at the gas block, two more very short lengths of MIL-STD-1913 rail. A variety of stocks, ranging from fixed to true folding stocks are available, including standard AR-15/M16 stocks and M4-type collapsible stocks, skeletonized fixed stocks, and special stocks like those made by Vltor and other such companies. (Figures for the fixed and folding stocks below, especially in terms of weight, are *greatly* generalized.)

The MCR is divided into four groups: the MCR-100, MCR-200, MCR-300, and MCR-400. They vary for the most part only in the upper receiver, barrel, and magazines/magazine well adapter. However, changing an MCR-400 from .300 Winchester Magnum to .338 Lapua Magnum also requires a bolt carrier assembly change. For the most part, the MCR is designed for civilian/police sales, and is available only in semiautomatic form; it is rumored though, since the MCR had its genesis in the Cobb's SCAR design, that automatic versions are available to certain agencies and for military sales, so figures are provided below.

Note: Due to the large number of chamberings and the huge size of the charts, they are broken into MCR-10, M200, MCR-300, and MCR-400 sections. Further, I do not know at this time whether all the calibers come in all of the barrel lengths listed (or even if there are other barrel lengths available for that matter) – but just in case…

Twilight 2000 Notes: The MCR series is not available in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
MCR-100 (Fixed Stock, Flash Suppressor, 10.5")	5.56mm NATO	3.07 kg	20, 30	$517
MCR-100 (Fixed Stock, Flash Suppressor, 14.5")	5.56mm NATO	3.18 kg	20, 30	$559
MCR-100 (Fixed Stock, Flash Suppressor, 16.5")	5.56mm NATO	3.36 kg	20, 30	$581
MCR-100 (Fixed Stock, Flash Suppressor, 18")	5.56mm NATO	3.41 kg	20, 30	$597
MCR-100 (Fixed Stock, Flash Suppressor, 20")	5.56mm NATO	3.47 kg	20, 30	$618
MCR-100 (Fixed Stock, Flash Suppressor, 22")	5.56mm NATO	3.53 kg	20, 30	$640
MCR-100 (Fixed Stock, Flash Suppressor, 24")	5.56mm NATO	3.59 kg	20, 30	$661
MCR-100 (Fixed Stock, Flash Suppressor, 30")	5.56mm NATO	3.76 kg	20, 30	$725
MCR-100 (Fixed Stock, Muzzle Brake, 10.5")	5.56mm NATO	3.22 kg	20, 30	$567
MCR-100 (Fixed Stock, Muzzle Brake, 14.5")	5.56mm NATO	3.34 kg	20, 30	$609
MCR-100 (Fixed Stock, Muzzle Brake, 16.5")	5.56mm NATO	3.52 kg	20, 30	$631
MCR-100 (Fixed Stock, Muzzle Brake, 18")	5.56mm NATO	3.58 kg	20, 30	$647
MCR-100 (Fixed Stock, Muzzle Brake, 20")	5.56mm NATO	3.64 kg	20, 30	$668
MCR-100 (Fixed Stock, Muzzle Brake, 22")	5.56mm NATO	3.7 kg	20, 30	$690
MCR-100 (Fixed Stock, Muzzle Brake, 24")	5.56mm NATO	3.77 kg	20, 30	$711
MCR-100 (Fixed Stock, Muzzle Brake, 30")	5.56mm NATO	3.94 kg	20, 30	$775
MCR-100 (Folding Stock, Flash Suppressor, 10.5")	5.56mm NATO	3.07 kg	20, 30	$537
MCR-100 (Folding Stock, Flash Suppressor, 14.5")	5.56mm NATO	3.18 kg	20, 30	$579
MCR-100 (Folding Stock, Flash Suppressor, 16.5")	5.56mm NATO	3.36 kg	20, 30	$601
MCR-100 (Folding Stock, Flash Suppressor, 18")	5.56mm NATO	3.41 kg	20, 30	$617
MCR-100 (Folding Stock, Flash Suppressor, 20")	5.56mm NATO	3.47 kg	20, 30	$638
MCR-100 (Folding Stock, Flash Suppressor, 22")	5.56mm NATO	3.53 kg	20, 30	$660
MCR-100 (Folding Stock, Flash Suppressor, 24")	5.56mm NATO	3.59 kg	20, 30	$681
MCR-100 (Folding Stock, Flash Suppressor, 30")	5.56mm NATO	3.76 kg	20, 30	$745
MCR-100 (Folding Stock, Muzzle Brake, 10.5")	5.56mm NATO	3.22 kg	20, 30	$587
MCR-100 (Folding Stock, Muzzle Brake, 14.5")	5.56mm NATO	3.34 kg	20, 30	$627
MCR-100 (Folding Stock, Muzzle Brake, 16.5")	5.56mm NATO	3.52 kg	20, 30	$651
MCR-100 (Folding Stock, Muzzle Brake, 18")	5.56mm NATO	3.58 kg	20, 30	$667
MCR-100 (Folding Stock, Muzzle Brake, 20")	5.56mm NATO	3.64 kg	20, 30	$658
MCR-100 (Folding Stock, Muzzle Brake, 22")	5.56mm NATO	3.7 kg	20, 30	$710
MCR-100 (Folding Stock, Muzzle Brake, 24")	5.56mm NATO	3.77 kg	20, 30	$731
MCR-100 (Folding Stock, Muzzle Brake, 30")	5.56mm NATO	3.94 kg	20, 30	$795
MCR-100 (Fixed Stock, Flash Suppressor, 10.5")	6.5mm Grendel	3.25 kg	18, 27	$606
MCR-100 (Fixed Stock, Flash Suppressor, 14.5")	6.5mm Grendel	3.37 kg	18, 27	$630
MCR-100 (Fixed Stock, Flash Suppressor, 16.5")	6.5mm Grendel	3.56 kg	18, 27	$652
MCR-100 (Fixed Stock, Flash Suppressor, 18")	6.5mm Grendel	3.61 kg	18, 27	$668
MCR-100 (Fixed Stock, Flash Suppressor, 20")	6.5mm Grendel	3.68 kg	18, 27	$691
MCR-100 (Fixed Stock, Flash Suppressor, 22")	6.5mm Grendel	3.74 kg	18, 27	$712
MCR-100 (Fixed Stock, Flash Suppressor, 24")	6.5mm Grendel	3.81 kg	18, 27	$732
MCR-100 (Fixed Stock, Flash Suppressor, 30")	6.5mm Grendel	3.99 kg	18, 27	$798
MCR-100 (Fixed Stock, Muzzle Brake, 10.5")	6.5mm Grendel	3.45 kg	18, 27	$656
MCR-100 (Fixed Stock, Muzzle Brake, 14.5")	6.5mm Grendel	3.57 kg	18, 27	$680
MCR-100 (Fixed Stock, Muzzle Brake, 16.5")	6.5mm Grendel	3.76 kg	18, 27	$702
MCR-100 (Fixed Stock, Muzzle Brake, 18")	6.5mm Grendel	3.81 kg	18, 27	$718
MCR-100 (Fixed Stock, Muzzle Brake, 20")	6.5mm Grendel	3.88 kg	18, 27	$741
MCR-100 (Fixed Stock, Muzzle Brake, 22")	6.5mm Grendel	3.94 kg	18, 27	$762

MCR-100 (Fixed Stock, Muzzle Brake, 24”)	6.5mm Grendel	4.01 kg	18, 27	$782
MCR-100 (Fixed Stock, Muzzle Brake, 30”)	6.5mm Grendel	4.19 kg	18, 27	$848
MCR-100 (Folding Stock, Flash Suppressor, 10.5”)	6.5mm Grendel	3.25 kg	18, 27	$626
MCR-100 (Folding Stock, Flash Suppressor, 14.5”)	6.5mm Grendel	3.37 kg	18, 27	$650
MCR-100 (Folding Stock, Flash Suppressor, 16.5”)	6.5mm Grendel	3.56 kg	18, 27	$672
MCR-100 (Folding Stock, Flash Suppressor, 18”)	6.5mm Grendel	3.61 kg	18, 27	$688
MCR-100 (Folding Stock, Flash Suppressor, 20”)	6.5mm Grendel	3.68 kg	18, 27	$711
MCR-100 (Folding Stock, Flash Suppressor, 22”)	6.5mm Grendel	3.74 kg	18, 27	$732
MCR-100 (Folding Stock, Flash Suppressor, 24”)	6.5mm Grendel	3.81 kg	18, 27	$752
MCR-100 (Folding Stock, Flash Suppressor, 30”)	6.5mm Grendel	3.99 kg	18, 27	$818
MCR-100 (Folding Stock, Muzzle Brake, 10.5”)	6.5mm Grendel	3.45 kg	18, 27	$676
MCR-100 (Folding Stock, Muzzle Brake, 14.5”)	6.5mm Grendel	3.57 kg	18, 27	$700
MCR-100 (Folding Stock, Muzzle Brake, 16.5”)	6.5mm Grendel	3.76 kg	18, 27	$722
MCR-100 (Folding Stock, Muzzle Brake, 18”)	6.5mm Grendel	3.81 kg	18, 27	$738
MCR-100 (Folding Stock, Muzzle Brake, 20”)	6.5mm Grendel	3.88 kg	18, 27	$761
MCR-100 (Folding Stock, Muzzle Brake, 22”)	6.5mm Grendel	3.94 kg	18, 27	$782
MCR-100 (Folding Stock, Muzzle Brake, 24”)	6.5mm Grendel	4.01 kg	18, 27	$802
MCR-100 (Folding Stock, Muzzle Brake, 30”)	6.5mm Grendel	4.19 kg	18, 27	$868
MCR-100 (Fixed Stock, Flash Suppressor, 10.5”)	7.62mm Kalashnikov	3.67 kg	20, 30, 40, 75D	$766
MCR-100 (Fixed Stock, Flash Suppressor, 14.5”)	7.62mm Kalashnikov	3.81 kg	20, 30, 40, 75D	$810
MCR-100 (Fixed Stock, Flash Suppressor, 16.5”)	7.62mm Kalashnikov	4.02 kg	20, 30, 40, 75D	$832
MCR-100 (Fixed Stock, Flash Suppressor, 18”)	7.62mm Kalashnikov	4.08 kg	20, 30, 40, 75D	$848
MCR-100 (Fixed Stock, Flash Suppressor, 20”)	7.62mm Kalashnikov	4.16 kg	20, 30, 40, 75D	$869
MCR-100 (Fixed Stock, Flash Suppressor, 22”)	7.62mm Kalashnikov	4.23 kg	20, 30, 40, 75D	$891
MCR-100 (Fixed Stock, Flash Suppressor, 24”)	7.62mm Kalashnikov	4.31 kg	20, 30, 40, 75D	$914
MCR-100 (Fixed Stock, Flash Suppressor, 30”)	7.62mm Kalashnikov	4.51 kg	20, 30, 40, 75D	$978
MCR-100 (Fixed Stock, Muzzle Brake, 10.5”)	7.62mm Kalashnikov	3.87 kg	20, 30, 40, 75D	$816
MCR-100 (Fixed Stock, Muzzle Brake, 14.5”)	7.62mm Kalashnikov	4.01 kg	20, 30, 40, 75D	$860
MCR-100 (Fixed Stock, Muzzle Brake, 16.5”)	7.62mm Kalashnikov	4.22 kg	20, 30, 40, 75D	$882
MCR-100 (Fixed Stock, Muzzle Brake, 18”)	7.62mm Kalashnikov	4.28 kg	20, 30, 40, 75D	$898
MCR-100 (Fixed Stock, Muzzle Brake, 20”)	7.62mm Kalashnikov	4.36 kg	20, 30, 40, 75D	$919
MCR-100 (Fixed Stock, Muzzle Brake, 22”)	7.62mm Kalashnikov	4.43 kg	20, 30, 40, 75D	$941
MCR-100 (Fixed Stock, Muzzle Brake, 24”)	7.62mm Kalashnikov	4.51 kg	20, 30, 40, 75D	$964
MCR-100 (Fixed Stock, Muzzle Brake, 30”)	7.62mm Kalashnikov	4.71 kg	20, 30, 40, 75D	$1028
MCR-100 (Folding Stock, Flash Suppressor, 10.5”)	7.62mm Kalashnikov	3.67 kg	20, 30, 40, 75D	$786
MCR-100 (Folding Stock, Flash Suppressor, 14.5”)	7.62mm Kalashnikov	3.81 kg	20, 30, 40, 75D	$830
MCR-100 (Folding Stock, Flash Suppressor, 16.5”)	7.62mm Kalashnikov	4.02 kg	20, 30, 40, 75D	$852
MCR-100 (Folding Stock, Flash Suppressor, 18”)	7.62mm Kalashnikov	4.08 kg	20, 30, 40, 75D	$868
MCR-100 (Folding Stock, Flash Suppressor, 20”)	7.62mm Kalashnikov	4.16 kg	20, 30, 40, 75D	$889
MCR-100 (Folding Stock, Flash Suppressor, 22”)	7.62mm Kalashnikov	4.23 kg	20, 30, 40, 75D	$911
MCR-100 (Folding Stock, Flash Suppressor, 24”)	7.62mm Kalashnikov	4.31 kg	20, 30, 40, 75D	$934
MCR-100 (Folding Stock, Flash Suppressor, 30”)	7.62mm Kalashnikov	4.51 kg	20, 30, 40, 75D	$998
MCR-100 (Folding Stock, Muzzle Brake, 10.5”)	7.62mm Kalashnikov	3.87 kg	20, 30, 40, 75D	$836
MCR-100 (Folding Stock, Muzzle Brake, 14.5”)	7.62mm Kalashnikov	4.01 kg	20, 30, 40, 75D	$880
MCR-100 (Folding Stock, Muzzle Brake, 16.5”)	7.62mm Kalashnikov	4.22 kg	20, 30, 40, 75D	$902
MCR-100 (Folding Stock, Muzzle Brake, 18”)	7.62mm Kalashnikov	4.28 kg	20, 30, 40, 75D	$918
MCR-100 (Folding Stock, Muzzle Brake, 20”)	7.62mm Kalashnikov	4.36 kg	20, 30, 40, 75D	$939
MCR-100 (Folding Stock, Muzzle Brake, 22”)	7.62mm Kalashnikov	4.43 kg	20, 30, 40, 75D	$961
MCR-100 (Folding Stock, Muzzle Brake, 24”)	7.62mm Kalashnikov	4.51 kg	20, 30, 40, 75D	$984
MCR-100 (Folding Stock, Muzzle Brake, 30”)	7.62mm Kalashnikov	4.71 kg	20, 30, 40, 75D	$1048
MCR-100 (Fixed Stock, Flash Suppressor, 10.5”)	9mm Parabellum	3.1 kg	20, 32, 40	$231
MCR-100 (Fixed Stock, Flash Suppressor, 14.5”)	9mm Parabellum	3.2 kg	20, 32, 40	$273
MCR-100 (Fixed Stock, Flash Suppressor, 16.5”)	9mm Parabellum	3.38 kg	20, 32, 40	$294
MCR-100 (Fixed Stock, Flash Suppressor, 18”)	9mm Parabellum	3.43 kg	20, 32, 40	$310
MCR-100 (Fixed Stock, Flash Suppressor, 20”)	9mm Parabellum	3.49 kg	20, 32, 40	$331
MCR-100 (Fixed Stock, Flash Suppressor, 22”)	9mm Parabellum	3.55 kg	20, 32, 40	$352
MCR-100 (Fixed Stock, Flash Suppressor, 24”)	9mm Parabellum	3.79 kg	20, 32, 40	$374
MCR-100 (Fixed Stock, Flash Suppressor, 30”)	9mm Parabellum	3.96 kg	20, 32, 40	$437
MCR-100 (Fixed Stock, Muzzle Brake, 10.5”)	9mm Parabellum	3.3 kg	20, 32, 40	$281
MCR-100 (Fixed Stock, Muzzle Brake, 14.5”)	9mm Parabellum	3.4 kg	20, 32, 40	$323

MCR-100 (Fixed Stock, Muzzle Brake, 16.5”)	9mm Parabellum	3.58 kg	20, 32, 40	$344
MCR-100 (Fixed Stock, Muzzle Brake, 18”)	9mm Parabellum	3.63 kg	20, 32, 40	$360
MCR-100 (Fixed Stock, Muzzle Brake, 20”)	9mm Parabellum	3.69 kg	20, 32, 40	$381
MCR-100 (Fixed Stock, Muzzle Brake, 22”)	9mm Parabellum	3.75 kg	20, 32, 40	$402
MCR-100 (Fixed Stock, Muzzle Brake, 24”)	9mm Parabellum	3.99 kg	20, 32, 40	$424
MCR-100 (Fixed Stock, Muzzle Brake, 30”)	9mm Parabellum	4.16 kg	20, 32, 40	$487
MCR-100 (Folding Stock, Flash Suppressor, 10.5”)	9mm Parabellum	3.1 kg	20, 32, 40	$251
MCR-100 (Folding Stock, Flash Suppressor, 14.5”)	9mm Parabellum	3.2 kg	20, 32, 40	$293
MCR-100 (Folding Stock, Flash Suppressor, 16.5”)	9mm Parabellum	3.38 kg	20, 32, 40	$314
MCR-100 (Folding Stock, Flash Suppressor, 18”)	9mm Parabellum	3.43 kg	20, 32, 40	$330
MCR-100 (Folding Stock, Flash Suppressor, 20”)	9mm Parabellum	3.49 kg	20, 32, 40	$351
MCR-100 (Folding Stock, Flash Suppressor, 22”)	9mm Parabellum	3.55 kg	20, 32, 40	$372
MCR-100 (Folding Stock, Flash Suppressor, 24”)	9mm Parabellum	3.79 kg	20, 32, 40	$394
MCR-100 (Folding Stock, Flash Suppressor, 30”)	9mm Parabellum	3.96 kg	20, 32, 40	$457
MCR-100 (Folding Stock, Muzzle Brake, 10.5”)	9mm Parabellum	3.3 kg	20, 32, 40	$301
MCR-100 (Folding Stock, Muzzle Brake, 14.5”)	9mm Parabellum	3.4 kg	20, 32, 40	$343
MCR-100 (Folding Stock, Muzzle Brake, 16.5”)	9mm Parabellum	3.58 kg	20, 32, 40	$364
MCR-100 (Folding Stock, Muzzle Brake, 18”)	9mm Parabellum	3.63 kg	20, 32, 40	$380
MCR-100 (Folding Stock, Muzzle Brake, 20”)	9mm Parabellum	3.69 kg	20, 32, 40	$401
MCR-100 (Folding Stock, Muzzle Brake, 22”)	9mm Parabellum	3.75 kg	20, 32, 40	$422
MCR-100 (Folding Stock, Muzzle Brake, 24”)	9mm Parabellum	3.99 kg	20, 32, 40	$444
MCR-100 (Folding Stock, Muzzle Brake, 30”)	9mm Parabellum	4.16 kg	20, 32, 40	$497
MCR-100 (Fixed Stock, Flash Suppressor, 10.5”)	.45 ACP	3.31 kg	20, 30, 40	$315
MCR-100 (Fixed Stock, Flash Suppressor, 14.5”)	.45 ACP	3.42 kg	20, 30, 40	$357
MCR-100 (Fixed Stock, Flash Suppressor, 16.5”)	.45 ACP	3.62 kg	20, 30, 40	$378
MCR-100 (Fixed Stock, Flash Suppressor, 18”)	.45 ACP	3.67 kg	20, 30, 40	$394
MCR-100 (Fixed Stock, Flash Suppressor, 20”)	.45 ACP	3.73 kg	20, 30, 40	$415
MCR-100 (Fixed Stock, Flash Suppressor, 22”)	.45 ACP	3.8 kg	20, 30, 40	$437
MCR-100 (Fixed Stock, Flash Suppressor, 24”)	.45 ACP	4.06 kg	20, 30, 40	$458
MCR-100 (Fixed Stock, Flash Suppressor, 30”)	.45 ACP	4.45 kg	20, 30, 40	$521
MCR-100 (Fixed Stock, Muzzle Brake, 10.5”)	.45 ACP	3.51 kg	20, 30, 40	$365
MCR-100 (Fixed Stock, Muzzle Brake, 14.5”)	.45 ACP	3.62 kg	20, 30, 40	$407
MCR-100 (Fixed Stock, Muzzle Brake, 16.5”)	.45 ACP	3.82 kg	20, 30, 40	$428
MCR-100 (Fixed Stock, Muzzle Brake, 18”)	.45 ACP	3.87 kg	20, 30, 40	$444
MCR-100 (Fixed Stock, Muzzle Brake, 20”)	.45 ACP	3.93 kg	20, 30, 40	$465
MCR-100 (Fixed Stock, Muzzle Brake, 22”)	.45 ACP	4 kg	20, 30, 40	$487
MCR-100 (Fixed Stock, Muzzle Brake, 24”)	.45 ACP	4.26 kg	20, 30, 40	$508
MCR-100 (Fixed Stock, Muzzle Brake, 30”)	.45 ACP	4.65 kg	20, 30, 40	$571
MCR-100 (Folding Stock, Flash Suppressor, 10.5”)	.45 ACP	3.31 kg	20, 30, 40	$315
MCR-100 (Folding Stock, Flash Suppressor, 14.5”)	.45 ACP	3.42 kg	20, 30, 40	$357
MCR-100 (Folding Stock, Flash Suppressor, 16.5”)	.45 ACP	3.62 kg	20, 30, 40	$378
MCR-100 (Folding Stock, Flash Suppressor, 18”)	.45 ACP	3.67 kg	20, 30, 40	$394
MCR-100 (Folding Stock, Flash Suppressor, 20”)	.45 ACP	3.73 kg	20, 30, 40	$415
MCR-100 (Folding Stock, Flash Suppressor, 22”)	.45 ACP	3.8 kg	20, 30, 40	$437
MCR-100 (Folding Stock, Flash Suppressor, 24”)	.45 ACP	4.06 kg	20, 30, 40	$458
MCR-100 (Folding Stock, Flash Suppressor, 30”)	.45 ACP	4.45 kg	20, 30, 40	$521
MCR-100 (Folding Stock, Muzzle Brake, 10.5”)	.45 ACP	3.51 kg	20, 30, 40	$365
MCR-100 (Folding Stock, Muzzle Brake, 14.5”)	.45 ACP	3.62 kg	20, 30, 40	$407
MCR-100 (Folding Stock, Muzzle Brake, 16.5”)	.45 ACP	3.82 kg	20, 30, 40	$428
MCR-100 (Folding Stock, Muzzle Brake, 18”)	.45 ACP	3.87 kg	20, 30, 40	$444
MCR-100 (Folding Stock, Muzzle Brake, 20”)	.45 ACP	3.93 kg	20, 30, 40	$465
MCR-100 (Folding Stock, Muzzle Brake, 22”)	.45 ACP	4 kg	20, 30, 40	$487
MCR-100 (Folding Stock, Muzzle Brake, 24”)	.45 ACP	4.26 kg	20, 30, 40	$508
MCR-100 (Folding Stock, Muzzle Brake, 30”)	.45 ACP	4.65 kg	20, 30, 40	$571
MCR-100 (Fixed Stock, Flash Suppressor, 10.5”)	.50 Beowulf	3.73 kg	7, 12, 16	$528
MCR-100 (Fixed Stock, Flash Suppressor, 14.5”)	.50 Beowulf	3.86 kg	7, 12, 16	$572
MCR-100 (Fixed Stock, Flash Suppressor, 16.5”)	.50 Beowulf	4.09 kg	7, 12, 16	$593
MCR-100 (Fixed Stock, Flash Suppressor, 18”)	.50 Beowulf	4.15 kg	7, 12, 16	$610
MCR-100 (Fixed Stock, Flash Suppressor, 20”)	.50 Beowulf	4.21 kg	7, 12, 16	$631
MCR-100 (Fixed Stock, Flash Suppressor, 22”)	.50 Beowulf	4.29 kg	7, 12, 16	$652

MCR-100 (Fixed Stock, Flash Suppressor, 24”)	.50 Beowulf	4.59 kg	7, 12, 16	$674
MCR-100 (Fixed Stock, Flash Suppressor, 30”)	.50 Beowulf	5.25 kg	7, 12, 16	$737
MCR-100 (Fixed Stock, Muzzle Brake, 10.5”)	.50 Beowulf	3.93 kg	7, 12, 16	$578
MCR-100 (Fixed Stock, Muzzle Brake, 14.5”)	.50 Beowulf	4.06 kg	7, 12, 16	$622
MCR-100 (Fixed Stock, Muzzle Brake, 16.5”)	.50 Beowulf	4.29 kg	7, 12, 16	$643
MCR-100 (Fixed Stock, Muzzle Brake, 18”)	.50 Beowulf	4.35 kg	7, 12, 16	$660
MCR-100 (Fixed Stock, Muzzle Brake, 20”)	.50 Beowulf	4.41 kg	7, 12, 16	$681
MCR-100 (Fixed Stock, Muzzle Brake, 22”)	.50 Beowulf	4.49 kg	7, 12, 16	$702
MCR-100 (Fixed Stock, Muzzle Brake, 24”)	.50 Beowulf	4.79 kg	7, 12, 16	$724
MCR-100 (Fixed Stock, Muzzle Brake, 30”)	.50 Beowulf	5.45 kg	7, 12, 16	$787
MCR-100 (Folding Stock, Flash Suppressor, 10.5”)	.50 Beowulf	3.73 kg	7, 12, 16	$548
MCR-100 (Folding Stock, Flash Suppressor, 14.5”)	.50 Beowulf	3.86 kg	7, 12, 16	$592
MCR-100 (Folding Stock, Flash Suppressor, 16.5”)	.50 Beowulf	4.09 kg	7, 12, 16	$613
MCR-100 (Folding Stock, Flash Suppressor, 18”)	.50 Beowulf	4.15 kg	7, 12, 16	$630
MCR-100 (Folding Stock, Flash Suppressor, 20”)	.50 Beowulf	4.21 kg	7, 12, 16	$651
MCR-100 (Folding Stock, Flash Suppressor, 22”)	.50 Beowulf	4.29 kg	7, 12, 16	$672
MCR-100 (Folding Stock, Flash Suppressor, 24”)	.50 Beowulf	4.59 kg	7, 12, 16	$694
MCR-100 (Folding Stock, Flash Suppressor, 30”)	.50 Beowulf	5.25 kg	7, 12, 16	$757
MCR-100 (Folding Stock, Muzzle Brake, 10.5”)	.50 Beowulf	3.93 kg	7, 12, 16	$598
MCR-100 (Folding Stock, Muzzle Brake, 14.5”)	.50 Beowulf	4.06 kg	7, 12, 16	$642
MCR-100 (Folding Stock, Muzzle Brake, 16.5”)	.50 Beowulf	4.29 kg	7, 12, 16	$663
MCR-100 (Folding Stock, Muzzle Brake, 18”)	.50 Beowulf	4.35 kg	7, 12, 16	$680
MCR-100 (Folding Stock, Muzzle Brake, 20”)	.50 Beowulf	4.41 kg	7, 12, 16	$701
MCR-100 (Folding Stock, Muzzle Brake, 22”)	.50 Beowulf	4.49 kg	7, 12, 16	$722
MCR-100 (Folding Stock, Muzzle Brake, 24”)	.50 Beowulf	4.79 kg	7, 12, 16	$744
MCR-100 (Folding Stock, Muzzle Brake, 30”)	.50 Beowulf	5.45 kg	7, 12, 16	$807

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
MCR-100 (5.56mm, Fixed, Flash, 10.5”)	5	2	1-Nil	5	2	6	21
MCR-100 (5.56mm, Fixed, Flash, 14.5”)	5	3	1-Nil	5	2	5	36
MCR-100 (5.56mm, Fixed, Flash, 16.5”)	5	3	1-Nil	6	2	6	43
MCR-100 (5.56mm, Fixed, Flash, 18”)	5	3	1-Nil	6	2	6	49
MCR-100 (5.56mm, Fixed, Flash, 20”)	5	3	1-Nil	6	2	6	58
MCR-100 (5.56mm, Fixed, Flash, 22”)	5	3	1-Nil	7	2	6	66
MCR-100 (5.56mm, Fixed, Flash, 24”)	5	3	1-Nil	7	2	6	72
MCR-100 (5.56mm, Fixed, Flash, 30”)	5	3	2-Nil	8	2	6	91
MCR-100 (5.56mm, Fixed, Brake, 10.5”)	5	2	1-Nil	5	2	4	21
MCR-100 (5.56mm, Fixed, Brake, 14.5”)	5	3	1-Nil	5	2	4	36
MCR-100 (5.56mm, Fixed, Brake, 16.5”)	5	3	1-Nil	6	2	4	43
MCR-100 (5.56mm, Fixed, Brake, 18”)	5	3	1-Nil	6	2	4	49
MCR-100 (5.56mm, Fixed, Brake, 20”)	5	3	1-Nil	6	2	4	58
MCR-100 (5.56mm, Fixed, Brake, 22”)	5	3	1-Nil	7	2	4	66
MCR-100 (5.56mm, Fixed, Brake, 24”)	5	3	1-Nil	7	2	4	72
MCR-100 (5.56mm, Fixed, Brake, 30”)	5	3	1-Nil	8	2	5	91
MCR-100 (5.56mm, Folding, Flash, 10.5”)	5	2	1-Nil	3/5	2	6	21
MCR-100 (5.56mm, Folding, Flash, 14.5”)	5	3	1-Nil	4/5	2	5	36
MCR-100 (5.56mm, Folding, Flash, 16.5”)	5	3	1-Nil	4/6	2	6	43
MCR-100 (5.56mm, Folding, Flash, 18”)	5	3	1-Nil	5/6	2	6	49
MCR-100 (5.56mm, Folding, Flash, 20”)	5	3	1-Nil	5/6	2	6	58
MCR-100 (5.56mm, Folding, Flash, 22”)	5	3	1-Nil	5/7	2	6	66
MCR-100 (5.56mm, Folding, Flash, 24”)	5	3	1-Nil	6/7	2	6	72
MCR-100 (5.56mm, Folding, Flash, 30”)	5	3	2-Nil	7/8	2	6	91
MCR-100 (5.56mm, Folding, Brake, 10.5”)	5	2	1-Nil	3/5	2	4	21
MCR-100 (5.56mm, Folding, Brake, 14.5”)	5	3	1-Nil	4/5	2	4	36
MCR-100 (5.56mm, Folding, Brake, 16.5”)	5	3	1-Nil	4/6	2	4	43
MCR-100 (5.56mm, Folding, Brake, 18”)	5	3	1-Nil	5/6	2	4	49
MCR-100 (5.56mm, Folding, Brake, 20”)	5	3	1-Nil	5/6	2	4	58
MCR-100 (5.56mm, Folding, Brake, 22”)	5	3	1-Nil	5/7	2	4	66
MCR-100 (5.56mm, Folding, Brake, 24”)	5	3	1-Nil	6/7	2	4	72
MCR-100 (5.56mm, Folding, Brake, 30”)	5	3	2-Nil	7/8	2	5	91

MCR-100 (6.5mm, Fixed, Flash, 10.5")	5	3	1-1-Nil	5	2	6	29
MCR-100 (6.5mm, Fixed, Flash, 14.5")	5	3	1-1-Nil	5	3	6	48
MCR-100 (6.5mm, Fixed, Flash, 16.5")	5	3	1-2-Nil	6	3	6	58
MCR-100 (6.5mm, Fixed, Flash, 18")	5	3	1-2-Nil	6	3	6	66
MCR-100 (6.5mm, Fixed, Flash, 20")	5	3	1-2-Nil	6	3	6	74
MCR-100 (6.5mm, Fixed, Flash, 22")	5	3	1-2-Nil	7	3	6	82
MCR-100 (6.5mm, Fixed, Flash, 24")	5	3	1-2-Nil	7	3	6	90
MCR-100 (6.5mm, Fixed, Flash, 30")	5	4	1-2-Nil	8	4	9	115
MCR-100 (6.5mm, Fixed, Brake, 10.5")	5	3	1-1-Nil	5	2	5	29
MCR-100 (6.5mm, Fixed, Brake, 14.5")	5	3	1-1-Nil	5	2	5	48
MCR-100 (6.5mm, Fixed, Brake, 16.5")	5	3	1-2-Nil	6	2	5	58
MCR-100 (6.5mm, Fixed, Brake, 18")	5	3	1-2-Nil	6	2	5	66
MCR-100 (6.5mm, Fixed, Brake, 20")	5	3	1-2-Nil	6	2	5	74
MCR-100 (6.5mm, Fixed, Brake, 22")	5	3	1-2-Nil	7	2	5	82
MCR-100 (6.5mm, Fixed, Brake, 24")	5	3	1-2-Nil	7	2	5	90
MCR-100 (6.5mm, Fixed, Brake, 30")	5	4	1-2-Nil	8	3	7	115
MCR-100 (6.5mm, Folding, Flash, 10.5")	5	3	1-1-Nil	3/5	2	6	29
MCR-100 (6.5mm, Folding, Flash, 14.5")	5	3	1-1-Nil	4/5	3	6	48
MCR-100 (6.5mm, Folding, Flash, 16.5")	5	3	1-2-Nil	4/6	3	6	58
MCR-100 (6.5mm, Folding, Flash, 18")	5	3	1-2-Nil	5/6	3	6	66
MCR-100 (6.5mm, Folding, Flash, 20")	5	3	1-2-Nil	5/6	3	6	74
MCR-100 (6.5mm, Folding, Flash, 22")	5	3	1-2-Nil	5/7	3	6	82
MCR-100 (6.5mm, Folding, Flash, 24")	5	3	1-2-Nil	6/7	3	6	90
MCR-100 (6.5mm, Folding, Flash, 30")	5	4	1-2-Nil	7/8	4	9	115
MCR-100 (6.5mm, Folding, Brake, 10.5")	5	3	1-1-Nil	3/5	2	5	29
MCR-100 (6.5mm, Folding, Brake, 14.5")	5	3	1-1-Nil	4/5	2	5	48
MCR-100 (6.5mm, Folding, Brake, 16.5")	5	3	1-2-Nil	4/6	2	5	58
MCR-100 (6.5mm, Folding, Brake, 18")	5	3	1-2-Nil	5/6	2	5	66
MCR-100 (6.5mm, Folding, Brake, 20")	5	3	1-2-Nil	5/6	2	5	74
MCR-100 (6.5mm, Folding, Brake, 22")	5	3	1-2-Nil	5/7	2	5	82
MCR-100 (6.5mm, Folding, Brake, 24")	5	3	1-2-Nil	6/7	2	5	90
MCR-100 (6.5mm, Folding, Brake, 30")	5	4	1-2-Nil	7/8	3	7	115
MCR-100 (7.62mm, Fixed, Flash, 10.5")	5	3	2-Nil	5	2	6	24
MCR-100 (7.62mm, Fixed, Flash, 14.5")	5	3	2-Nil	5	3	9	40
MCR-100 (7.62mm, Fixed, Flash, 16.5")	5	4	2-Nil	6	3	9	49
MCR-100 (7.62mm, Fixed, Flash, 18")	5	4	2-Nil	6	3	9	55
MCR-100 (7.62mm, Fixed, Flash, 20")	5	4	2-3-Nil	6	3	9	62
MCR-100 (7.62mm, Fixed, Flash, 22")	5	4	2-3-Nil	7	3	9	69
MCR-100 (7.62mm, Fixed, Flash, 24")	5	4	2-3-Nil	7	4	9	75
MCR-100 (7.62mm, Fixed, Flash, 30")	5	4	2-3-Nil	8	4	9	96
MCR-100 (7.62mm, Fixed, Brake, 10.5")	5	3	2-Nil	5	2	5	24
MCR-100 (7.62mm, Fixed, Brake, 14.5")	5	3	2-Nil	5	3	6	40
MCR-100 (7.62mm, Fixed, Brake, 16.5")	5	4	2-Nil	6	3	6	49
MCR-100 (7.62mm, Fixed, Brake, 18")	5	4	2-Nil	6	3	6	55
MCR-100 (7.62mm, Fixed, Brake, 20")	5	4	2-3-Nil	6	3	7	62
MCR-100 (7.62mm, Fixed, Brake, 22")	5	4	2-3-Nil	7	3	6	69
MCR-100 (7.62mm, Fixed, Brake, 24")	5	4	2-3-Nil	7	3	6	75
MCR-100 (7.62mm, Fixed, Brake, 30")	5	4	2-3-Nil	8	3	7	96
MCR-100 (7.62mm, Folding, Flash, 10.5")	5	3	2-Nil	3/5	2	6	24
MCR-100 (7.62mm, Folding, Flash, 14.5")	5	3	2-Nil	4/5	3	9	40
MCR-100 (7.62mm, Folding, Flash, 16.5")	5	4	2-Nil	4/6	3	9	49
MCR-100 (7.62mm, Folding, Flash, 18")	5	4	2-Nil	5/6	3	9	55
MCR-100 (7.62mm, Folding, Flash, 20")	5	4	2-3-Nil	5/6	3	9	62
MCR-100 (7.62mm, Folding, Flash, 22")	5	4	2-3-Nil	5/7	3	9	69
MCR-100 (7.62mm, Folding, Flash, 24")	5	4	2-3-Nil	6/7	4	9	75
MCR-100 (7.62mm, Folding, Flash, 30")	5	4	2-3-Nil	7/8	4	9	96
MCR-100 (7.62mm, Folding, Brake, 10.5")	5	3	2-Nil	3/5	2	5	24
MCR-100 (7.62mm, Folding, Brake, 14.5")	5	3	2-Nil	4/5	3	6	40
MCR-100 (7.62mm, Folding, Brake, 16.5")	5	4	2-Nil	4/6	3	6	49
MCR-100 (7.62mm, Folding, Brake, 18")	5	4	2-Nil	5/6	3	6	55

MCR-100 (7.62mm, Folding, Brake, 20”)	5	4	2-3-Nil	5/6	3	7	62
MCR-100 (7.62mm, Folding, Brake, 22”)	5	4	2-3-Nil	5/7	3	6	69
MCR-100 (7.62mm, Folding, Brake, 24”)	5	4	2-3-Nil	6/7	3	6	75
MCR-100 (7.62mm, Folding, Brake, 30”)	5	4	2-3-Nil	7/8	3	7	96
MCR-100 (9mm, Fixed, Flash, 10.5”)	5	2	1-Nil	5	1	3	23
MCR-100 (9mm, Fixed, Flash, 14.5”)	5	2	1-Nil	5	1	3	33
MCR-100 (9mm, Fixed, Flash, 16.5”)	5	2	1-Nil	6	1	2	38
MCR-100 (9mm, Fixed, Flash, 18”)	5	2	1-Nil	6	1	2	42
MCR-100 (9mm, Fixed, Flash, 20”)	5	2	1-Nil	6	1	2	48
MCR-100 (9mm, Fixed, Flash, 22”)	5	2	1-Nil	7	1	2	53
MCR-100 (9mm, Fixed, Flash, 24”)	5	2	1-Nil	7	1	2	57
MCR-100 (9mm, Fixed, Flash, 30”)	5	2	1-Nil	8	1	2	70
MCR-100 (9mm, Fixed, Brake, 10.5”)	5	2	1-Nil	5	1	2	23
MCR-100 (9mm, Fixed, Brake, 14.5”)	5	2	1-Nil	5	1	2	33
MCR-100 (9mm, Fixed, Brake, 16.5”)	5	2	1-Nil	6	1	2	38
MCR-100 (9mm, Fixed, Brake, 18”)	5	2	1-Nil	6	1	2	42
MCR-100 (9mm, Fixed, Brake, 20”)	5	2	1-Nil	6	1	2	48
MCR-100 (9mm, Fixed, Brake, 22”)	5	2	1-Nil	7	1	2	53
MCR-100 (9mm, Fixed, Brake, 24”)	5	2	1-Nil	7	1	2	57
MCR-100 (9mm, Fixed, Brake, 30”)	5	2	1-Nil	8	1	2	70
MCR-100 (9mm, Folding, Flash, 10.5”)	5	2	1-Nil	3/5	1	3	23
MCR-100 (9mm, Folding, Flash, 14.5”)	5	2	1-Nil	4/5	1	3	33
MCR-100 (9mm, Folding, Flash, 16.5”)	5	2	1-Nil	4/6	1	2	38
MCR-100 (9mm, Folding, Flash, 18”)	5	2	1-Nil	5/6	1	2	42
MCR-100 (9mm, Folding, Flash, 20”)	5	2	1-Nil	5/6	1	2	48
MCR-100 (9mm, Folding, Flash, 22”)	5	2	1-Nil	5/7	1	2	53
MCR-100 (9mm, Folding, Flash, 24”)	5	2	1-Nil	6/7	1	2	57
MCR-100 (9mm, Folding, Flash, 30”)	5	2	1-Nil	7/8	1	2	70
MCR-100 (9mm, Folding, Brake, 10.5”)	5	2	1-Nil	3/5	1	2	23
MCR-100 (9mm, Folding, Brake, 14.5”)	5	2	1-Nil	4/5	1	2	33
MCR-100 (9mm, Folding, Brake, 16.5”)	5	2	1-Nil	4/6	1	2	38
MCR-100 (9mm, Folding, Brake, 18”)	5	2	1-Nil	5/6	1	2	42
MCR-100 (9mm, Folding, Brake, 20”)	5	2	1-Nil	5/6	1	2	48
MCR-100 (9mm, Folding, Brake, 22”)	5	2	1-Nil	5/7	1	2	53
MCR-100 (9mm, Folding, Brake, 24”)	5	2	1-Nil	6/7	1	2	57
MCR-100 (9mm, Folding, Brake, 30”)	5	2	1-Nil	7/8	1	2	70
MCR-100 (.45, Fixed, Flash, 10.5”)	5	2	1-Nil	5	2	5	25
MCR-100 (.45, Fixed, Flash, 14.5”)	5	2	1-Nil	5	2	5	35
MCR-100 (.45, Fixed, Flash, 16.5”)	5	2	1-Nil	6	2	5	40
MCR-100 (.45, Fixed, Flash, 18”)	5	2	1-Nil	6	2	5	45
MCR-100 (.45, Fixed, Flash, 20”)	5	2	1-Nil	6	2	5	50
MCR-100 (.45, Fixed, Flash, 22”)	5	2	1-Nil	7	2	5	56
MCR-100 (.45, Fixed, Flash, 24”)	5	2	1-Nil	7	2	5	63
MCR-100 (.45, Fixed, Flash, 30”)	5	2	1-Nil	8	2	5	77
MCR-100 (.45, Fixed, Brake, 10.5”)	5	2	1-Nil	5	2	4	25
MCR-100 (.45, Fixed, Brake, 14.5”)	5	2	1-Nil	5	2	4	35
MCR-100 (.45, Fixed, Brake, 16.5”)	5	2	1-Nil	6	2	4	40
MCR-100 (.45, Fixed, Brake, 18”)	5	2	1-Nil	6	2	4	45
MCR-100 (.45, Fixed, Brake, 20”)	5	2	1-Nil	6	2	4	50
MCR-100 (.45, Fixed, Brake, 22”)	5	2	1-Nil	7	2	4	56
MCR-100 (.45, Fixed, Brake, 24”)	5	2	1-Nil	7	1	4	63
MCR-100 (.45, Fixed, Brake, 30”)	5	2	1-Nil	8	1	4	77
MCR-100 (.45, Folding, Flash, 10.5”)	5	2	1-Nil	3/5	2	5	25
MCR-100 (.45, Folding, Flash, 14.5”)	5	2	1-Nil	4/5	2	5	35
MCR-100 (.45, Folding, Flash, 16.5”)	5	2	1-Nil	4/6	2	5	40
MCR-100 (.45, Folding, Flash, 18”)	5	2	1-Nil	5/6	2	5	45
MCR-100 (.45, Folding, Flash, 20”)	5	2	1-Nil	5/6	2	5	50
MCR-100 (.45, Folding, Flash, 22”)	5	2	1-Nil	5/7	2	5	56
MCR-100 (.45, Folding, Flash, 24”)	5	2	1-Nil	6/7	2	5	63
MCR-100 (.45, Folding, Flash, 30”)	5	2	1-Nil	7/8	2	5	77

MCR-100 (.45, Folding, Brake, 10.5")	5	2	1-Nil	3/5	2	4	25
MCR-100 (.45, Folding, Brake, 14.5")	5	2	1-Nil	4/5	2	4	35
MCR-100 (.45, Folding, Brake, 16.5")	5	2	1-Nil	4/6	2	4	40
MCR-100 (.45, Folding, Brake, 18")	5	2	1-Nil	5/6	2	4	45
MCR-100 (.45, Folding, Brake, 20")	5	2	1-Nil	5/6	2	4	50
MCR-100 (.45, Folding, Brake, 22")	5	2	1-Nil	5/7	2	4	56
MCR-100 (.45, Folding, Brake, 24")	5	2	1-Nil	6/7	1	4	63
MCR-100 (.45, Folding, Brake, 30")	5	2	1-Nil	7/8	1	4	77
MCR-100 (.50, Fixed, Flash, 10.5")	5	4	1-2-Nil	5	2	6	24
MCR-100 (.50, Fixed, Flash, 14.5")	5	5	1-2-Nil	5	3	8	40
MCR-100 (.50, Fixed, Flash, 16.5")	5	6	1-2-Nil	6	3	8	49
MCR-100 (.50, Fixed, Flash, 18")	5	6	1-2-Nil	6	3	8	55
MCR-100 (.50, Fixed, Flash, 20")	5	6	1-2-3	6	3	8	65
MCR-100 (.50, Fixed, Flash, 22")	5	6	1-2-3	7	3	8	71
MCR-100 (.50, Fixed, Flash, 24")	5	6	1-2-3	7	3	8	78
MCR-100 (.50, Fixed, Flash, 30")	5	6	1-2-3	8	3	8	100
MCR-100 (.50, Fixed, Brake, 10.5")	5	4	1-2-Nil	5	2	4	24
MCR-100 (.50, Fixed, Brake, 14.5")	5	5	1-2-Nil	5	2	6	40
MCR-100 (.50, Fixed, Brake, 16.5")	5	6	1-2-Nil	6	2	6	49
MCR-100 (.50, Fixed, Brake, 18")	5	6	1-2-Nil	6	3	6	55
MCR-100 (.50, Fixed, Brake, 20")	5	6	1-2-3	6	2	6	65
MCR-100 (.50, Fixed, Brake, 22")	5	6	1-2-3	7	3	6	71
MCR-100 (.50, Fixed, Brake, 24")	5	6	1-2-3	7	2	6	78
MCR-100 (.50, Fixed, Brake, 30")	5	6	1-2-3	8	2	6	100
MCR-100 (.50, Folding, Flash, 10.5")	5	4	1-2-Nil	3/5	2	6	24
MCR-100 (.50, Folding, Flash, 14.5")	5	5	1-2-Nil	4/5	3	8	40
MCR-100 (.50, Folding, Flash, 16.5")	5	6	1-2-Nil	4/6	3	8	49
MCR-100 (.50, Folding, Flash, 18")	5	6	1-2-Nil	5/6	3	8	55
MCR-100 (.50, Folding, Flash, 20")	5	6	1-2-3	5/6	3	8	65
MCR-100 (.50, Folding, Flash, 22")	5	6	1-2-3	5/7	3	8	71
MCR-100 (.50, Folding, Flash, 24")	5	6	1-2-3	6/7	3	8	78
MCR-100 (.50, Folding, Flash, 30")	5	6	1-2-3	7/8	3	8	100
MCR-100 (.50, Folding, Brake, 10.5")	5	4	1-2-Nil	3/5	2	4	24
MCR-100 (.50, Folding, Brake, 14.5")	5	5	1-2-Nil	4/5	2	6	40
MCR-100 (.50, Folding, Brake, 16.5")	5	6	1-2-Nil	4/6	2	6	49
MCR-100 (.50, Folding, Brake, 18")	5	6	1-2-Nil	5/6	3	6	55
MCR-100 (.50, Folding, Brake, 20")	5	6	1-2-3	5/6	2	6	65
MCR-100 (.50, Folding, Brake, 22")	5	6	1-2-3	5/7	3	6	71
MCR-100 (.50, Folding, Brake, 24")	5	6	1-2-3	6/7	2	6	78
MCR-100 (.50, Folding, Brake, 30")	5	6	1-2-3	7/8	2	6	100

Colt Carbines

Notes: Development of the AR-15/M16 into a carbine variant (with a mid-length barrel, unlike the CAR-15 and its ilk) began in the late 1960s; ironically, the first carbine variant was designed for civilian and police use instead of military use. The Model 605A had a 16-inch barrel and was based on the M16A1, complete with forward assist. Civilian versions had a solid stock and were rigged to fire on semiautomatic; police could get a version with a four-position folding stock and with full-auto capability. The police version also had the unusual feature (at the time) of having an additional selector lever position allowing for two-round bursts. The handguard was shortened appropriately, but still used a triangular cross-section with left and right handguard halves. A Model 605B version was also designed; this version had a 15-inch barrel, full-length handguards with just the muzzle and front sight stand protruding (which probably looked rather strange), the four-position selector, and the collapsible stock. Neither of these variants could use a bayonet or an underbarrel grenade launcher, and they used the prong-type flash suppressor. They also did not sell very well, though some small amounts were sold to civilians and police departments.

The Model 651 was designed shortly thereafter; it was based on the M16A1, and had a solid stock and a 14.5-inch barrel tipped with a prong-type flash suppressor. The Model 651 was designed primarily for export but I have not been able to find out how many sales were made. The Model 652 is basically identical, but has no forward assist. The Model 653 and 654 are identical to the Models 651 and 652 respectively, except for their collapsible stock. The Model 653 was also license-built in the Philippines; these were known as the Model 653P.

The M4 is a cut down carbine version of the M16A2. This weapon, unlike most of the M16-based carbines and short assault rifles, can mount the M203. The weapon was designed for paratroopers and special ops troops, to allow them to jump with their weapon uncased (for faster access during combat jumps), as well as to replace the M9 pistol in some roles, but is becoming the standard

assault rifle in many other types of US units as well. The British SAS and SBS also use a large amount of M4s, particularly the M4 SOPMOD.

Operation of the M4 is essentially the same as that of the M16A2 (in fact, they share a receiver and its internal components), but the barrel is 14.57 inches long (officially, 14.5 inches long). The barrel is tipped with the same flash suppressor as the M16A2, and fires on semiautomatic or three-round bursts. The stock is a four-position sliding one, with a lever on the underside of the buttstock allowing for this sliding. The M4A1 is essentially the same weapon, but has the burst-fire mechanism replaced by a full auto setting. There is also a version of the M4 (alternatively called the M4A1E1, M16A3 carbine, Colt Model 923, and M4A2), which is an M4, complete with the burst mechanism, but the carrying handle replaced with a MIL-STD-1913 rail. Another version of this carbine as the burst mechanism replaced with a full-auto setting, but I don't know what official designations have been given to this version. In the charts below, I call them the M4A1E1 and M4A1E2.

With US special ops units using the M4A1 variant so much, the US Navy Special Warfare Center developed the SOPMOD kit for the M4A1 (which will also fit any of the M4 series). The M4 SOPMOD replaces the carrying handle with a MIL-STD-1913 rail, and a RIS (Rail Interface System) replaces the standard handguards, providing four more MIL-STD-1913 rails where the standard handguard was. This allows the M4 SOPMOD to mount a dizzying array of accessories and optics, as well as items such as an underbarrel grenade launcher or shotgun kit. The types of accessories are limited only by the imagination of the shooter and what the mission calls for. (The player who is equipped with an M4 SOPMOD may choose up to $300 of accessories for his rifle, and these are included in the cost.)

The Model 723 is based on the M4; it shares the M4's general features, but has M16A1-type sights and a slightly-longer 14.57-inch barrel. The Model 723 is also built to the same standards as an M4 SOPMOD model. As with the M4 SOPMOD, the player may choose $300 worth of accessories for his Model 723 as part of the cost of the weapon. Though primarily exported to the United Arab Emirates, it also used in small numbers by US Special Forces (reportedly actually Delta Force) under unknown circumstances.

Clones of the M4 are legion, with and without sliding stocks (most have sliding stocks). They can have literally innumerable differences, ranging from stocks to pistol grips to bipods to MIL-STD-1913 rails. One common one uses a 16-inch barrel, and this is listed below. They may be semiautomatic civilian/police versions, or full-auto or burst capable. Pick an analogue from the list below.

An increasing number of companies are making M4s (and their civilian counterparts) chambered for 6.8mm SPC. For the most part they are identical to the standard M4/M4A1/Civilian M4, except for the caliber. As with standard M4 clones, civilian and most law-enforcement versions have 16-inch barrels and military and some LE versions use the 14.5-inch barrel. (Civilian versions often have a fixed stock; subtract $20 from the cost and use the higher of Bulk figures.) They are also internally somewhat different from the standard M4 clone. A smaller amount make these clones chambered for 6.5mm Grendel; these normally require bigger changes to the guts and to the magazine well, and it's often not a simple lower receiver change. Finally, a large amount of companies are offering M4 clones which use a gas piston system instead of the direct gas impingement system of the standard M4; unfortunately, this is difficult to simulate in game terms, though there are some benefits in the area of cleaning, maintaining cleanliness of the internal parts and chamber, and a small increase in accuracy.

Since the early 1990, Colt has made, in addition to their standard series of Military/Police carbines that fire on automatic as well as semiautomatic, versions designed for civilians and by police. Some of these include the LE (Law Enforcement) series. These LE series, though available to civilians, have a number of features aimed primarily at police interests. The LE-6040 is short of a base member of the series, finished in black for metal surfaces as well as the synthetic stock and furniture. Like all of this series, the bore is chromed; for the LE-6040, the barrel has standard width (for an A2), and has a 16.1 inch barrel tipped with an A2 flash suppressor. Atop the receiver is a MIL-STD-1913 rail, with one that extends down the upper part of the handguards and becomes continuous with the receiver rail. Under the handguard is another rail that extends down the entire handguard, similar rails extend down the sides of the handguards. BUIS are standard, flip-up sight duplicating the standard AR-15A2 sights. Handguards, the sliding stock, pistol grip, forward pistol grip, and the BUIS are all made by Magpul and except for the BUIS, a part of the MOE system. The LE-6040P is essentially the same weapon, but used a gas piston instead of a direct gas system. It's a smidgeon heavier, but performs the same. The LE-6920SOCOM is also virtually the same, but retains the standard AR-style front sight, AR-compatible folding rear sight, and M4-type sliding stock. Again, it is slightly heavier, but performs the same. Though the LE-6920 technically begat the LE-6920SOCOM, the LE-6920 is in fact a Plain-Jane carbine with the exception of the Magpul MOE stock and pistol grip. It has the same weight as the LE-6920, but costs slightly less.

And the LE Series gets more exotic with the LE-6920MP-FDE.The FDE has a short handguard with a single MIL-STD-1913 rail under the handguard and a supplied handguard. (A bipod could also be mounted.) Atop the receiver is another rail. The front A2 post is retained, but the rear sight is a flip-up sight that works similar to that of an AR-15A2. Furniture is by Magpul and is part of their MOE collection. Furniture and magazines may be desert tan-colored if desired, but the rest is matte black. The FDE has the same weight as the LE-6940, so despite increases in utility, it is otherwise identical to the LE-6090P for game purposes.

The AR Series also continued beyond the AR-10, though far later. The AR-6270 is sort of a modernized AR-15A1, and designed for both utility and light weight. It uses a light-profile 16.1-inch barrel equipped with an A2 flash suppressor. The top of the receiver has a MIL-STD-1913 rail, with a flip up BUIS. The front sight is a conventional A2 post. The stock and pistol grip are by Magpul. The AR-6721 is designed both to be a patrol carbine and a light tactical sharpshooting weapon; the barrel profile is heavy and the barrel free-floating. A MIL-STD-1913 Rail is atop the receiver, with a further short length extending about a third of the way down the top side of the handguard. The front sling swivel doubles as a bipod mount. The Magpul MOE stock and pistol grip are retained. The carrying handle which comes with the AR-6721 is removable. The AR-6450 is a pistol cartridge-firing carbine, a conventional AR is most ways, except the changes required for its operation (mostly a change to blowback operation and firing from a closed bolt). The

AR-6450 retains its 16.1" barrel, A2-type flash suppressor, and Magpul MOE stock.

Twilight 2000 Notes: Airborne, special ops, and some Marine units will have these weapons; most other units will not.

Merc 2000 Notes: The M4 has worked its way into a lot of NATO and US units, and a civilianized version is also available. Civilian versions often have a fixed stock, and sometimes are not equipped with a flash suppressor; they usually don't have bayonet lugs, either.

Weapon	Ammunition	Weight	Magazines	Price
Model 605A (Civilian)	5.56mm NATO	2.07 kg	20, 30	$565
Model 605A (Police)	5.56mm NATO	2.07 kg	20, 30	$767
Model 605B	5.56mm NATO	2.05 kg	20, 30	$757
Model 651	5.56mm NATO	2.07 kg	20, 30	$549
Model 652	5.56mm NATO	2.02 kg	20, 30	$549
Model 653	5.56mm NATO	2.07 kg	20, 30	$569
Model 654	5.56mm NATO	2.02 kg	20, 30	$569
M4/M4A1/M4A1E1	5.56mm NATO	2.52 kg	20, 30	$570
M4 SOPMOD	5.56mm NATO	2.6 kg (base)	20, 30	$878
M4A1E2	5.56mm NATO	2.54 kg	20, 30	$575
Model 723	5.56mm NATO	2.6 kg (base)	20, 30	$883
LE-6940	5.56mm NATO	3.08 kg	5, 10, 20, 30	$593
LE-6940P	5.56mm NATO	3.13 kg	5, 10, 20, 30	$593
LE-6920SOCOM	5.56mm NATO	3.18 kg	5, 10, 20, 30	$593
LE-6920	5.56mm NATO	3.18 kg	5, 10, 20, 30	$587
AR-6270	5.56mm NATO	2.81 kg	5, 10, 20, 30	$592
AR-6721	5.56mm NATO	3.31 kg	5, 10, 20, 30	$597
AR-6450	9mm Parabellum	2.86 kg	10, 20, 30	$302
M4 Clone (16" Barrel)	5.56mm NATO	2.55 kg	20, 30	$585
M4 Clone (16" Barrel)	6.8mm SPC	2.82 kg	20, 30	$724
M4 Clone (14.5 Barrel)	6.8mm SPC	2.77 kg	20, 30	$708
M4 Clone (16" Barrel)	6.5mm Grendel	2.7 kg	20, 30	$666
M4 Clone (14.5 Barrel)	6.5mm Grendel	2.65 kg	20, 30	$640

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 605A (Civilian)	SA	3	1-Nil	6	3	Nil	39
Model 605A (Police)	2/5	3	1-Nil	4/6	3	3/9	39
Model 605B	2/5	3	1-Nil	4/5	3	3/9	36
Model 651	5	3	1-Nil	5	3	7	34
Model 652	5	3	1-Nil	5	3	8	34
Model 653	5	3	1-Nil	4/5	3	7	34
Model 654	5	3	1-Nil	4/5	3	8	34
M4/M4A1E1	3	3	1-Nil	4/5	3	4	34
M4A1/M4A1E2	5	3	1-Nil	4/5	3	7	34
M4 SOPMOD	5	3	1-Nil	4/5	3	7	38
Model 723	5	3	1-Nil	4/5	3	7	36
LE-6940	SA	3	1-Nil	4/6	2	Nil	41
AR-6270	SA	3	1-Nil	4/6	3	Nil	40
AR-6721	SA	3	1-Nil	4/6	2	Nil	42
AR-6450	SA	2	1-Nil	3/5	1	Nil	36
M4 Clone (16")	3 or 5	3	1-Nil	4/5	3	4 or 7	40
M4 Clone (16", 6.8mm)	5	3	1-2-Nil	5/6	3	7	54
M4 Clone (14.5", 6.8mm)	5	3	1-2-Nil	4/6	3	7	46
M4 Clone (16", 6.5mm)	5	3	1-1-Nil	4/6	3	7	53
M4 Clone (14.5", 6.5mm)	5	3	1-1-Nil	4/5	3	7	46

Colt M16 Assault Rifle Series

Notes: This is the standard combat rifle of the US, as well as having been used or being used by over 50 other armies. The M16 rivals the AK-series for widespread use. The M16 is an effective and popular weapon, but is a bit sensitive to dirt. The M16 was originally designed by the small arms genius Eugene Stoner, based on the AR-10's action and a development of the .222 Remington round, which was designed to fall in range, penetration, and wounding potential somewhere between the 7.62mm NATO round and the .30 Carbine round. The US Army had expressed a desire (against the wishes of the DoD) as early as 1957 for a light rifle to replace the M14 as its standard assault rifle, which had already proven to be too heavy for regular troop use and uncontrollable in automatic fire. The prototypes went through several iterations based upon troop and small-arms-expert evaluations. Different

ammunition types also were tried, and the AR-15 (as the M16 was called at the time by Stoner) also faced fierce opposition from the DoD's Chief of Ordinance, who wanted to stick with the M14. This meant that official adoption, first by the USAF, did not occur until 1962, who issued it to their security troops), and later that year, for use by SEAL and Special Forces advisors in Vietnam.

Since the SPIW program essentially produced nothing acceptable to the military, Secretary McNamara finally intervened and told the Army to accept the M16, first for special ops, airborne, Air Cav, and air assault troops, and then later for the Army and Air Force in general. This crash program unfortunately led to quality control problems, which were only partially rectified.

The original M16 contained most of the features which became standard on future M16s. It uses the now-standard 20-inch length barrel, though the flash suppressor is slightly different than on later models (though still of the slotted type), and is also made of light alloy instead of the steel of later models. It has no forward assist, and the chamber and barrel are not chromed, which led to quick corrosion and fowling in Vietnam's climate. (Air Force Security troops, for the most part not operating in such environments or in the bush, didn't really have this problem.) At the time of issue, the M16 was still using the IMR Ball propellant recommended by Eugene Stoner, which also greatly decreased fouling and corrosion.

The M16A1 is perhaps the most common version of the M16. The original M16A1s quickly suffered from not being used with IMR Ball propellant (instead, the military decided to go with a much cheaper propellant that caused much more fouling and corrosion, and though they later changed to better-quality propellant, it still did not match the quality of the original IMR Ball propellant), a myth that sprang up among soldiers that the M16A1 didn't require any regular cleaning, and a barrel and chamber that corroded rapidly. Thus, the M16A1 quickly gained a reputation of jamming, usually at the wrong moment. The problems with corrosion were largely fixed by chroming the chamber and barrel. The M16A1 also introduced the forward assist, which is sort of plunger that can be used to fully close the bolt when the M16A1 is fouled inside the receiver or otherwise does not seat properly. (This feature as added at the insistence of the Army and Marines; the USAF also has some M16A1s, but most of them don't have forward assists, and are often mistaken for original M16s.) The T-bar charging handle was made wider, the slotted flash suppressor was changed to steel construction (and later changed to the now-familiar birdcage pattern), and the magazines were changed from steel to an aluminum alloy (including a new 30-round magazine introduced in 1969). Most of the problems experienced with the M16A1 can be traced back to improper maintenance (personally, even though I have always cleaned my weapons *thoroughly,* have always had problems with extraction failures on both the M16A1 and A2, however, as did many of my fellow soldiers). The recoil buffer had mass added, which both curbed the too-high cyclic rate and also corrected a problem where the bolt tended to literally "bounce" inside the receiver, resulting in a bolt which did not close properly. It should be noted that in addition to Colt, many M16A1s were manufactured by GM's Hydra-Matic division and Harrington & Richardson. (The M16A1s built by these two alternate manufacturers actually turned out to be superior in quality to those manufactured by Colt!) The M16A1 has turned up in some strange places; for example, leftist rebels in Nicaragua, El Salvador, and Guatemala were often encountered with it. The serial numbers on the captured M16A1s were traced to weapons lost or abandoned in Vietnam before US involvement in that country ended. In addition, some 30+ countries are licensed to manufacture the M16A1, so they may be encountered pretty much all over the globe.

Though the US Army was satisfied with the M16A1, the Marines were not. In 1980, they began to tinker with the M16A1, producing the M16E1A1, which eventually resulted in the M16A2, which was adopted by the Marines in 1983. Changes made for the M16A2 included better chroming for the chamber and barrel, a change to a 1:7 rifling twist (from 1:12) to suit the superior SS-109 ammunition which had been developed by FN and Heckler & Koch, the omission of the bottom slot from the flash suppressor (allowing it to function as sort of a partial muzzle brake), and a small block added behind the ejection port to deflect hot brass away from left-handed shooters (hot brass often ends up in the shirts or face of left-handed shooters of the M16 and M16A1). The handguard was changed from its triangular cross-section to a round, ribbed cross section; this is not only ergonomically better, but simplifies the supply chain by eliminating the need to have left and right handguard sections. They also dissipate heat better. The pistol grip was also redesigned, with finger swells. The formerly solid polymer stock was replaced with a fiberglass/nylon composite which is filled nylon foam, which helps counteract the fact that the M16A2 is heavier elsewhere, and is also far stronger than the original stock. The rear sight is replaced by one which allows adjustments for windage and elevation by simple dials (on the M16A1, windage adjustments had to be made by sticking the point of a bullet or other object into holes in the adjustment dials, and elevation was done on the front post in the same manner). Perhaps the most controversial change was the fire selector; the capability for fully automatic fire was replaced with a 3-round burst feature, with a cyclic rate so high that the recoil from the first round is not felt until the third round is already out of the barrel. The barrel is the subject of more misunderstanding than anything else on the M16A2; it is roughly double the thickness, but only at about the last third of the barrel. Many think this is to increase accuracy (untrue), to increase heat dissipation (mostly true), and to stiffen the barrel (a little bit true). However, the primary reason for this thickening is a reflection of grunt mentality; the primary reason this was done is to stop soldiers from bending the barrel when using their rifle as an ad hoc crowbar.

The US Army was originally quite reluctant to accept the M16A2; they did not want to have to switch to SS-109 ammunition since they had mountains of old M193, and they did not like the burst fire mechanism, as they felt that the ability to produce massive quantities of firepower increased the confidence and morale of its troops. (In essence, they were underestimating their soldiers.) Ironically, a version of the M16A2 was made with full-auto capabilities, but they were built only for export as the request of certain customers, and not used by the US military. However, in 1985, they were basically forced by the Pentagon to adopt the M16A2. In addition to the full-auto M16A2 mentioned above, other versions built for specific export customers include an M16A2 with full auto features as well as M16A1-type sights, and an M16A2 with a medium-weight M16A1-type barrel.

The M16A3 is identical to the M16A2 but has a removable carrying handle that is mounted on a MIL-STD-1913 (for better mounting of optics) and is without burst control. This version is the current standard version of the M16A1 for the US Army and Marines, and is often seen with an ACOG-type sight mounted on the rail rather than standard iron sights. The M16A3 also restores the full-automatic

feature to the M16, in lieu of the 3-round burst feature. The M16A4 is identical to the M16A2 except for the removable carrying handle and MIL-STD-1913 rail, and uses the selector with the 3-round burst feature.

Other variants of note include the AR-15 HB, also known as the Model 606 or Heavy Assault Rifle M1. The "HB" stood for Heavy Barrel;" the AR-15 HB was a variant of the M16A1 designed for use as a squad automatic weapon or as a weapon for what would now be called a designated marksman. The AR-15 HB could take a detachable version of the BAR's bipod or a standard scissors bipod. The Model 606A was essentially simply a heavier-barreled M16A1, and the Model 606B was the same weapon, but with an additional selector position to allow burst fire. Only a few hundred were built, primarily for field and combat evaluation use.

The AR-15, AR-15A1, AR-15A2, and AR-15A3 are civilian versions of the M16/M16A1/M16A2/M16A3; they cannot mount a bayonet, and usually have been "fixed" so that a conversion to automatic fire is beyond the abilities of normal gun owners or even armorers of normal skills. Those few versions built during the Assault Weapons Ban period (even variants built by other companies) usually have no flash suppressor, and were sold with 5 or 10-round magazines (though they can still accept any sort of M16-type magazine).

Though many special variants of the AR-15 have been made (most by private gunsmiths), some of them include the AR-15 HBAR (Model 611), which is a civilian variant of the AR-15 HB above; it has no bayonet lug nor a forward assist. The Model 611P is a Model 611 built in the Philippines, and the Model 621, which was built for export but is otherwise identical to the standard AR-15 HBAR. The AR-15A2 HBAR (Model 737) is based on the AR-15A2, with the heavier barrel (essentially, the barrel is heavy throughout its length, instead of just the last third); however, it uses M16A1-type sights. The AR-15A2 Delta HBAR (Model 741) replaces the carrying handle and rear sight with a special mount for a Colt-designed rubber-armored 3-9x sight, and an ambidextrous raised cheekpiece (with an undercut for pulling back the charging handle). The Delta HBAR was introduced in 1987, but was produced for little over a year. The AR-15A3 HBAR (Model 941) is basically the same as the AR-15A2 HBAR, but has a MIL-STD-1913 rail instead of a carrying handle.

Like the M4, there have been many accessories designed for the M16 series, ranging from new handgrips to different flash suppressors or even firing different ammunition. The first underbarrel grenade launcher, the M203, was designed specifically for the M16A1.

Meanwhile, in Iraq and Afghanistan, the Army and Marines have been using specialist versions of the M16A3; the Army calls theirs the SDMR (Squad Designated Marksman Rifle), while the Marines call it the SAMR (Squad Advanced Marksman Rifle). These are "semi-sniper rifles," designed for sharpshooters assigned to squads of troops who are not trained as full snipers. The SDMR itself comes in two models – most are in fact based on the M16A3, but the 82nd Airborne and 101st Air Assault Divisions employ many that are based on a flattop version of the M4 Carbine. (It should be noted that DPMS Panther also makes a civilian model of the SDMR, which is virtually identical.) The SDMR and SAMR use a heavy, match-quality barrel, and the carrying handle is replaced by a MIL-STD-1913 rail which extends from the receiver to the front sight post. No rear iron sights are normally used, but can be added to the rail. The front sight can also be removed as required. The barrel is 20 inches long and is free-floating, but uses a 1:8 twist to accommodate both standard SS-109 ammunition and match-quality rounds, and is made from stainless steel. The trigger and fire mechanism has been replaced by a two-stage match trigger, and the SDMR and SAMR are semiautomatic-only weapons. On the handguards is mounted a Harris S-L light bipod, adjustable for height and cant. The M4-based version is identical except for the 14.5-inch barrel. The cost of these weapons below include a compact telescopic sight.

Not truly an assault rifle, the AR-15A2 MT-6700 is an AR-15A2 designed for target shooting. Only a few hundred were produced. The MT-6700 used a 20-inch heavy barrel tipped with a muzzle brake, and a MIL-STD-1913 rail atop the receiver. A detachable carrying handle/rear sight is included.

In Vietnam, the US Navy SEALs sometimes used a specialist version of the M16A1 called the Mk 4 Mod 0. This was an M16A1 with a modified barrel which mounted the Mk 2 Mod 0 Blast Suppressor, producing a suppressed M16A1. The weapon was also treated for better corrosion resistance, particularly in salt water. The Mk 2 Mod 0 suppressor was designed for quick emptying of water after being submerged, and water would completely empty within eight seconds. The action was also modified, as the Mk 2 Mod 0 suppressor vented gas directly into the action, and a deflector was also added to the ejection port and the charging handle to prevent gas from being vented into the shooter's face. The suppressor was permanently mounted, as the action would not cycle if the suppressor was removed. Descendants of the Mk 4 Mod 0 are still used today by SEALs, though these are new-build weapons and not the original Vietnam issues.

Like the Colt Carbine, clones of the M16 and AR-15 abound. You can basically pick one below as an analogue. I have also included stats for an 18, 22, and 24" standard-weight barrel, with fixed stock. Other stats may be inferred from other versions; on the average, a sliding stock increases cost by $20 and reduces Bulk when closed by two steps.

An increasing number of companies are making M16s (and their civilian counterparts) chambered for 6.8mm SPC. For the most part they are identical to the standard AR-15/M16, except for the caliber. A smaller amount make these clones chambered for 6.5mm Grendel; these normally require bigger changes to the guts and to the magazine well, and it's often not a simple lower receiver change. Finally, a large amount of companies are offering M4 clones which use a gas piston system instead of the direct gas impingement system of the standard M4; unfortunately, this is difficult to simulate in game terms, though there are some benefits in the area of cleaning, maintaining cleanliness of the internal parts and chamber, and a small increase in accuracy.

Stag 15 has made its name on left-handed versions of civilian (and some say, limited military use) versions of the AR-15 and civilian versions of the M4. However, Stag 15 also makes right-handed versions now.

Twilight 2000 Notes: The M16A3 and A4 do not exist in as great a quantity in the Twilight 2000 timeline as in the real world; nor does the AR-15A3 and its HBAR variant. The SDMR and SAMR *were* in fact made in the Twilight 2000 timeline, both in the US and

by local armorers; however, in the Twilight 2000 timeline, they are called the M16A3E1 and M4E1.

Weapon	Ammunition	Weight	Magazines	Price
M16	5.56mm NATO	3.1 kg	10, 20, 30	$606
M16A1	5.56mm NATO	3.18 kg	10, 20, 30	$611
M16A2	5.56mm NATO	3.4 kg	10, 20, 30	$616
M16A3/A4	5.56mm NATO	3.43 kg	10, 20, 30	$626
AR-15 HB	5.56mm NATO	3.57 kg	10, 20, 30	$1088
AR-15	5.56mm NATO	3.1 kg	5, 10, 20, 30	$600
AR-15A1	5.56mm NATO	3.18 kg	5, 10, 20, 30	$605
AR-15A2 (Ban Version)	5.56mm NATO	3.37 kg	5, 10, 20, 30	$600
AR-15A2 (Pre and Post Ban)	5.56mm NATO	3.4 kg	5, 10, 20, 30	$610
AR-15A3	5.56mm NATO	3.43 kg	5, 10, 20, 30	$620
AR-15 HBAR	5.56mm NATO	3.42 kg	5, 10, 20, 30	$605
AR-15 Delta HBAR	5.56mm NATO	3.62 kg	5, 10, 20, 30	$805
SDMR/SAMR	5.56mm NATO	4.64 kg	10, 20, 30	$1305
SDMR (M4-Based)	5.56mm NATO	4.42 kg	10, 20, 30	$1148
AR-15A2 MT-6700	5.56mm NATO	3.86 kg	5, 10, 20, 30	$659
Mk 4 Mod 0	5.56mm NATO	3.55 kg	10, 20, 30	$685
M16/AR-15 Clone (18" Barrel)	5.56mm NATO	3.34 kg	10, 20, 30	$585
M16/AR-15 Clone (22" Barrel)	5.56mm NATO	3.46 kg	10, 20, 30	$627
M16/AR-15 Clone (24" Barrel)	5.56mm NATO	3.51 kg	10, 20, 30	$647
M16/AR-15 Clone (18" Barrel)	6.8mm SPC	3.71 kg	10, 20, 30	$725
M16/AR-15 Clone (20" Barrel)	6.8mm SPC	3.74 kg	10, 20, 30	$745
M16/AR-15 Clone (22" Barrel)	6.8mm SPC	3.84 kg	10, 20, 30	$766
M16/AR-15 Clone (24" Barrel)	6.8mm SPC	3.9 kg	10, 20, 30	$787
M16/AR-15 Clone (18" Barrel)	6.5mm Grendel	3.56 kg	10, 20, 30	$656
M16/AR-15 Clone (20" Barrel)	6.5mm Grendel	3.59 kg	10, 20, 30	$677
M16/AR-15 Clone (22" Barrel)	6.5mm Grendel	3.69 kg	10, 20, 30	$698
M16/AR-15 Clone (24" Barrel)	6.5mm Grendel	3.74 kg	10, 20, 30	$718

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
M16/M16A1	5	3	1-Nil	6	3	6	55
M16A2/A4	3	3	1-Nil	6	2	4	55
M16A3	5	3	1-Nil	6	2	6	55
AR-15 HB	5	3	1-Nil	6	2	6	57
(With Bipod)	5	3	1-Nil	6	1	3	74
AR-15/AR-15A1	SA	3	1-Nil	6	3	Nil	55
AR-15A2/A3	SA	3	1-Nil	6	2	Nil	55
AR-15 HBAR	SA	3	1-Nil	6	2	Nil	57
AR-15 Delta HBAR	SA	3	1-Nil	6	2	Nil	57
SDMR/SAMR	SA	3	1-Nil	6	2	Nil	59
With Bipod	SA	3	1-Nil	6	1	Nil	77
SDMR (M4-Based)	SA	3	1-Nil	4/6	2	Nil	37
With Bipod	SA	3	1-Nil	4/6	1	Nil	48
AR-15A2 MT-6700	SA	3	1-Nil	6	2	Nil	59
Mk 4 Mod 0	5	2	1-Nil	6	2	5	41
M16 Clone (18")	5	3	1-Nil	6	2	6	47
M16 Clone (22")	5	3	1-Nil	7	2	6	63
M16 Clone (24")	5	3	1-Nil	7	2	6	70
M16 Clone (6.8mm, 18")	5	3	1-2-Nil	6	2	6	64
M16 Clone (6.8mm, 20")	5	3	1-2-Nil	6	3	6	74
M16 Clone (6.8mm, 22")	5	3	1-2-Nil	7	3	9	84
M16 Clone (6.8mm, 24")	5	3	1-2-Nil	7	3	9	92
M16 Clone (6.5mm, 18")	5	3	1-2-Nil	6	3	6	64
M16 Clone (6.5mm, 20")	5	3	1-2-Nil	6	3	6	72
M16 Clone (6.5mm, 22")	5	3	1-2-Nil	7	3	6	80
M16 Clone (6.5mm, 24")	5	3	1-2-Nil	7	3	6	87

Colt M16-Based Short Assault Rifles

Notes: There have probably been innumerable short and micro versions of the M16 built over the past 40 years, both for the US

and for (and in) other countries. Most of them are simply shortened M16s of various types built using different manufacturing methods, different stock lengths or pistol grips, or slightly different materials, but most of these conform to the other examples shown here.

The CAR-15/XM177 series is one of the more ubiquitous members of this sort of weapon. The first CAR-15 appeared in 1965 for use by US Army Special Forces in Vietnam, to give them a lighter carry weapon and one that was more suited to Vietnam's short-ranged combat. The original CAR-15 was simply an M16 with the barrel chopped in half to 10 inches. The prototypes had shorter versions of the M16A1's triangular handguards, but the ones that reached combat had round, ribbed handguards. The stock remained solid, but was shortened a little. Unfortunately, the flash suppressor remained the original prong-type, and that was its greatest problem -- the abbreviated barrel spat out a large amount of unburned powder, muzzle blast, and muzzle flash in general. In a firefight, the shooter became effectively deafened in a matter of seconds, and at night, blinded as well.

The US Air Force envisioned a version of the CAR-15 which could be carried disassembled in a pilot's survival pack (mostly by the pilots of heavy aircraft and helicopter crews). This had several variations from the CAR-15; the stock was a tubular fixed detachable stock 3 inches shorter than a standard M16 stock, the pistol grip was shortened, and the muzzle sported a cone-shaped flash hider. They were to have been issued with 10 or 20-round magazines. It was quickly judged that the CAR-15 Survival Rifle, as the weapon was known, was still too large a package to be carried in a pilot's bug-out pack.

The CAR-15 Survival Rifle was a non-starter, but Special Forces realized CAR-15 itself showed some promise, with a major overhaul. First, the prong-type flash suppressor was discarded in favor of a much larger flash/suppressor/muzzle brake that did a much better job of suppressing the muzzle blast and flash. Second, the stock of the CAR-15 Survival Rifle was greatly improved, turned into a four-position sliding stock, and fitted to the new weapon. Third, the pistol grip was restored to the standard length of an M16's pistol grip. This resulted in the XM177, also known as the CAR-15 Commando (the weapon was never released from its experimental designation, and was always a limited-issue weapon), and the GAU-5/A/A (the US Air Force's designation; at that time, three different designation systems were used, depending upon the branch of service using the weapon) which appeared in 1965. Like the Air Force's M16s, the XM177 had no forward assist. The GAU-5/A/A version that was first issued to the Air Force had a very stubby 9.8-inch barrel; problems with the GAU-5/A/A (primarily due to The XM177's Stoner-designed gas system for the M16 series not really being designed for a barrel of 10 inches or less without considerable modification) led quickly to the GAU-5/A/B, with a slightly longer 10-inch barrel. The GAU-5 was meant for issue to Air Force Security Police, but was primarily issued to the newly-forming elite Pararescue teams that were subsets of the PJs.

Shortly thereafter, the XM177E1 version appeared; this version was essentially the same as the GAU-5/A/B version of the XM177, but based upon an M16A1 receiver with its forward assist; there was also a slight weight difference. Though intended for special operations use, carrying an XM177E1 became a sort of status symbol among line officers and senior NCOs. In 1967, the barrel was lengthened to 11.5 inches, to reduce the amount of unburned powder and to increase the reliability of the weapon. This version was known as the XM177E2, which became the most common of the XM177/CAR-15 series. The XM177E2 was also capable of mounting the then-new M203 underbarrel grenade launcher. Collectively, the XM177 series was known as the Commando series. (Trivia note: Most of the time when people see pictures of troops in Vietnam or slightly later and think they are seeing a CAR-15, they are actually seeing an XM177E2.) The XM177E2 was primarily issued to special ops units, LRRPs, and such troops, and was rare in line units. The USAF also used a further modified version of the XM177E2, which they called the GAU-5P; this version had the barrel lengthened to 14.49 inches (making it more a carbine than a short assault rifle, but included here for completeness).

Functioning members of the XM177 series are today difficult to find; US special ops units continued to use them well into the 1980s, and many other XM177s were cannibalized to provide spare parts for other XM177s (Colt stopped producing XM177 parts in the 1970s), and most XM177s had been shot out by the time they were replaced.

Sometime after the advent of the M16A2, special ops again expressed a desire for a Commando variant of the M16A2. Though (as far as I can tell; I'm not quite sure on this, and I invite corrections), it was designated the M6 Carbine, it appears to be called simply the Commando or M16A2 Commando most of the time. It is based on the M4 Carbine, but has a shortened 11.5-inch barrel tipped with a standard M16A2/M4 flash suppressor. The 3-round burst mechanism was replaced with a full-auto sear, but there is also an M6A1 version with a 3-round burst feature instead of the full-auto feature. Though more modern propellants and cartridges lessen the muzzle flash and blast, this is reportedly a problem with these versions of the Commando. Lately, pictures from Iraq and Afghanistan have been seen showing troops armed with flat-topped Commandos with MIL-STD-1913 rails atop the receiver, but I don't know the designation of this version. (I have called it the M6A2 below.)

This brings us to a rather weird variant of the M16 series: the M231 Port Firing Weapon. (No, that's not backwards; that's the proper designation of the weapon.) This version was specifically designed for used from the firing ports of the Bradley series of Infantry Fighting Vehicles. In its early phases, the M231 program came down to the Colt version or a version of the Heckler & Koch HK-53, but in the interests of interoperability, the Colt version won out, and became the M231 PFW. The M231 has a 14.49-inch heavy barrel (primarily to minimize overheating) tipped with a standard M16A2 flash suppressor. Just ahead of the short handguard are wide threads which allow the M231 to be quickly screwed into the Bradley's firing point swivel ball. Sighting was meant to be done through primarily through the vision block above the firing ports, with the magazines of the M231 filled with tracers to allow the shooter to adjust his fire quickly. Feed is from standard M16 magazines, and internally, the M231 is for the most part the same as the M16A2. However, the M231 fires from an open bolt and the cyclic rate was greatly increased up to 1100-1200 rpm, to provide better suppressive fire. The right side of the M231 has integral attachment points for a canvas brass catcher. The design of this bag also allowed the fumes from firing the M231 to be vented outside of the Bradley. Though the infantrymen inside the Bradley also have M16A2s or M4s to grab when they exit the vehicle, the M231's could be quickly dismounted and used as conventional short assault

rifles if necessary. The M231 has no iron sights; the trough of the carrying handle is to be used as an emergency short-range sight when the M231 is dismounted. Early versions of the M231 were issued with a sliding wire stock for use if dismounted, and even a stock which clipped onto the buffer tube was experimentally tried. The wire stock (or a stock of any kind) was later discarded as being unnecessary, especially after the side firing ports of the Bradleys were plated over in the interests of adding more side armor.

Twilight 2000 Notes: The XM177E1 and E2 were rarely seen in military service by the time of the Twilight War, but they were later pulled out of storage and put to good use, mostly by Milgov and Civgov forces inside the US, despite their generally poor condition. The M231 had even wider use than was intended by the designers; they were often stripped from immobilized Bradleys and used as assault rifles by both military and civilian forces, often with the addition of stocks removed from non-functional M16s, M177s, CAR-15s, or M4s; M231s were also seen with homemade wooden stocks or sliding wire stocks.

Weapon	Ammunition	Weight	Magazines	Price
CAR-15	5.56mm NATO	2.85 kg	20, 30	$503
CAR-15 Survival Rifle	5.56mm NATO	2.18 kg	10, 20, 30	$493
XM177	5.56mm NATO	2.74 kg	20, 30	$569
XM177E1	5.56mm NATO	2.81 kg	20, 30	$569
XM177E2	5.56mm NATO	3.09 kg	20, 30	$584
GAU-5/A/A	5.56mm NATO	2.7 kg	20, 30	$567
GAU-5/A/B	5.56mm NATO	2.77 kg	20, 30	$567
GAU-5P	5.56mm NATO	2.89 kg	20, 30	$614
M6/M6A1	5.56mm NATO	2.44 kg	20, 30	$539
M6A2	5.56mm NATO	2.46 kg	20, 30	$544
M231 (With Stock)	5.56mm NATO	3.9 kg	20, 30	$569
M231 (No Stock)	5.56mm NATO	3.63 kg	20, 30	$544

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
CAR-15	5	2	1-Nil	5	2	6	19
CAR-15 Survival Rifle	5	2	1-Nil	4	3	7	19
XM177/XM177E1	5	2	1-Nil	3/5	2	5	19
XM177E2	5	2	1-Nil	3/5	2	5	24
GAU-5/A/A & GAU-5/A/B	5	2	1-Nil	3/5	2	5	18
GAU-5P	5	3	1-Nil	4/5	2	5	34
M6/M6A2	5	2	1-Nil	3/5	2	6	24
M6A1	3	2	1-Nil	3/5	2	4	24
M231 (With Stock)	10	3	1-Nil	4/5	2	10	34
M231 (No Stock)	10	3	1-Nil	4	2	12	28

Colt Expert 18

Notes: These two rifles were designed to be competition rifles, particularly in use by competitors in 3-Gun-type competitions where rapid speed, easy operation, and great potential accuracy are paramount. The Expert 18 (also known as the CRE-18) has, as the name would indicate, an 18-inch heavy free-floated stainless steel match-quality barrel, tipped with a muzzle brake; it is also fluted. The handguards are round with an enhanced gripping surface at the center of the handguards. There is an attachment just ahead of the handguards for the attachment of most bipods. Atop the receiver is a MIL-STD-1913 rail; there is no front sight and no provision for a BUIS. The upper and lower receiver is precision matched and forged, with the sliding stock being a Magpul design. The entire rifle is, in essence, hand-fitted. The handguards, gas block, and gas tube have been moved forward from that normally present on an 18” barrel to allow the installation of a gas tube normally used on a 20” barrel rifle. The trigger pack is a Geiselle match trigger group. Under the standard matte black finish is a Nickel-Teflon coating for weatherproofing.

The Pro 18 (also known as the CRP-18) is to a great extent similar to the Expert 18. The first difference one will notice is the handguards; they are designed for this rifle, and stretch a full 15 inches, almost shrouding the barrel and muzzle. The barrel, also 18 inches, is of stainless steel, custom-fitted, fluted, and free-floating. The gas block is adjustable without tool to allow the shooter to adjust to increasing fouling if necessary. Of course, the same muzzle brake as on the Expert 18 is found on the Pro 18. Atop the receiver is a MIL-STD-1913; this fits seamlessly with the rail that tops the handguard. The handguard is otherwise heavily ventilated with rows of slots. Construction is of the same grade as that of the Expert 18. The trigger is a two-stage trigger with a minimum of 3.5 pounds of pull weight. The stock, pistol grip, and handguards are Magpul designs.

Weapon	Ammunition	Weight	Magazines	Price
Expert 18	5.56mm NATO	3.08 kg	5, 10, 20, 30	$671
Pro 18	5.56mm NATO	3.18 kg	5, 10, 20, 30	$665

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Expert 18	SA	3	1-Nil	5/6	2	Nil	53
Pro 18	SA	3	1-Nil	5/6	2	Nil	51

Colt LE6920

Notes: As the designation indicates, the LE6920 is designed first with Law Enforcement concerns in mind, though it is also sold to civilians. The carbine is said to be extremely reliable, performs well, and is accurate for the length of its barrel. Colt's advertising says that the carbine "is the standard by which all Modern Sporting rifles and LE carbines are judged."

The basic version of the carbine is the LE6920 has a 16.1-inch barrel made of 4150CrMo/Van steel alloy which is Manganese Phosphate coated and black hard coated., and tipped with an A2-type flash suppressor; it has a military profile. The barrel, chamber, and barrel extension are, of course, chromed. The handguards are standard M4-type, and come apart in lower and upper halves; they have the attachment points for a permanently-mounted grenade launcher of the LE and military types. The handguards have polished aluminum heat shields. Up front is a standard M4-type permanently-attached, yet adjustable front sight. The top of the receiver has a monolithic MIL-STD-1913 rail, and the carbine comes with a Magpul MBUS rear sight, similar to the M4's rear sight. The receiver halves are black hard coat anodized. The stock is also an M4-type stock. The controls are not ambidextrous, but they can be reversed for left-handed shooters; the ejection port is unfortunately not reversible, so a block is permanently attached as a brass deflector. The pistol grip is an A2-type pistol grip. Operation is by direct impingement.

The LE6920MPS uses a Magpul MOE SL Handguard, which is diamond-shaped in profile and has three MLOK slots on the upper sides of the handguard and the bottom (2, 6, and 10 o'clock). The carbine comes with a vertical foregrip, which may be attached to any of the MLOK slots. Except for the black hard anodized receiver halves, the entire rifle is finished in gray polymer or Cerekote, though it may also be had in black. The barrel is the same barrel as used on the LE6920, and the controls are also reversible. The stock is also a part of the Magpul MOE SL collection., as is the pistol grip and vertical grip. The LE6920FDE is simply the same carbine with all but the receiver halves (black) and barrel and front sight (gray) finished in Flat Dark Earth. The two are identical for game purposes.

The LE6920 OEM1 and OEM2 are stripped versions for those who want to customized their carbines themselves, and have no stocks, pistol grips, or handguards. They will not be covered here.

The AR6951 is made to the same specifications, except instead of a military profile, it has a medium barrel profile. Accouterments and details are otherwise similar to the LE6920, except what is necessary for the different chambering, and a change to straight blowback operation. However, it cannot mount a grenade launcher.

Gunsmiths have noted that the barrel nut is virtually impossible to remove – one gunsmith said he had to use a cheater bar to remove it, which destroyed the thread on the nut. (When he got the new nut from Colt, he torqued it to only 50 pound-feet, which was perfectly adequate for holding the barrel in place with no loosening and with the ability to remove it with a normal barrel nut wrench.) Many shooters say the provided MBUS and front sight are adequate; some, however, say that the use of at least an ACOG-type sight is best. However, shooter note that the LE6920 series requires very little lubrication, even when dirty or after lots of firing. One shooter noted that standard motor oil is fine for lubrication of the LE6920.

The LE6920 series was introduced at the 2015 SHOY Show.

Weapon	Ammunition	Weight	Magazines	Price
LE6920	5.56mm NATO	2.85 kg	5, 10, 20, 30	$594
LE6920MPS	5.56mm NATO	3.15 kg	5, 10, 20, 30	$600
AR6951	9mm Parabellum	2.89 kg	10, 12, 25, 32	$309

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
LE6920	SA	3	1-Nil	4/6	3	Nil	41
LE6920MPS	SA	3	1-Nil	4/6	2	Nil	41
AR6951	SA	2	1-Nil	4/6	1	Nil	36

Christensen Arms CA15

Notes: The CA15 is an AR-15 clone with a few different twists; so far, no automatic/military version has been announced, though there are several semiautomatic variants for use by police and civilians. The real-world price of a CA15 is much higher than most AR-15 clones, but the CA15 has several new and different features that make it a more reliable, easy to use, and accurate version of the AR-15. The CA15 uses a push-rod gas piston operation, as many current AR-15/M16 clones are using, to reduce fouling and improve reliability. The gas block is Melonite-treated for extra durability and has a two-position setting to allow for continued reliability as the rifle's interior gets dirty. The inside of the upper receiver is plated with nickel-boron, which gives it extra durability and reduces the need for lubrication of the bolt carrier. The bolt carrier key is integral with the bolt carrier instead of being a separate part, which strengthens the bolt carrier and gives the CA15 one less part to fail. The bolt carrier group is beefy and designed to address bolt carrier tilt, which can be a reliability problem on other AR-15 clones. The upper and lower receivers are made of high-strength and low-weight 7075-T6 aluminum, though most of the interior and working parts are of steel. The nickel-boron finish of the receiver is a matte medium gray as standard, though other finishes are available; the bolt carrier group and other metal working parts actually have the same finish on them, but appear to be chromed in color due to the difference in finish color when applying the finish to aluminum or steel. The finish has a somewhat slick surface, reducing the need for internal lubrication and helping to keep the receiver clean externally. The receiver has an integral shell deflector, like the M16A2 and AR-15A2, though it extends outwards a bit more then on the AR-15A2 or M16A2. The upper receiver is topped with an integral MIL-STD-1913 rail; the CA15 is meant to be used with some sort of optic and has no iron sights unless the shooter attaches some to the rails. The selector lever operation, trigger action (which is

two-stage), and the operation of the charging handle is described as very smooth, much more so than most AR-15 clones. The Timney trigger pack can be adjusted by a gunsmith for length of pull and pull weight; standard pull weight is a light three pounds. The takedown pins have knobs on them to make them easier to remove, though the takedown pins themselves lock tight when pushed in.

The barrels are a heavy-profile, match-quality, floating barrels, which may be of different lengths depending upon the variant of the CA15. These barrels are tipped by a flash suppressor that is designed for use as both a rebar breaker (by putting the flash suppressor directly on the rebar section and firing) and a lock-blower. The barrels are also unusual in that they are made of carbon fiber with an internal steel sleeve; the object of the designers was to lighten the rifle as much as possible. This sleeve has a chromed bore, and the barrel extension is also chromed. The handguards are also of carbon fiber, and include a MIL-STD-1913 rail at the top of the handguard (extends the full length of the handguard) and one at the bottom of the handguard (extends halfway down the handguard from the front). These rails are integral to the handguards, and the top rail is continuous with the rail on top of the receiver. The pistol grip is also of carbon fiber, overmolded with a Hogue rubber design, and the magazines designed for use with the CA15 also have an outer shell of carbon fiber (though the CA15 can use any magazine that the AR-15/M16 series can use if chambered for 5.56mm NATO/.223). Assorted other parts, such as the selector lever, magazine release, charging handle, and takedown pins are also of carbon fiber. The selector lever and magazine release are ambidextrous, with both found on each side of the lower receiver in the same place; the bolt catch is still found only on left side, in the usual place. A buyer has several choices of stock: ACE fixed stock, ACE adjustable stock, Magpul CTR adjustable stock, the SCM fixed stock designed by Christensen Arms, and a standard M4-type adjustable stock. The SCM stock is designed to be light in weight and consists of a padded aluminum tube with a skeletonized butt on the end, and includes a rubber recoil pad (which has no effect in game terms due to the SCMStock-equipped CA15's lower base weight).

Variants of the CA15 include the Predator, which has a 20 or 24-inch barrel; receiver finishes may be matte gray, a tan color called by Christensen King's Desert Shadow, or a white finish called King's Snow Shadow. Four choices of chambering are available for the Predator. The Recon uses a 16-inch barrel, and is constructed otherwise like the Predator; it has five choices of chamberings (though .223/5.56mm NATO and .223 Wylde are identical for game purposes – though *not* in real world terms). In addition, the 6.5mm Grendel chambering is no longer being offered by Christensen Arms.

The CA10 Series is designed for larger calibers, and is available in four chamberings. The barrel is tipped by a compact muzzle brake, though this muzzle brake is not designed to be used as a rebar breaker like that of the CA15. The CA15 is generally longer and heavier, as well as more heavily-constructed, due to the heavier and more power cartridges for which it designed.

Twilight 2000 Notes: The CA15 is not available in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
CA15 Predator (20" Barrel, Fixed Stock)	.204 Ruger	2.49 kg	5, 10, 20	$564
CA15 Predator (20" Barrel, Fixed Stock)	5.56mm NATO	2.58 kg	5, 10, 20, 30	$615
CA15 Predator (20" Barrel, Fixed Stock)	6.5mm Grendel	2.7 kg	5, 10, 20	$687
CA15 Predator (20" Barrel, Fixed Stock)	6.8mm SPC	2.82 kg	5, 10, 20	$756
CA15 Predator (20" Barrel, Folding Stock)	.204 Ruger	2.49 kg	5, 10, 20	$594
CA15 Predator (20" Barrel, Folding Stock)	5.56mm NATO	2.58 kg	5, 10, 20, 30	$652
CA15 Predator (20" Barrel, Folding Stock)	6.5mm Grendel	2.7 kg	5, 10, 20	$725
CA15 Predator (20" Barrel, Folding Stock)	6.8mm SPC	2.82 kg	5, 10, 20	$794
CA15 Predator (20" Barrel, SCM Stock)	.204 Ruger	2.37 kg	5, 10, 20	$670
CA15 Predator (20" Barrel, SCM Stock)	5.56mm NATO	2.45 kg	5, 10, 20, 30	$728
CA15 Predator (20" Barrel, SCM Stock)	6.5mm Grendel	2.57 kg	5, 10, 20	$800
CA15 Predator (20" Barrel, SCM Stock)	6.8mm SPC	2.68 kg	5, 10, 20	$870
CA15 Predator (24" Barrel, Fixed Stock)	.204 Ruger	2.58 kg	5, 10, 20	$610
CA15 Predator (24" Barrel, Fixed Stock)	5.56mm NATO	2.66 kg	5, 10, 20, 30	$660
CA15 Predator (24" Barrel, Fixed Stock)	6.5mm Grendel	2.78 kg	5, 10, 20	$723
CA15 Predator (24"	6.8mm SPC	2.9 kg	5, 10, 20	$800

Barrel, Fixed Stock)				
CA15 Predator (24" Barrel, Folding Stock)	.204 Ruger	2.58 kg	5, 10, 20	$640
CA15 Predator (24" Barrel, Folding Stock)	5.56mm NATO	2.66 kg	5, 10, 20, 30	$690
CA15 Predator (24" Barrel, Folding Stock)	6.5mm Grendel	2.78 kg	5, 10, 20	$753
CA15 Predator (24" Barrel, Folding Stock)	6.8mm SPC	2.9 kg	5, 10, 20	$830
CA15 Predator (24" Barrel, SCM Stock)	.204 Ruger	2.45 kg	5, 10, 20	$716
CA15 Predator (24" Barrel, SCM Stock)	5.56mm NATO	2.53 kg	5, 10, 20, 30	$766
CA15 Predator (24" Barrel, SCM Stock)	6.5mm Grendel	2.64 kg	5, 10, 20	$829
CA15 Predator (24" Barrel, SCM Stock)	6.8mm SPC	2.76 kg	5, 10, 20	$906
CA15 Recon (Fixed Stock)	.204 Ruger	2.41 kg	5, 10, 20	$521
CA15 Recon (Fixed Stock)	5.56mm NATO/.223 Wylde	2.5 kg	5, 10, 20, 30	$570
CA15 Recon (Fixed Stock)	6.5mm Grendel	2.61 kg	5, 10, 20	$643
CA15 Recon (Fixed Stock)	6.8mm SPC	2.73 kg	5, 10, 20	$711
CA15 Recon (Folding Stock)	.204 Ruger	2.41 kg	5, 10, 20	$551
CA15 Recon (Folding Stock)	5.56mm NATO/.223 Wylde	2.5 kg	5, 10, 20, 30	$600
CA15 Recon (Folding Stock)	6.5mm Grendel	2.61 kg	5, 10, 20	$673
CA15 Recon (Folding Stock)	6.8mm SPC	2.73 kg	5, 10, 20	$743
CA15 Recon (SCM Stock)	.204 Ruger	2.29 kg	5, 10, 20	$627
CA15 Recon (SCM Stock)	5.56mm NATO/.223 Wylde	2.38 kg	5, 10, 20, 30	$676
CA15 Recon (SCM Stock)	6.5mm Grendel	2.49 kg	5, 10, 20	$749
CA15 Recon (SCM Stock)	6.8mm SPC	2.58 kg	5, 10, 20	$807
CA15 Predator (20" Barrel, Fixed Stock)	.243 Winchester	2.81 kg	5, 10, 20	$610
CA15 Predator (20" Barrel, Fixed Stock)	6.5mm Creedmoor	2.9 kg	5, 10, 20	$853
CA15 Predator (20" Barrel, Fixed Stock)	7.62mm NATO	3.25 kg	5, 10, 20	$1048
CA15 Predator (20" Barrel, Fixed Stock)	.338 Federal	3.47 kg	5, 10, 20	$1258
CA15 Predator (20" Barrel, Folding Stock)	.243 Winchester	2.81 kg	5, 10, 20	$640
CA15 Predator (20" Barrel, Folding Stock)	6.5mm Creedmoor	2.9 kg	5, 10, 20	$883
CA15 Predator (20" Barrel, Folding Stock)	7.62mm NATO	3.25 kg	5, 10, 20	$1088
CA15 Predator (20" Barrel, Folding Stock)	.338 Federal	3.47 kg	5, 10, 20	$1288
CA10 Predator (20" Barrel, SCM Stock)	.243 Winchester	2.67 kg	5, 10, 20	$716
CA10 Predator (20" Barrel, SCM Stock)	6.5mm Creedmoor	2.76 kg	5, 10, 20	$959
CA10 Predator (20" Barrel, SCM Stock)	7.62mm NATO	3.09 kg	5, 10, 20	$1164
CA10 Predator (20" Barrel, SCM Stock)	.338 Federal	3.3 kg	5, 10, 20	$1364
CA15 Predator (24" Barrel, Fixed Stock)	.243 Winchester	2.92 kg	5, 10, 20	$764
CA15 Predator (24"	6.5mm Creedmoor	3.02 kg	5, 10, 20	$791

Barrel, Fixed Stock)				
CA15 Predator (24" Barrel, Fixed Stock)	7.62mm NATO	3.38 kg	5, 10, 20	$1132
CA15 Predator (24" Barrel, Fixed Stock)	.338 Federal	3.61 kg	5, 10, 20	$1294
CA15 Predator (24" Barrel, Fixed Stock)	.243 Winchester	2.92 kg	5, 10, 20	$870
CA15 Predator (24" Barrel, Folding Stock)	6.5mm Creedmoor	3.02 kg	5, 10, 20	$923
CA15 Predator (24" Barrel, Folding Stock)	7.62mm NATO	3.38 kg	5, 10, 20	$1092
CA15 Predator (24" Barrel, Folding Stock)	.338 Federal	3.61 kg	5, 10, 20	$1325
CA15 Predator (24" Barrel, Folding Stock)	.243 Winchester	2.77 kg	5, 10, 20	$946
CA15 Predator (24" Barrel, SCM Stock)	6.5mm Creedmoor	2.87 kg	5, 10, 20	$1002
CA15 Predator (24" Barrel, SCM Stock)	7.62mm NATO	3.21 kg	5, 10, 20	$1238
CA15 Predator (24" Barrel, SCM Stock)	.338 Federal	3.43 kg	5, 10, 20	$1400
CA10 Recon (Fixed Stock)	.243 Winchester	2.71 kg	5, 10, 20	$753
CA10 Recon (Fixed Stock)	6.5mm Creedmoor	2.8 kg	5, 10, 20	$810
CA10 Recon (Fixed Stock)	7.62mm NATO	3.14 kg	5, 10, 20	$1044
CA10 Recon (Fixed Stock)	.338 Federal	3.36 kg	5, 10, 20	$1207
CA10 Recon (Folding Stock)	.243 Winchester	2.71 kg	5, 10, 20	$783
CA10 Recon (Folding Stock)	6.5mm Creedmoor	2.8 kg	5, 10, 20	$840
CA10 Recon (Folding Stock)	7.62mm NATO	3.14 kg	5, 10, 20	$1074
CA10 Recon (Folding Stock)	.338 Federal	3.36 kg	5, 10, 20	$1237
CA10 Recon (SCM Stock)	.243 Winchester	2.57 kg	5, 10, 20	$859
CA10 Recon (SCM Stock)	6.5mm Creedmoor	2.66 kg	5, 10, 20	$916
CA10 Recon (SCM Stock)	7.62mm NATO	2.98 kg	5, 10, 20	$1150
CA10 Recon (SCM Stock)	.338 Federal	3.19 kg	5, 10, 20	$1313

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
CA15 Predator (20" Barrel, Fixed Stock, .204)	SA	3	1-Nil	6	3	Nil	53
CA15 Predator (20" Barrel, Fixed Stock, 5.56mm)	SA	3	1-Nil	6	3	Nil	60
CA15 Predator (20" Barrel, Fixed Stock, 6.5mm)	SA	3	1-2-Nil	6	3	Nil	77
CA15 Predator (20" Barrel, Fixed Stock, 6.8mm)	SA	3	1-2-Nil	6	3	Nil	81
CA15 Predator (20" Barrel, Folding Stock, .204)	SA	3	1-Nil	5/6	3	Nil	53
CA15 Predator (20" Barrel, Folding Stock, 5.56mm)	SA	3	1-Nil	5/6	3	Nil	60
CA15 Predator (20" Barrel, Folding Stock, 6.5mm)	SA	3	1-2-Nil	5/6	3	Nil	77
CA15 Predator (20" Barrel, Folding Stock, 6.8mm)	SA	3	1-2-Nil	5/6	3	Nil	81
CA15 Predator (20" Barrel, SCM Stock, .204)	SA	3	1-Nil	5/6	3	Nil	53
CA15 Predator (20" Barrel, SCM Stock, 5.56mm)	SA	3	1-Nil	5/6	3	Nil	53
CA15 Predator (20" Barrel, SCM Stock, 6.5mm)	SA	3	1-2-	5/6	3	Nil	77

CA15 Predator (20” Barrel, SCM Stock, 6.8mm)	SA	3	1-2-Nil	5/6	3	Nil	81
CA15 Predator (24” Barrel, Fixed Stock, .204mm)	SA	3	1-Nil	7	3	Nil	66
CA15 Predator (24” Barrel, Fixed Stock, 5.56mm)	SA	3	1-Nil	7	3	Nil	74
CA15 Predator (24” Barrel, Fixed Stock, 6.5mm)	SA	3	1-2-Nil	7	4	Nil	93
CA15 Predator (24” Barrel, Fixed Stock, 6.8mm)	SA	3	1-2-Nil	7	4	Nil	98
CA15 Predator (24” Barrel, Folding Stock, .204)	SA	3	1-Nil	6/7	3	Nil	66
CA15 Predator (24” Barrel, Folding Stock, 5.56mm)	SA	3	1-Nil	6/7	3	Nil	74
CA15 Predator (24” Barrel, Folding Stock, 6.5mm)	SA	3	1-2-Nil	6/7	3	Nil	93
CA15 Predator (24” Barrel, Folding Stock, 6.8mm)	SA	3	1-2-Nil	6/7	3	Nil	98
CA15 Recon (Fixed Stock, .204)	SA	2	1-Nil	6	3	Nil	38
CA15 Recon (Fixed Stock, 5.56mm/.223 Wylde)	SA	3	1-Nil	6	3	Nil	43
CA15 Recon (Fixed Stock, 6.5mm)	SA	3	1-2-Nil	6	3	Nil	58
CA15 Recon (Fixed Stock, 6.8mm)	SA	3	1-2-Nil	6	3	Nil	58
CA15 Recon (Folding Stock, .204)	SA	2	1-Nil	4/6	3	Nil	38
CA15 Recon (Folding Stock, 5.56mm/.223 Wylde)	SA	3	1-Nil	4/6	3	Nil	43
CA15 Recon (Folding Stock, 6.5mm)	SA	3	1-2-Nil	4/6	3	Nil	58
CA15 Recon (Folding Stock, 6.8mm)	SA	3	1-2-Nil	4/6	3	Nil	58
CA15 Recon (SCM Stock, .204)	SA	2	1-Nil	4/6	3	Nil	38
CA15 Recon (SCM Stock, 5.56mm/.223 Wylde)	SA	3	1-Nil	4/6	3	Nil	43
CA15 Recon (SCM Stock, 6.5mm)	SA	3	1-2-Nil	4/6	3	Nil	58
CA15 Recon (SCM Stock, 6.8mm)	SA	3	1-2-Nil	4/6	3	Nil	58
CA10 Predator (20” Barrel, Fixed Stock, .243)	SA	3	2-Nil	7	2	Nil	53
CA10 Predator (20” Barrel, Fixed Stock, 6.5mm Creedmoor)	SA	3	1-2-Nil	7	3	Nil	72
CA10 Predator (20” Barrel, Fixed Stock, 7.62)	SA	4	2-3-Nil	7	3	Nil	68
CA10 Predator (20” Barrel, Fixed Stock, .338)	SA	5	1-2-3	7	3	Nil	82
CA10 Predator (20” Barrel, Folding Stock, .243)	SA	3	2-Nil	5/7	2	Nil	53
CA10 Predator (20” Barrel, Folding Stock, 6.5mm Creedmoor)	SA	3	1-2-Nil	6/7	2	Nil	72
CA10 Predator (20” Barrel, Folding Stock, 7.62)	SA	4	2-3-Nil	6/7	3	Nil	68
CA10 Predator (20” Barrel, Folding Stock, .338)	SA	5	1-2-3	6/7	3	Nil	82
CA10 Predator (20” Barrel, SCM Stock, 6.5mm	SA	3	1-2-	6/7	3	Nil	72

Creedmoor)			Nil				
CA10 Predator (20" Barrel, SCM Stock, 7.62)	SA	4	2-3-Nil	5/7	3	Nil	68
CA10 Predator (20" Barrel, SCM Stock, .338)	SA	5	1-2-3	6/7	3	Nil	81
CA10 Predator (20" Barrel, SCM Stock, 6.5mm Creedmoor)	SA	4	1-2-3	6/7	3	Nil	68
CA10 Predator (20" Barrel, SCM Stock, .338)	SA	5	1-2-3	6/7	3	Nil	82
CA10 Predator (24" Barrel, Fixed Stock, .243)	SA	3	2-Nil	7	2	Nil	74
CA10 Predator (24" Barrel, Fixed Stock, 6.5mm Creedmoor)	SA	4	1-2-Nil	7	3	Nil	100
CA10 Predator (24" Barrel, Fixed Stock, 7.62mm)	SA	4	2-3-Nil	7	3	Nil	88
CA10 Predator (24" Barrel, Fixed Stock, .338)	SA	6	1-2-3	7	3	Nil	106
CA10 Predator (24" Barrel, Folding Stock, .243)	SA	3	2-Nil	6/7	2	Nil	74
CA10 Predator (24" Barrel, Folding Stock, 6.5mm Creedmoor)	SA	4	1-2-Nil	6/7	3	Nil	100
CA10 Predator (24" Barrel, Folding Stock, 7.62mm)	SA	4	2-3-Nil	6/7	4	Nil	88
CA10 Predator (24" Barrel, Folding Stock, .338)	SA	5	1-2-3	6/7	4	Nil	106
CA10 Predator (24" Barrel, SCM Stock, .243)	SA	3	2-Nil	6/7	2	Nil	74
CA10 Predator (24" Barrel, SCM Stock, 6.5mm Creedmoor)	SA	4	1-2-Nil	6/7	3	Nil	100
CA10 Predator (24" Barrel, SCM Stock, 7.62mm)	SA	4	2-3-Nil	6/7	3	Nil	88
CA10 Predator (24" Barrel, SCM Stock, .338)	SA	5	1-2-3	6/7	3	Nil	106
CA10 Recon (Fixed Stock, .243)	SA	3	2-Nil	6	2	Nil	40
CA10 Recon (Fixed Stock, 6.5mm Creedmoor)	SA	3	1-2-Nil	6	2	Nil	56
CA10 Recon (Fixed Stock, 7.62mm)	SA	4	2-3-Nil	6	3	Nil	49
CA10 Recon (Fixed Stock, .338)	SA	5	1-2-3	6	3	Nil	58
CA10 Recon (Folding/SCM Stock, .243)	SA	3	2-Nil	4/6	2	Nil	40
CA10 Recon (Folding/SCM Stock, 6.5mm Creedmoor)	SA	3	1-2-Nil	5/6	2	Nil	56
CA10 Recon (Folding/SCM Stock, 7.62mm)	SA	4	2-3-Nil	5/6	3	Nil	49
CA10 Recon (Folding/SCM Stock, .338)	SA	5	1-2-3	5/6	3	Nil	58

CORE15 Piston Rifle

Notes: The CORE 15 (CORE is also the name of the company) is essentially a version of the M4 with a 16-inch barrel and some improvements. The upper and lower receiver is forged from 7075-T6 aluminum, treated with Type II Class II Anodized Hardcoat. Atop the receiver is a monolithic MIL-STD-1913 rail, atop the end of the low-profile gas block is a very short length of MIL-STD-1913 rail. Internally, the CORE15 is treated with dry lube for the bolt, bolt carrier group, and the inside of the receiver halves. The bore, barrel extension, and chamber are chromed. The bolt carrier is treated with Melonite. The magazine well is beveled for quicker reloads, and the fire selector has bullet diagrams instead of labels. The charging handle is a CORE15 Hardcore V.1, and the gas tube is CORE15's version of a standard Mil-Spec gas tube. (Operation is by gas piston.)

The barrel is 16 inches and is of government profile; it is made from Chrome/Molybdenum/Vanadium steel alloy with a Black Nitride finish, tipped with an A2 flash suppressor. The pistol grip is an A2-type; the handguards are M4-type of Thermoset Polymer with dual

heat shields. They are otherwise like basic M4 handguards. The lower section may be removed to a grenade launcher may be mounted; this is primarily for police to mount a non-lethal-firing launcher. The stock is a CORE15-made stock which duplicates the M4 stock. The trigger guard is oversized for gloves, but not heavy gloves. Though the CORE15 will take most AR-15/M4 magazines; CORE recommends Magpul PMags. CORE15's come in a couple of alternate chamberings, listed below. The CORE15 does not have sights permanently-mounted; instead, basic BUIS are provided.

Weapon	Ammunition	Weight	Magazines	Price
CORE15	5.56mm NATO	2.81 kg	5, 10, 20, 30	$591
CORE15	6.5mm Grendel	2.81 kg	5, 10, 20, 30	$664
CORE15	.300 Blackout	2.81 kg	5, 10, 20, 30	$773

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
CORE15 (5.56mm)	SA	3	1-Nil	4/6	3	Nil	40
CORE15 (6.5mm)	SA	3	1-2-Nil	4/6	3	Nil	54
CORE15 (.300)	SA	3	2-Nil	4/6	4	Nil	45

Clark Gator

Notes: This AR-15 variant features a prominent Miculek muzzle brake that virtually eliminates muzzle blast and greatly reduces recoil. As the Gator was designed for competition, the brake was included to reduce shot recovery time. The Gator also has an adjustable gas system; this allows for more flexibility in ammunition loads to be used. The top of the receiver has a MIL-STD-1913 rail, while another short rail is located where the front sight post is normally located on an AR-15. This allows iron sights to be mounted, but also allows the maximum flexibility in sight and scope types. (The Gator does not come with iron sights from the factory.) The handguard is round and made from light carbon fiber, and allows the barrel to free-float. (A vented aluminum handguard is available if the buyer wishes.)

Twilight 2000 Notes: This weapon does not exist.

Weapon	Ammunition	Weight	Magazines	Price
Gator (20" Barrel)	5.56mm NATO	3.63 kg	10, 20, 30	$1174
Gator (24" Barrel)	5.56mm NATO	3.7 kg	10, 20, 30	$1216

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Gator (20" Barrel)	SA	3	1-Nil	6	2	Nil	58
Gator (24" Barrel)	SA	3	1-Nil	7	2	Nil	72

Crane NWSC Mk 12 SPR

Notes: Expanding on the US Navy SEALs' special version of the M4 Carbine generally known as simply the SEAL Recon Rifle, the Mk 12 SPR (originally meaning Special Purpose *Receiver*, but now said by the Pentagon as standing for Special Purpose *Rifle)* is a very highly-modified version of the M16/M4 series, blending features of the M16A4 and M4A1 as well as having a plethora of new and different features that essentially make the Mk 12 a distinct subtype of the M16 series (or perhaps even an altogether different rifle).

The Mk 12 was designed from the outset to use the Mk 262 version of the 5.56mm NATO cartridge; this round uses a heavier 77-grain bullet (the standard 5.56mm NATO bullet is a 62-grain bullet), along with a slightly higher powder charge and a different propellant mix. (Unfortunately, there is no really adequate way to simulate this in the *Twilight 2000 v2.2* rules; I'm essentially fudging as best as I can in the fire chart below.) The Mk 12 can fire other types of 5.56mm NATO rounds, but generally with relatively poor results. Many of the details of the Mk 12 are still classified, but it appears that most of the upper receivers were given the "Canadian treatment" – manufactured in Canada by Diemaco instead of by Colt or Armalite. Most Mk 12's don't carry much in the way of markings, if any, so it can be difficult to tell. The upper receiver is still made from aluminum alloy, but it appears that it is made of stronger stuff than that of the standard M16 series. Like the M16A4, there is no carrying handle; the receiver is instead topped by a MIL-STD-1913 rail. In photographs from Afghanistan and Iraq, some of these rails top only the upper receiver, while some extend from the upper receiver all the way down the handguard.

The lower receiver is also of strengthened aluminum alloy; it appears to house an improved version of the standard M16-type gas operating system, using a bolt with an improved extractor and case ejector. Oddly enough, the trigger system, while built by KAC, is derived from that of the M16A1, modified to use a two-stage trigger mechanism.

The barrel itself is 18 inches long, match quality, free-floating, heavier than the standard M16A4 barrel, and threaded at the end to allow the easy attachment and detachment of a variety of muzzle devices. They also have a collar to allow the attachment of muzzle devices which do not use threads. Though they appear in photographs with a variety of muzzle devices, the most common appears to be a muzzle brake similar to those designed by OPS, Inc. A special suppressor has also been designed by OPS for the rifle which attaches directly onto the muzzle brake without having to make any adjustments or alterations to the muzzle brake or barrel. The barrels themselves are known to be manufactured by Douglas Barrels especially for the Mk 12, from stronger yet lighter steel, and have a 1:7 rifling twist. The gas blocks, more reliable than standard AR gas blocks and adjustable for optimum performance with a suppressor, are specially-designed for the Mk 12 by Badger Ordnance.

The buttstocks of the Mk 12 SPRs seem to be the most variable feature of these rifles; they have been seen with M16A1 stocks,

M16A2 stocks, M4 sliding stocks, and special sliding stocks designed by Crane NWSC which have several compartments for small accessories and are more adjustable than the M4's stock. In addition, every so often some other type of stock is seen; it appears that the SEALs, Special Forces, and Rangers are still experimenting to find the optimum stock.

Handguards are longer, wider, and of a different profile than M16-type handguards; they are also made from carbon fiber and do not touch the barrel at any point. Another common handguard seen on the Mk 12 is a specially-made version of the KAC M4 Free-Floating RAS handguard, with 4-point MIL-STD-1913 rails (and still do not touch the barrel at any point). Flip-up iron sights are provided at the rear; they are dial-adjusted and allow for finer elevation and windage adjustments than standard M16A2/A3/A4 rear sights. The triangular front sight post is deleted, replaced by a flip-up front sight assembly. Again, several types of iron sights have been observed. In addition, the Mk 12 is commonly seen with a wide variety of optics attached to the MIL-STD-1913 rails. In most cases, these optics are attached with quick-release mounts that allow the optics to be changed and/or removed and reattached without losing the weapon's zero.

Early Mk 12's were seen with Versa-Pod folding bipods, which do allow for limited cant and height adjustments, but were found to be not adjustable enough and to not have the robustness required for their role. The Versa-Pods were therefore replaced with Harris-made folding bipods, which are stronger and more finely-adjustable.

There are two known versions of the Mk 12 listed as being in use: the Mk 12 Mod 0, used by US Army Special Forces and other Army special ops units, and the Mk 12 Mod 1, used by US Army Rangers and US Navy SEALs. The primary differences appear to be in who manufactured the parts of the rifle and how they manufactured them. For game purposes, they are identical.

Recently, Centurion Arms has been authorized to build a version of the Mk 12 Mod 1 for civilian sales. However, they sell this only as an upper receiver assembly, and not as a whole rifle, so the lower receiver a buyer uses will be whatever he chooses to use with Centurion's upper receiver assembly. In addition, Centurion will pin the gas block at the buyer's request. The Centurion Mk 12 upper receiver assembly has an extended M4-type feed ramp; I have not been able to find out whether military Mk 12s have this feature. Construction of this upper receiver assembly is virtually identical to that of military Mk 12 Mod 1s, and the differences are not important in game terms. The result is that Centurion Arms's Mk 12 Mod 1 is essentially identical in game terms to a military Mk 12 Mod 1 except for the automatic-fire capability, slightly less weight (primarily due to the lack of the standard bipod, and a less solid in most cases lower receiver), and slightly less range; this is primarily due to differences in the lower receiver and stock assembly, as well as some fit-and-finish differences. In addition, the Centurion Arms version does not come standard with a bipod, though it does have a mount under the handguards for one. The Centurion Arms version is capable of using all civilian and military loads, including the Mk 262 ammunition that the military uses. (This is not available to civilians, but is available to law enforcement.) The ammunition used in the stats below is standard ammunition.

Centurion also makes a variant they call the Mk 12K; this is identical but uses a 16-inch barrel of the same quality as the standard barrel.

Twilight 2000 Notes: The Mk 12, as such, is unavailable in the Twilight 2000 timeline; however, it is a fair bet that such weapons would appear as experiments at the very least in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
Mk 12 SPR (M16A1 Stock)	5.56mm NATO (Mk 262)	4.5 kg	20, 30	$1097
Mk 12 SPR (M16A2 Stock)	5.56mm NATO (Mk 262)	4.57 kg	20, 30	$1101
Mk 12 SPR (M4 Stock)	5.56mm NATO (Mk 262)	4.57 kg	20, 30	$1121
Mk 12 SPR (Crane Stock)	5.56mm NATO (Mk 262)	4.52 kg	20, 30	$1127
Centurion Mk 12 Mod 1 (A1 Stock)	5.56mm NATO	3.62 kg	10, 20, 30	$644
Centurion Mk 12 Mod 1 (A2 Stock)	5.56mm NATO	3.68 kg	10, 20, 30	$648
Centurion Mk 12 Mod 1 (M4 Stock)	5.56mm NATO	3.68 kg	10, 20, 30	$664
Centurion Mk 12 Mod 1 (Crane-Type Stock)	5.56mm NATO	3.64 kg	10, 20, 30	$670
Centurion Mk 12K (A1 Stock)	5.56mm NATO	3.56 kg	10, 20, 30	$623
Centurion Mk 12K (A2 Stock)	5.56mm NATO	3.62 kg	10, 20, 30	$627
Centurion Mk 12K (M4 Stock)	5.56mm NATO	3.62 kg	10, 20, 30	$643
Centurion Mk 12K (Crane-Type Stock)	5.56mm NATO	3.58 kg	10, 20, 30	$649

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Mk 12 SPR (M16A1/A2 Stock)	5	3	1-2-Nil	6	2	4	53
With Bipod	5	3	1-2-Nil	6	1	2	68
Mk 12 SPR (M4/Crane Stock)	5	3	1-2-Nil	4/6	2	4	53
With Bipod	5	3	1-2-Nil	4/6	1	2	68
Centurion Mk 12 Mod 1 (A1/A2 Stock)	SA	3	1-Nil	6	2	Nil	50
Centurion Mk 12 Mod 1 (M4/Crane-Type Stock)	SA	3	1-Nil	4/6	2	Nil	50

Centurion Mk 12K (A1/A2 Stock)	SA	3	1-Nil	6	2	Nil	42
Centurion Mk 12K (M4 Crane-Type Stock)	SA	3	1-Nil	4/6	2	Nil	42

D&L Sports CQB Carbine

Notes: One of D&L Sports' specialties is enhanced versions of AR-15/M16/M4 rifles. One of these is the CQB Carbine, an entry/close assault version of the AR-15 or M16 rifle. The CQB Carbine is the product of Dave Lauck, who is described by Sammy Reese of *Guns* magazine as D&L Sports "chief cook and bottle washer" – a driving force behind D&L Sports; the CQB Carbine was done at the prodding of Sammy Reese, who wanted to trick out his pre-California-ban AR-15. It was, in essence, a special project that went mainstream, and is now offered by D&L Sports for general sale.

Though at its core, the CQB Carbine is a conventional, if very well-made, AR-15/M16, with a forged A-3 upper receiver and a forged lower receiver. The 16-inch free-floating barrel uses a special contour and is tipped with an A2 muzzle brake. (A rifle version with a 20-inch barrel is also available.) The standard chamber is throated to increase reliability and seating of the rounds. Handguards are D&L Superduty aluminum handguards, which are circular in profile and allow for extra cooling of the barrel using several vent holes. The CQB Carbine used either a fixed, tubular aluminum stock (three styles are available) or a collapsible stock (with two types available). The receiver and upper part of the handguard have a full-length MIL-STD-1913 rail, with a fixed AR-15/M-15-type front sight, a blade front sight, or a folding front sight. The handguards are also drilled and tapped on the right, left, and underside for additional accessory rails, though they are not standard. The rear sight is folding as standard; unlike on the AR-15/M16, the rear sight is forward on the upper receiver in the "scout" position. The entire rifle can be gotten hand-dehorned at an extra charge; an oversized charging handle may be installed. (Dave Lauck recommends against oversized AR-15/M16 charging handles, as they can easily get snagged on the shooter's equipment or other items and pull the bolt out of battery at the wrong moment.) The trigger group is designed to take extra punishment; trigger group problems are common on AR-15/M16 series rifles. The bolt carrier group is hand-fitted and headspaced. The entire rifle is finished in a hard-anodized black finish. Numerous additional accessories and upgrades are available from D&L Sports.

Weapon	Ammunition	Weight	Magazines	Price
CQB Carbine (Fixed Stock)	5.56mm NATO	3.65 kg	10, 20, 30	$612
CQB Carbine (Folding Stock)	5.56mm NATO	3.45 kg	10, 20, 30	$642
CQB Rifle (Fixed Stock)	5.56mm NATO	3.77 kg	10, 20, 30	$654
CQB Rifle (Folding Stock)	5.56mm NATO	3.57 kg	10, 20, 30	$684

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
CQB Carbine (Fixed Stock)	5	3	1-Nil	6	2	4	42
CQB Carbine (Folding Stock)	5	3	1-Nil	4/6	2	4	42
CQB Rifle (Fixed Stock)	5	3	1-Nil	6	2	4	58
CQB Rifle (Folding Stock)	5	3	1-Nil	5/6	2	5	58

Daniel Defense Ambush

Notes: Introduced in late 2011 in 6.8mm SPC, the Ambush 6.8 was quickly followed by several other calibers and more may follow in the future. Though Daniel Defense states that the Ambush is designed for hunters, the design would seem to point at police and possible military applications. The name of "Ambush" is not just a cool name; it denotes Ambush Firearms, which is mostly a design firm, and that Daniel Defense builds and sells the Ambush for Ambush Firearms. The base of the Ambush is an AR-type receiver, but the rifle has numerous differences, including a receiver-top MIL-STD-1913 rail which forms a continuous rail with the two atop the handguard. A shorter MIL-STD-1913 (about 4 inches long) is found on each side of the end of the handguard. The rails are easily removable. The handguards, rails, and stock are modular; and everyone knows that there are a plethora of stock designs for an AR. As sold by Daniel Defense, the Ambush is equipped with a Magpul MOE sliding skeletonized stock. Finish for an Ambush is currently in basic black, Mossy Oak Break Up Infinity or Realtree AP. Below this tough outer finish is a tough Salt-Bath Nitride finish that retards corrosion. Chambers are designed to take hot or sub-loads or loads in-between. An 18-inch barrel is currently available, and the barrels are hammer-forged with a heavy profile. As sold by Daniel Defense, the barrel is widened at the end and threaded for anything from a target crown to a muzzle brake (or a simple cap). Another possible muzzle device is a suppressor/silencer, particularly appropriate with some of the Ambush's possible loadings. The handguards allow for a free-floating barrel, and extend to the gas block; the gas block is a pinned and staked low-profile gas block. As sold, the Ambush has no iron sights, though BUIS may be mounted at buyer's request. The trigger is designed by Geissele, and is a two-stage trigger, with the second stage designed to be a hair-trigger. Standard magazines are shown below. A separate line is not shown below for a subsonic .300 Blackout round, since the round is naturally subsonic.

Though there are no plans for an automatic version, I have put such stats below, just in case…

Twilight 2000 Notes: The Ambush does not exist in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
Ambush	5.56mm NATO	3.37 kg	5, 10, 20, 30	$613
Ambush (w/Flash Suppressor)	5.56mm NATO	3.43 kg	5, 10, 20, 30	$620
Ambush (w/Muzzle Brake)	5.56mm NATO	3.57 kg	5, 10, 20, 30	$664
Ambush	6.8mm SPC	3.7 kg	5, 10, 20, 30	$751

Ambush (w/Flash Suppressor)	6.8mm SPC	3.78 kg	5, 10, 20, 30	$759
Ambush (w/Muzzle Brake)	6.8mm SPC	3.9 kg	5, 10, 20, 30	$801
Ambush	.300 Blackout	3.79 kg	5, 10, 20	$790
Ambush (w/Flash Suppressor)	.300 Blackout	3.88 kg	5, 10, 20	$799
Ambush (w/Muzzle Brake)	.300 Blackout	3.99 kg	5, 10, 20	$841
Ambush Silencer	N/A	1.68 kg	N/A	$335

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Ambush (5.56mm)	5	3	1-Nil	4/6	2	6	50
Ambush (5.56mm, w/Flash Suppressor)	5	3	1-Nil	5/6	2	6	50
Ambush (5.56mm, w/Muzzle Brake)	5	3	1-Nil	5/6	2	4	50
Ambush (5.56mm, w/Silencer)	5	3	1-Nil	7/8	2	5	41
Ambush (5.56mm, w/Silencer, Subsonic)	5	2	1-Nil	7/8	2	5	32
Ambush (6.8mm)	5	3	1-2-Nil	4/6	3	6	67
Ambush (6.8mm, w/Flash Suppressor)	5	3	1-2-Nil	5/6	2	6	67
Ambush (6.8mm, w/Muzzle Brake)	5	3	1-2-Nil	5/6	2	5	67
Ambush (6.8mm, w/Silencer)	5	3	1-Nil	7/8	2	5	56
Ambush (6.8mm, w/Silencer, Subsonic)	5	3	2-Nil	7/8	2	5	38
Ambush (.300)	5	4	2-Nil	5/6	4	9	44
Ambush (.300, w/Flash Suppressor)	5	4	2-Nil	5/6	4	9	44
Ambush (.300, w/Muzzle Brake)	5	4	2-Nil	5/6	3	7	44
Ambush (.300, w/Silencer)	5	3	1-2-Nil	8/9	3	7	37

Daniel Defense DDM4 Carbines and Rifles

Notes: Also simply known as the Daniel Defense M4, the DDM4 is, as the name would indicate, is Daniel Defense's own variation on the US military's M4 Carbine. Though available on a limited basis since the 2012 SHOT Show (it was still considered prototypical at the time), it has been officially (in a big way) available since March 2013. It is available in several chamberings, and with threaded and non-threaded barrels, and the gas system is capable of handling supersonic and subsonic rounds with a variety of loadings. (A side-introduction at that time was the Can U Silencer, designed specifically for the DDM4.) Without the integral Can U Suppressor, the rifle comes in a variety of barrel lengths, civilian/police and military versions, and lengths and amounts of MIL-STD-1913 rails. Standard for the system is a receiver-top rail joined to a top of the handrail rail, which also includes a rail length for the low-profile gas block; the system also has three other full-handrail length rails. Naturally, the rail length will depend on the handrail length, which is largely contingent on the barrel length. DDM4s also come in SBR versions that can be legally owned by civilians (with the right taxes and paperwork, of course).

DDM4 Carbines

The original DDM4 was the DDM4 v1 Carbine (Lightweight Barrel). The term "Lightweight Barrel" is a sort of misnomer; the actual barrel weight is the same as that of the M16 and M16A1. The v1 is chambered for 5.56mm NATO; the lower receiver is Mil-Spec, with some enhancements, such as a flared magazine well and a rear sling mount which has a quick-detach ability. The upper receiver is also Mil-Spec with enhancements, such as flared feed ramps and indexing marks for the MIL-STD-1913 rails. The 16-inch barrel is

made of 4140 chrome-moly-vanadium steel which is cold hammer forged, and is chrome lined in the bore and barrel extension and feed ramps. It has a Phosphated mil-spec barrel, but is has a heavy coat of phosphate instead of the normal coat. (The normal muzzle attachment is a flash suppressor.) The entire rifle is Mil-Spec heavy phosphate-coated. A slight extension is added to the point where the rifle joins the stock, which is a Daniel Defense version of the A2 stock; it is made of glass-filled polymer, and has soft rubber overmolding. There is a short rail under the end of the handguard; the V1 comes with a vertical grip for attachment to the lower rail; this is also a Daniel Defense design. The DDM4 V1 Carbine is essentially the same, but uses a medium-profile barrel. The rear and front sights are fixed in place, and are M4-type sights. A MIL-STD-1913 rail is found on the upper handguard; this rail joins to the receiver handguard, runs up to the front sight, and then about 4 inches ahead of the front sight. The receivers are of the AR-15/M4 standard 7075-T6 aluminum, which is hard-coat anodized. The pistol grip is also designed by Daniel Defense, and has soft rubber overmolding. The DDM V1 Carbine LE comes with panels to cover the rails; these are made of Santoprene polymer.

The DDM4 v2 Carbine is essentially a V1, but has an A2-profile barrel and SBR-length handguards with the appropriate length of MIL-STD-1913 rails on all four sides. The front sight is a standard A2 sight, but the rear sight is a BUIS-type sight which folds. The rifle is a bit more buffered using a Daniel Defense heavy H-Buffer. The barrel is 16 inches long, of heavy profile on the forward third of its length, and built like other DDM4 barrels. The v4 is essentially the same rifle, but does not come with BUISs, and is lighter. For game purposes, it shoots the same.

The V5 is very similar to the V4; the primary difference is the chambering, and the heavy profile barrel. The barrel is 16 inches long, but appears to be longer due to the larger chambering and the relatively shorter handguards. In addition, the barrel has been given a Salt Bath Nitride finish for extra weatherproofing and heat-proofing. Originally, the Can U Suppressor was specifically designed for the .300 Blackout chambering. The V7 is again similar in many ways; the most obvious difference is the use of an MFR (Modular Float Rail), allowing the V7 to have a floating barrel. The handguards also have a different set of MIL-STD-1913 rails – the top is continuous with the receiver rail and the gas block rail, but the sides and underside of the handguards have 2.5-inch rails which can be moved around as desired on the handguards. Due to the absence of the full-length side and underside rails, the V7 is lighter than the V5. For 2017, Daniel Defense has introduced a 5.56mm NATO version.

The DDMK18 has the buzzwords in the web page of “Use what THEY use.” It’s essentially an SBR variant of the V2, but with no BUISs. The barrel is a mere 10.3 inches, and is made from tough chrome-moly-vanadium steel which is cold-hammer-forged. The finish for the barrel is Mil-Spec heavy phosphating, with a chromed bore. It uses the heavy H-Buffer. Atop the receiver is a MIL-STD-1913 rail, which is continuous with the upper rail of handguard and the low-profile gas block rail. The handguards are DD RIS II MK-18s, which are long enough to reach out to the flash suppressor and have rails as 3, 6, and 9 o’clock that run the length of the handguards. Other accouterments are as per the other versions of the DDM4. Note that due to the handrail system, the Mk18 cannot use a silencer, despite being having a threaded barrel.

The DDM4 V5 LW is essentially the DDM4 V-5 with measures taken to make it a little lighter. Part of this is that some plastic is replaced with Soft Touch rubber overmolding, including the pistol grip, handguard plates, and the stock cheekpiece. Another measure is the 16-inch chrome/moly/vanadium barrel replacing the standard steel barrel, tipped by a stainless steel flash suppressor. The barrel is a bit narrower in profile, but just as strong. The muzzle is not threaded and cannot take a suppressor or muzzle brake.

The DDM4-ISR (Integrally-Suppressed Rifle) is similar to the DDM4 V7; it, however, it integrally-suppressed, with the suppressor built into the rifle. An integrally-suppressed firearm is by nature quieter than a rifle with a can on it. While it can fire supersonic ammunition, such shots will be considerably louder and wear on the suppressor will be much faster. The rifled portion of the barrel is 10.3 inches, though it is not an SBR because the suppressor brings the “barrel” length out to 16.1 inches and is permanently attached, requiring an armorer to attach a new suppressor. The 10.3-inch rifled portion of the barrel is not suitable for firing without a suppressor, as well as not legal in the US. It is cold hammer-forged and floating inside the suppressor. The barrel is also heavy and fluted. The barrel is of Chrome/Vanadium/Moly steel, with a 17-4PH monolithic barrel. The suppressor is heat-treated and finished with copper-color Cerekote. The baffle core is user-removable, making servicing and cleaning of the suppressor easier. The rifle normally uses a Daniel Defense Modular Float rail, which has MIL-STD-1913 rail sections at 3, 6, and 9-o’clock, and a top handguard rail continuous with the receiver handguard. The handguard is 15 inches long, and comes with blanks for the lower sections of the rails not used. The receivers are Mil-Spec with indexing marks and M4-type feed ramps. They are of 7075-T6 billet, CNC-machined. The trigger is also Mil-Spec, though it is Daniel Defense-designed. The stock is a Daniel Defense sliding and skeletonized stock, along with a DD AR-15A2-type pistol grip. The stock is of glass-filled polymer, with soft touch overmolding, as is the pistol grip, and the included forward grip. Overall finish for the handguards and receivers are Cerekote. The magazine well has an Enhanced Flared Well.

Weapon	Ammunition	Weight	Magazines	Price
DDM4 V1 LW	5.56mm NATO	3.08 kg	5, 10, 20, 30	$596
DDM4 V1 LW (Muzzle Brake)	5.56mm NATO	3.28 kg	5, 10, 20, 30	$645
DDM4 V1 LW (Silencer)	5.56mm NATO Subsonic	4.13 kg	5, 10, 20, 30	$915
DDM4 V1	5.56mm NATO	3.15 kg	5, 10, 20, 30	$601
DDM4 V1 (Muzzle Brake)	5.56mm NATO	3.35 kg	5, 10, 20, 30	$649
DDM4 V1 (Silencer)	5.56mm NATO Subsonic	4.52 kg	5, 10, 20, 30	$926
DDM4 V2	5.56mm NATO	3.03 kg	5, 10, 20, 30	$596
DDM4 V2 (Muzzle Brake)	5.56mm NATO	3.18 kg	5, 10, 20, 30	$642
DDM4 V2 (Silencer)	5.56mm NATO Subsonic	4.03 kg	5, 10, 20, 30	$917

DDM4 V4	5.56mm NATO	2.94 kg	5, 10, 20, 30	$596
DDM4 V4 (Muzzle Brake)	5.56mm NATO	3.09 kg	5, 10, 20, 30	$642
DDM4 V4 (Silencer)	5.56mm NATO Subsonic	3.94 kg	5, 10, 20, 30	$917
DDM4 V5	.300 Blackout	3.2 kg	5, 10, 20	$777
DDM4 V5 (Muzzle Brake)	.300 Blackout	3.31 kg	5, 10, 20	$819
DDM4 V5 (Silencer)	.300 Blackout	4.86 kg	5, 10, 20	$1310
DDM4 V7	.300 Blackout	3.13 kg	5, 10, 20	$781
DDM4 V7 (Muzzle Brake)	.300 Blackout	3.24 kg	5, 10, 20	$823
DDM4 V7 (Silencer)	.300 Blackout	4.82 kg	5, 10, 20	$1326
DDM4 V7	5.56mm NATO	3.13 kg	5, 10, 20, 30	$594
DDM4 V7 (Muzzle Brake)	5.56mm NATO	3.24 kg	5, 10, 20, 30	$639
DDM4 V7 (Silencer)	5.56mm NATO Subsonic	4.82 kg	5, 10, 20, 30	
DDMK18	5.56mm NATO	2.73 kg	5, 10, 20, 30	$535
DDMK18 (Muzzle Brake)	5.56mm NATO	2.89 kg	5, 10, 20, 30	$581
DDM4 V5 LW	5.56mm NATO	2.79 kg	5, 10, 20, 30	$588
DDM4-ISR	.300 Blackout	3.43 kg	5, 10, 20	$822

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
DDM4 V1 LW	5	3	1-Nil	5	2	6	40
DDM4 V1 LW (Muzzle Brake)	5	3	1-Nil	5	2	4	40
DDM4 V1 LW (Silencer)	5	2	1-Nil	9	1	2	28
DDM4 V1	5	3	1-Nil	6	2	6	41
DDM4 V1 (Muzzle Brake)	5	3	1-Nil	5	2	5	41
DDM4 V1 (Silencer)	5	2	1-Nil	9	1	2	28
DDM4 V2	5	3	1-Nil	4/6	3	6	42
DDM4 V2 (Muzzle Brake)	5	3	1-Nil	4/6	2	5	42
DDM4 V2 (Silencer)	5	2	1-Nil	8/9	1	3	28
DDM4 V5	5	3	2-Nil	5/6	4	9	46
DDM4 V5 (Muzzle Brake)	5	3	2-Nil	5/6	3	7	46
DDM4 V5 (Silencer)	5	3	2-Nil	11/13	3	7	39
DDM4 V7 (.300)	5	3	2-Nil	5/6	4	9	48
DDM4 V7 (Muzzle Brake)	5	3	2-Nil	5/6	3	7	48
DDM4 V7 (Silencer)	5	3	2-Nil	11/13	3	7	40
DDM4 V7 (5.56mm)	5	3	1-Nil	4/6	3	6	43
DDM4 V7 (Muzzle Brake)	5	3	1-Nil	4/6	2	5	43
DDM4 V7 (Silencer)	5	2	1-Nil	6/8	1	4	35
DDMK18	5	2	1-Nil	3/5	3	6	21
DDMK18 (Muzzle Brake)	5	2	1-Nil	3/5	2	5	21
DDM4 V5 LW	5	3	1-Nil	4/6	3	7	41
DDM4-ISR (Supersonic Ammo)	SA	3	2-Nil	4/5	3	Nil	24
DDM4-ISR (Subsonic Ammo)	SA	3	2-Nil	4/5	3	Nil	20

DDM4 Mid-Length Rifle

Mid-Length DDM4s have essentially the same features as the Carbines, including construction, barrel quality, and rail system. The difference is primarily that, while the Carbines have a carbine-length gas system, the mid-length rifles have a, well, mid-length gas system.

Barrels are usually the same length as the Carbines, with the same threaded muzzle, normally tipped with a Daniel defense-designed flash suppressor which is essentially a birdcage-type flash suppressor.

The V3 uses handguards which combine a free float tube with the standard RIS of most of the DDM4 series; this is called the DDM4 Rail 9.0. The V3 6.8 is essentially the same rifle, but chambered for 6.8mm SPC.

A second version of the DDM4 V5, the V5 5.56mm, is essentially the same rifle, but uses a mid-length gas system rather than a carbine-length gas system. It also uses longer handguards and longer MIL-STD-1913 rails on them, but does not come with BUISs. Weight is a bit different, due to measure taken to lighten the rifle. This version is also chambered for 5.56mm NATO, and has a government profile barrel instead of a heavy barrel, which is heavy phosphate finished instead of having a Salt Bath Nitride finish. The V5 LW is, again, sort of a misnomer, as is uses an A1-profile barrel, which is more a standard-profile barrel. The V5 LW is otherwise almost identical to the V5 5.56mm. Again, weight is shaved off the platform. The V7 LW is mostly the same as the V5 LW, but with V7 Carbine type abbreviated handguards and a free-float handguard. Again, the V7 LW is lighter.

The V7 6.8 is basically the same as the .300-chambered carbine listed above, but chambered for 6.8mm SPC. Other details of construction are identical or near-identical, such as the mid-length gas system.

Weapon	Ammunition	Weight	Magazines	Price
DDM4 V3	5.56mm NATO	3.07 kg	5, 10, 20, 30	$600
DDM4 V3 (Muzzle Brake)	5.56mm NATO	3.21 kg	5, 10, 20, 30	$646
DDM4 V3 (Silencer)	5.56mm NATO Subsonic	4.08 kg	5, 10, 20, 30	$927
DDM4 V3 6.8	6.8mm SPC	3.18 kg	5, 10, 20, 30	$741
DDM4 V3 6.8 (Muzzle Brake)	6.8mm SPC	3.31 kg	5, 10, 20, 30	$784
DDM4 V3 6.8 (Silencer)	6.8mm SPC Subsonic	4.61 kg	5, 10, 20, 30	$1199
DDM4 V5 5.56mm	5.56mm NATO	2.9 kg	5, 10, 20, 30	$596
DDM4 V3 5.56mm (Muzzle Brake)	5.56mm NATO	3.05 kg	5, 10, 20, 30	$642
DDM4 V3 5.56mm (Silencer)	5.56mm NATO Subsonic	4.43 kg	5, 10, 20, 30	$909
DDM4 V5 5.56mm	5.56mm NATO	2.74 kg	5, 10, 20, 30	$593
DDM4 V3 5.56mm (Muzzle Brake)	5.56mm NATO	2.89 kg	5, 10, 20, 30	$639
DDM4 V3 5.56mm (Silencer)	5.56mm NATO Subsonic	4.27 kg	5, 10, 20, 30	$906
DDM4 V7 6.8	6.8mm SPC	3.18 kg	5, 10, 20, 30	$741
DDM4 V7 6.8 (Muzzle Brake)	6.8mm SPC	3.31 kg	5, 10, 20, 30	$784
DDM4 V7 6.8 (Silencer)	6.8mm SPC Subsonic	4.61 kg	5, 10, 20, 30	$1199

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
DDM4 V3	5	3	1-Nil	4/6	3	6	43
DDM4 V3 (Muzzle Brake)	5	3	1-Nil	4/6	2	5	43
DDM4 V3 (Silencer)	5	2	1-Nil	6/7	1	3	29
DDM4 V3 6.8	5	3	1-2-Nil	5/6	3	7	58
DDM4 V3 6.8 (Muzzle Brake)	5	3	1-2-Nil	5/6	2	5	58
DDM4 V3 6.8 (Silencer)	5	3	1-1-Nil	10/12	2	5	35
DDM4 V5 5.56mm	5	3	1-Nil	4/6	3	6	42
DDM4 V3 5.56mm (Muzzle Brake)	5	3	1-Nil	4/6	2	5	42
DDM4 V3 5.56mm (Silencer)	5	2	1-Nil	8/9	1	2	28
DDM4 V5 5.56mm	5	3	1-Nil	4/6	3	7	41
DDM4 V3 5.56mm (Muzzle Brake)	5	3	1-Nil	4/6	2	5	41
DDM4 V3 5.56mm (Silencer)	5	2	1-Nil	8/9	1	2	28
DDM4 V7 6.8	5	3	1-2-Nil	5/6	3	7	58
DDM4 V7 6.8 (Muzzle Brake)	5	3	1-2-Nil	5/6	2	5	58
DDM4 V7 6.8 (Silencer)	5	3	1-1-Nil	10/12	2	5	35

DDM4 SBRs

Notes: This is a line, mostly for military use, of short-barreled primarily close assault weapons, designed to be short for CQB environments. Furthermore, Daniel Defense chambers them for the .300 Blackout round (due better CQB performance.) These SBRs use a 10.3-inch, 11.5-inch, 12.5-inch, or (what is essentially a carbine length weapon) 14.5 inches. All can be integrally silenced by a special application of the Can U silencer, while retaining the handguards and rails. (It should be known that the silenced versions are known as V4 ISRs, and they use V7 handguards. Barrels for the 300 SBR are of the same high construction standards of larger rifles, with a heavy barrel profile; the heavy H-Buffer is also used. Handguards are the full-rail v9.0 handguards.

Weapon	Ammunition	Weight	Magazines	Price
300 SBR (10.3” Barrel)	.300 Blackout	2.65 kg	5, 10, 20, 30	$723
300 SBR (10.3” Barrel, Muzzle Brake)	.300 Blackout	2.78 kg	5, 10, 20, 30	$774

300 SBR (10.3" Barrel, Silencer)	.300 Blackout	3.58 kg	5, 10, 20, 30	$1183
300 SBR (11.5" Barrel)	.300 Blackout	2.67 kg	5, 10, 20, 30	$745
300 SBR (11.5" Barrel, Muzzle Brake)	.300 Blackout	2.8 kg	5, 10, 20, 30	$786
300 SBR (11.5" Barrel, Silencer)	.300 Blackout	3.37 kg	5, 10, 20, 30	$1205
300 SBR (12.5" Barrel)	.300 Blackout	2.69 kg	5, 10, 20, 30	$767
300 SBR (12.5" Barrel, Muzzle Brake)	.300 Blackout	2.82 kg	5, 10, 20, 30	$808
300 SBR (12.5" Barrel, Silencer)	.300 Blackout	3.39 kg	5, 10, 20, 30	$1227
300 SBR (14.5" Barrel)	.300 Blackout	2.71 kg	5, 10, 20, 30	$803
300 SBR (14.5" Barrel, Muzzle Brake)	.300 Blackout	3.04 kg	5, 10, 20, 30	$845
300 SBR (14.5" Barrel, Silencer)	.300 Blackout	3.41 kg	5, 10, 20, 30	$1362

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
300 SBR (10.3" Barrel)	5	3	2-Nil	4/5	3	7	24
300 SBR (10.3" Barrel, Muzzle Brake)	5	3	2-Nil	4/5	2	5	24
300 SBR (10.3" Barrel, Silencer)	5	3	2-Nil	7/8	2	5	20
300 SBR (11.5" Barrel)	5	3	2-Nil	4/5	3	7	28
300 SBR (11.5" Barrel, Muzzle Brake)	5	3	2-Nil	4/5	2	5	28
300 SBR (11.5" Barrel, Silencer)	5	3	2-Nil	8/9	2	5	24
300 SBR (12.5" Barrel)	5	3	2-Nil	4/5	3	7	32
300 SBR (12.5" Barrel, Muzzle Brake)	5	3	2-Nil	4/5	2	5	32
300 SBR (12.5" Barrel, Silencer)	5	3	2-Nil	8/9	2	5	24
300 SBR (14.5" Barrel)	5	3	2-Nil	5/6	4	10	51
300 SBR (14.5" Barrel, Muzzle Brake)	5	3	2-Nil	5/6	3	7	51
300 SBR (14.5" Barrel, Silencer)	5	3	2-Nil	10/11	3	7	42

Daniel Defense Mark 18

Notes: The Mark 18 was originally designed to a specification by US Navy SEALs for a shorter, close assault version of the M4 Carbine. Other members of USSOCOM later took up the Mark 18, most notably Delta. The Mark 18 features the RIS II MK 18 forend, with Picatinny Rails at the 12, 3, 6, and 9 o'clock positions, and as the RIS II is eight-sided, the other flat surfaces have MLOK slots. The barrel is a short 10.3 inches, and is made of Chrome/Moly/Vanadium steel, is cold hammer forged, has a Government profile, and has a chrome-lined bore. The barrel is finished in heavy phosphate and is MP tested; it is tipped with a standard A2 flash suppressor. The lower receiver is standard Mil Spec and has an enhanced flared magazine well. The operation is standard AR, but has a special carbine gas system. The top of the receiver also has a Picatinny Rail and forms a continuous rail with that on the handguard top rail. When sold to civilians, the Mark 18 is not sold with iron sights; these are sold separately. The stock is a Magpul MOE, which is similar to that of the M4, a sliding stock. Military and law enforcement Mark 18s are, of course, capable of automatic fire; civilian Mark 18s are sold only with semiautomatic fire capability.

It should be noted that at the time I write this (22 Aug 25), Daniel Defense is no longer selling the Mark 18 to civilians.

The Mark 18 Pistol is essentially a Mark 18 Rifle without a stock. It comes with an SB Tactical SBA3 brace, however. The trigger guard of the Mark 18 Pistol is integral with the pistol grip; the grip has soft touch overmolding. The Pistol also features a Grip-N-Rip charging handle.

Weapon	Ammunition	Weight	Magazines	Price
Mark 18	5.56mm NATO	2.59 kg	10, 20, 30, 32	$538
Mark 18 Pistol	5.56mm NATO	2.65 kg	10, 20, 30, 32	$630

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Mark 18	5	2	1-Nil	3/5	3	7	21
Mark 18 Pistol	SA	2	1-Nil	3	4	Nil	18

Del-Ton Carbines

Notes: Del-ton makes a variety AR-15 clones; their rifles typically follow the AR-15 general platform, but are built with better, higher-quality components and closer tolerances. Del-ton's AR-15 rifles are generally a bit lighter than their Colt antecedents, and the amount of customization that Del-Ton will make to one of their rifles upon request is staggering. Del-Ton rifles are basically AR-15s done better, though they are also known (using real prices) for being affordable and to an extent, no frills. Del-Ton manufactures several series of related rifles and carbines, most of which differ only in small details.

The base carbine of Del-Ton's carbines based on the AR-15 is the DT Sport. The basic body is made of light alloy, but stronger alloy than used on a standard AR-15 or M16/M4. The barrel is a standard-profile 16-inch barrel tipped by an AR-15-type flash suppressor, but made of lighter-yet-stronger steel. The barrel is of low-carbon steel which is stronger than a standard barrel, but has great durability and corrosion resistance. The rifling has a twist rate of 1:9, allowing it to stabilize a variety of bullet weights and propellant loads. The receiver has a MIL-STD-1913 rail atop the receiver; a fold-down rear BUIS is provided, but the front sight is

standard AR-15A2. The bolt and bolt-carrier is phosphated for dirt and carbon resistance. Handguards are the same as on the M4, and the stock is a standard six-position M4-type stock. (The DT Sport comes from the factory with a California-approved trigger lock; nonetheless, the local laws of California and five other states ban the DT Sport.) The exterior is manganese-phosphated, heat-treated and plated in a Del-Ton proprietary finish (which is black like an actual AR-15), which is then hard-anodized. The chamber, barrel extension, the interior of the bolt carrier group, and bore are chromed.

The Echo 316 (also called the DTI-4) is a carbine related to the DT Sport; the form is virtually identical, but the Echo 316 comes with the addition of a Chamber Safety Tool (essentially a block placed in the open chamber, preventing bolt movement; US Soldiers and Marines may remember this from Basic Training. The Echo 316 is also a bit more heavily built, and weighs more than the DT Sport; despite this performance is the same for the DT Sport for game purposes. It is also a base-level Del-ton Carbine, with a 16-inch standard-weight barrel tipped by an A2-type flash suppressor as standard; however, areas of the Echo 316 which are vulnerable to heat are given extra treatment to increase their resistance to damage or deformation due to heat from prolonged firing. Of course, the bore is hard-chromed, other parts are also chromed, including the gas key, the inside of the bolt carrier group, and the carrier key. The Echo 316 has a one-piece heat shield inside of the handguard made of highly-polished aluminum. Atop the Echo 316 is a MIL-STD-1913 rail; however, the standard AR front sight assembly remains. The stock of the Echo 316 is a standard M4-type 6-position sliding stock. Most of the particulars of the Echo 316 apply to the Echo 316 subtypes described below.

Other members of the Echo 316 series includes the Echo 316/MOE (also known as the DTI Carbine Rifle MOE). Most changes are essentially cosmetic, such as the use of a Magpul MOE sliding stock instead of the M4-type stock. The exterior of the Echo 316/MOE is finished in OD Green or Dark Earth (and called the Echo 316/MOE OD and Echo 316/MOE DE, respectively). The Echo 316/MOE also has a trigger lock (as above, the trigger lock meets the most stringent gun laws in the US, but still cannot be sold in those states; you gotta love state politicians!) and a Chamber Safety Tool. However, biggest change in the Echo 316/MOE is the 16-inch heavy barrel, threaded at the end to attach Del-Ton's variation of the AR-15A2's flash suppressor, most muzzle brakes, or a wide variety of silencers and suppressors. The handguards are also Magpul MOE handguards, though they are essentially identical for game purposes, and the rifle is finished in black (over several anti-corrosive, heat resistant, and antiwear coatings. The Sierra 316H/MOE, also known as the DTI Mid-Length MOE Rifle (though it is actually carbine), is for the most part virtually identical to the Echo 316/MOE, except for the color (the Echo 316H/MOE-OD and the Echo 316H/MOE-DE, are finished in OD green and Dark Earth, respectively.)

The Echo 316PF (also called the Carbine Post-Ban Rifle) was designed to be able to be sold after the Assault Weapons ban, and is still built for California sales and some other jurisdictions. The Echo 316PF uses special magazines (which can be gotten from various sources) which can hold only 10 rounds maximum. The flash suppressor and bayonet lug are deleted. The barrel is not threaded at the tip and cannot take a flash suppressor, muzzle brake, or silencer, but the 16-inch barrel is of heavy profile and tipped with a target crown. The stock is a standard A2-type Zytel fixed stock, but the Echo 316PF does have a MIL-STD-1913 rail atop the receiver.

The Echo 316L (also called the Lightweight Rifle) is essentially a base Echo 316 built using lighter but stronger metal, polymer parts that are made of a lighter polymer, and a 16-inch lightweight barrel (which, I'll admit, looks a bit spindly). The sliding stock, while being the same design as on M4s, is made from polymer materials. Otherwise, the Echo 316L is built and finished in the same way as the base Echo 316.

The Echo 216 (also called the DT-4 Rifle) is essentially the same carbine as the Echo 316, but it has the standard AR carrying handle and rear sight. The Echo 216H differs from the Echo 216 in its having an A2-type fixed stock (but with a trapdoor to access a small compartment), and a heavy-profile barrel.

The Sierra 216H, also known as the DTI A2 Mid-Length Rifle (though it too is actually a carbine), is essentially the same as the GPR in the next entry, but is equipped with a 16-inch barrel and appropriate-length handguards.

The DTI Extreme Duty 316 (also known as simply the DTI Extreme Duty), is sort of a DT Sport built to more exacting tolerances and better quality than most of Del-Ton's range of AR clones, and can take more abuse than other rifles of its line. The 16-inch heavy barrel is cold-hammer-forged, has a bore with high-quality chroming, and has a rifling twist of 1:7, making better suited for modern civilian loadings as well as most military loads. The stock is an M4-type sliding stock, and the handguards are also M4-type, with double heat shields. The rear BUIS sight is made for the Extreme Duty by Troy, and the front sight post is more finely adjustable than a standard A2-type front sight. The upper receiver of the Extreme Duty is topped by a MIL-STD-1913 rail.

The DTI TRX Rifle (actually a carbine) is basically a variation on a theme. It is similar to the Echo 316/MOE, being black or Dark Earth in color and with a Magpul MOE sliding stock. However, the TRX Rifle does not have an MOE pistol grip, having a standard A2 pistol grip. The upper receiver's MIL-STD-1913 rail joins the upper MIL-STD-1913 of the handguard, and the TRX Rifle uses a low-profile gas block. These two items mean that the TRX Rifle can be equipped with a front and rear BUIS. The barrel is 16 inches long, cold hammer-forged, accurized, and chromes, including the chroming of the feed ramp.

The Sport is designed essentially for target shooting, plinking, and varmint hunting. It uses a 16-inch barrel tipped with an A2-type flash suppressor, and is of government profile. The barrel has a 1:9 twist, and therefore is best used with civilian .223 ammunition or older military M-193 ammunition. (This is inconsequential for game purposes.) Working parts are made from stronger-than-normal steel and the bolt interior is chromed like the bore. The handguards are M4-length, but made of aluminum and has an aluminum heat shield. The top of the receiver has a MIL-STD-1913 rail. The bolt and interior of the receiver halves are coated with a dry-film lubrication coating. The stock is an M4-type 6-position sliding stock.

Note: The figures below assume the use of subloaded/subsonic ammunition when using the silencer. Note further that there is not actually a "Del-Ton Standard Muzzle Brake," or "Del-Ton Standard Silencer;" these are merely conventions I have used for purposes

of the game. They are based on an average weight and cost (in T2K terms) of about 10 muzzle brakes and silencers that the Del-Ton Carbines can use.

Twilight 2000 Notes: These rifles do not exist in the Twilight 2000 timeline (nor does, for that matter, Del-Ton exist in the Twilight 2000 timeline).

Weapon	Ammunition	Weight	Magazines	Price
DT Sport	5.56mm NATO	2.63 kg	5, 10, 20, 30	$591
Echo 316	5.56mm NATO	2.9 kg	5, 10, 20, 30	$593
Echo 316 MOE/MOE-OD/MOE-DE	5.56mm NATO	3.08 kg	5, 10, 20, 30	$594
Echo 316PF	5.56mm NATO	3.18 kg	5, 10, 20, 30	$569
Echo 316L	5.56mm NATO	2.63 kg	5, 10, 20, 30	$616
Sierra 216H	5.56mm NATO	3.36 kg	5, 10, 20, 30	$567
Echo 216	5.56mm NATO	3.13 kg	5, 10, 20, 30	$585
Echo 216H	5.56mm NATO	3.18 kg	5, 10, 20, 30	$567
Extreme Duty 316	5.56mm NATO	2.9 kg	5, 10, 20, 30	$595
TRX Rifle	5.56mm NATO	3.27 kg	5, 10, 20, 30	$585
Del-ton Sport	5.56mm NATO	2.63 kg	5, 10, 20, 30	$570
Del-Ton Standard Muzzle Brake	N/A	0.2 kg	N/A	$50
Del-Ton Standard Silencer	N/A	0.98 kg	N/A	$315

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
DT Sport	SA	3	1-Nil	4/5	3	Nil	40
Echo 316/MOE	SA	3	1-Nil	4/5	3	Nil	40
Echo 316/MOE w/Muzzle Brake	SA	3	1-Nil	4/5	2	Nil	40
Echo 316/MOE w/Silencer	SA	2	1-Nil	7/8	1	Nil	28
Echo 316H/MOE	SA	3	1-Nil	4/6	3	Nil	41
Echo 316H/MOE w/Muzzle Brake	SA	3	1-Nil	4/6	2	Nil	41
Echo 316H/MOE w/Silencer	SA	2	1-Nil	7/8	2	Nil	28
Echo 316PF	SA	3	1-Nil	5	2	Nil	41
Echo 316L	SA	3	1-Nil	4/5	3	Nil	40
Sierra 216H	SA	3	1-Nil	6	2	Nil	41
Sierra 216H w/Muzzle Brake	SA	3	1-Nil	6	2	Nil	41
Sierra 216H w/Silencer	SA	2	1-Nil	8	1	Nil	28
Echo 216	SA	3	1-Nil	4/5	2	Nil	40
Echo 216 w/Muzzle Brake	SA	3	1-Nil	4/5	2	Nil	40
Echo 216 w/Silencer	SA	2	1-Nil	7/8	1	Nil	27
Echo 216H	SA	3	1-Nil	6	2	Nil	41
Echo 216H w/Muzzle Brake	SA	3	1-Nil	6	2	Nil	41
Echo 216H w/Silencer	SA	2	1-Nil	8	1	Nil	28
Extreme Duty	SA	3	1-Nil	4/6	3	Nil	41
Extreme Duty w/Muzzle Brake	SA	3	1-Nil	4/6	2	Nil	41
Extreme Duty w/Silencer	SA	2	1-Nil	7/8	1	Nil	28
TRX Rifle	SA	3	1-Nil	4/6	2	Nil	40
TRX Rifle w/Muzzle Brake	SA	3	1-Nil	4/6	2	Nil	40
TRX Rifle	SA	2	1-Nil	7/8	1	Nil	28

w/Silencer							
Del-ton Sport	SA	3	2-Nil	4/5	3	Nil	39

Del-Ton Rifles

Notes: Del-Ton's line of full-sized rifles is smaller than its line of carbines (probably because, in the past five years or so, civilian buyers interested in AR-type rifles are more interested in carbines than full-sized rifles). DTI's line of rifles range from a basic sort of AR clone that differs little from an AR-15A2 or AR-15A4 to heavy-barreled, greatly-accurized, and close-tolerance rifles with or without MIL-STD-1913 rails and fixed or sliding stocks. For the most part, Del-Ton's full-sized rifles are simply larger versions of their carbine line – sort of an AR done better. As far as construction, coatings, chroming, and finishes, Del-Ton's rifles have the same quality as Del-Ton's carbines. And, real-life-wise, Del-Ton's rifles and carbines are meant to give an AR shooter a weapon of quality with breaking the bank.

The Alpha 220H (also called the Standard Rifle) is sort of a base member of the Del-Ton Rifles line; it appears similar to a standard AR-15A2, with a fixed A2-type Zytel stock (but with a butt-trap compartment in the rear of the stock, large enough for a cleaning kit or several batteries), a standard AR-type carrying handle and AR-15A2 round handguards. The 20-inch barrel, however, is of heavy profile, and tipped with threads and a Del-Ton variation of an A2-type flash suppressor. The Alpha 220H has its top external finish, stock, handguards, and pistol grip in black.

The Alpha 320G (also called the Government Profile Rifle) is essentially a clone of the AR-15A4, and has the design features of that rifle, though with a slightly heavier medium-weight barrel profile (20 inches long), tipped with the standard threaded muzzle that normally is equipped with the Del-Ton A2 flash suppressor. The stock is a standard Del-Ton A2 stock with a trap-door and a compartment in the stock. The upper receiver has a MIL-STD-1913 rail. Essentially, it a lighter version of the Alpha 220H. The Alpha 320H (also called the DTI Rifle) is essentially the same as the Alpha 320G, (or the Alpha 220H with a upper MIL-STD-1913 rail instead of a carrying handle) but with a heavy-profile barrel; the weight of the Alpha 320H is a little different from the Alpha 220H as is the game price, but for game purposes they shoot identically.

Note: The figures below assume the use of subloaded/subsonic ammunition when using the silencer. Note further that there is not actually a "Del-Ton Standard Muzzle Brake," or "Del-Ton Standard Silencer;" these are merely conventions I have used for purposes of the game. They are based on an average weight and cost (in T2K terms) of about 10 muzzle brakes and silencers that the Del-Ton Carbines can use.

Twilight 2000 Notes: These rifles do not exist in the Twilight 2000 timeline (nor does, for that matter, Del-Ton exist in the Twilight 2000 timeline).

Weapon	Ammunition	Weight	Magazines	Price
Alpha 220H	5.56mm NATO	3.72 kg	5, 10, 20, 30	$616
Alpha 320G	5.56mm NATO	3.27 kg	5, 10, 20, 30	$614
Alpha 320H	5.56mm NATO	3.63 kg	5, 10, 20, 30	$623

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Alpha 220H	SA	3	1-Nil	6	2	Nil	56
Alpha 220H w/Muzzle Brake	SA	3	1-Nil	6	2	Nil	56
Alpha 220H Series w/Silencer	SA	2	1-Nil	8	2	Nil	34
Alpha 320G	SA	3	1-Nil	6	3	Nil	56
Alpha 320G w/Muzzle Brake	SA	3	1-Nil	6	2	Nil	56
Alpha 320G w/Silencer	SA	2	1-Nil	8	2	Nil	34

Destructive Devices AK-47/AKM Clones/Imports

Notes: Despite the name of their company, Destructive Devices does not sell destructive devices as defined by US laws; instead, they sell AKM and AK-47 clones, with US-made parts or part foreign/US parts kits. As a group, these rifles are often known as DDI-47s. DDI rifles are, for the most part, assembled and fitted by hand.

The base rifle of the line is the DDI Traditional AKM, which, ironically, is not a traditional AKM. It is more commonly called the DDI-0AKM. It is made out of Bulgarian stamped receiver, internal parts, gas system, and sights, and a US-made barrel, stock, pistol grip, handguards, and trigger pack. The thing that makes the rifle non-traditional is the polymer Magpul MOE US-made parts (except the trigger pack). The stock is fixed, with lightening grooves on either side. It has dual sling attachment points for tactical slings, as well as a sling attachment point at the bottom end of the handguard. The pistol grip has a compartment for storage. The 16-inch barrel is made using DDI's patented Fennocite barrel technology, which results in a better-quality but stiffer barrel and has a proprietary mix of Chrome/Moly/Vanadium steel. The barrel is also specially-bedded to make the bedding stiffer. The receiver has perfectly positioned and sunk rivets, and the sights are known for their accuracy. The DDI AK has a trigger with a much-reduced takeup length, which reduces the "trigger slap" caused by shooters trying to get AK triggers to shoot cleanly. DDI AKs also have a bayonet mount, something that most US-made AKs lack. DDI rifles are known for their ability to take any sort of AK/RPK magazine, whether steel, light

alloy, or polymer; the magazines supplied with the Traditional AKM are polymer. The DDI474150MBP, more commonly known as the DDI-47MBP, is essentially the same rifle with a milled receiver and KG GunKote finish; other details are the same as the DDI-0AKM.

The DDI474150MBPFF (more commonly known as the DDI-47MBPFF is a DDI-0AKM with an underfolding metal stock; the DDI-47MBPTF is the same rifle with a side-folding triangular skeletonized stock. The DDI-AK47SFMM is similar to a standard DDI AK, but the handguards use M-LOK slots instead of simply MIL-STD-1913 rails (though, of course, such rails may be attached to the M-LOK slots, and there is one atop the receiver). The DDI-47MBPUF has a side-folding solid stock. All three stocks are made by Magpul, and all these rifles are identical for game purposes.

The DDI-47, seeming by its designation the base of the line, is in fact the new kid on the block. It used a stamped AKM receiver as a base, but the internal parts are built to Western tolerances. The DDI-47 has the standard AKM front and rear sights, paddle selector lever, and the slant muzzle device. The muzzle device covers standard AK-type threads, and the shooter can use any sort of muzzle device which will fit on an AK. The gas tube is of ventilated steel, reducing heating. The trigger pack is a Tapco G2 two-stage trigger, which prevents the trigger slap so common on semiautomatic AKs. The magazine well is dimpled, which is both an AKM recognition feature and helps retain the magazine in the well. Unlike most civilian versions of military rifles, the DDI-47 does have a bayonet attachment point, though the bayonet itself is not sold with the DDI-47. The 16.1-inch barrel is made of a chrome/moly/vanadium steel alloy and is built heavier than normal and is more rigid than a standard AK barrel. The barrel is coated in a proprietary nitriding finish known as Fennocite, which has excellent resistance to corrosion and also offers good heat dissipation. Perhaps the most noticeable feature of the DDI-47 is the Magpul furniture, including a fixed skeletonized stock with a recoil pad, a polymer pistol grip with a closing compartment inside, Magpul polymer AK handguards with a MIL-STD-1913 rail under it, short rails on the beginning of the sides of the handguards, a MIL-STD-1913 rail above the receiver, and a side optic rail (which is removable). Fit and finish is highly improved over that of a standard AKM. The DDI-47 is essentially an evolved DDI Traditional AKM.

Weapon	Ammunition	Weight	Magazines	Price
DDI-0AKM	7.62mm Kalashnikov	3.4 kg	10, 20, 30, 40, 75D	$807
DDI-47-MBP	7.62mm Kalashnikov	4.03 kg	10, 20, 30, 40, 75D	$804
DDI-47MBPFF	7.62mm Kalashnikov	3.4 kg	10, 20, 30, 40, 75D	$827
DDI-47	7.62mm Kalashnikov	3.4 kg	10, 20, 30, 40, 75D	$900

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
DDI-0AKM	SA	4	2-Nil	6	4	Nil	46
DDI-47-MBP	SA	4	2-Nil	6	3	Nil	46
DDI-47MBPFF	SA	4	2-Nil	4/6	4	Nil	46
DDI-47	SA	4	2-Nil	6	3	Nil	47

Diamondback DB-15

Notes: This carbine is the result of a collaboration between Diamondback and TD Distributors; TD's parent company is Taurus Holdings of Brazil. TD/Taurus figures that it will gain experience in AR-15-type firearms, something they may manufacture in the future. Diamondback benefits from TD's sales and distribution infrastructure and access to raw materials. Diamondback's employees include a large amount of literally former rocket scientists; Diamondback is located near Cape Canaveral and many of the former Space Shuttle Team were looking for work, and had experience in metalworking and shaping, using exotic materials, and running things like CNC machines.

The DB-15, IRL, is not the cheapest AR on the market, but it is one of the most feature-rich and well-made. The DB-15 comes in a stockless, 7.5-inch barrel version, and a 16-inch-barrel carbine version. The barrels are made of 4140 Chrome/Moly. Both are tipped with compact muzzle brakes, and both free-float within their handguards. Barrels are A2-contour barrels. The handguards of the pistol are 6 inches, and of the carbine, 9 inches. They both have upper-handguard MIL-STD-1913 rails continuous with one on the top of the receiver. The handguards of the carbine have additional, short rails on the sides and bottom. The upper and lower receivers are forgings from the standard 7075-T6 aluminum, and the bolt carrier group is made from 8620 steel. Unlike most modern bolt carriers that are cut out on the bottom, the DB-15's fully-surround the rest of the bolt and associated working parts. An unusual feature is the color of the buffer, which is black instead of greenish. The castle nut that attaches the lower receiver to the buffer tube is adequately torque in place, but is not staked, and should be checked every few hundred rounds. The stock is an ATI Strikeforce collapsible stock, with six positions and an adjustable cheekpiece. Finish is Flat Dark Earth or Black.

DB-15s are not particularly happy with bullets of over standard weights, and the heavier the bullets get, the worse the groups get. Trigger pull is very light and can be a bit touchy without adjustment.

Recently (As of the time I write this in Dec 2016), the DB-15B series has been added to the line. This is essentially a 5.56mm version of the DB-15-300. It uses a direct gas impingement system, and there is a MIL-STD-1913 rail atop the receiver. They use a 16-inch 4140 chrome/moly steel for their barrels, Barrels are the same length as the DB-15-300. Handguards are of aluminum, of the same length as the DB-15-300. The sliding stock is of polymer but otherwise an M4-type stock (an ATI Strikeforce stock). Other details are as per the DB-15-300.

The pistol version is included here for completeness.

Weapon	Ammunition	Weight	Magazines	Price
DB-15-300 Carbine	.300 Blackout	3.02 kg	5, 10, 20, 30	$821
DB-15-300 Pistol	.300 Blackout	2.67 kg	5, 10, 20, 30	$679

DB-15B Carbine	5.56mm NATO	3.02 kg	5, 10, 20, 30, 35	$643
DB-15B Pistol	5.56mm NATO	2.67 kg	5, 10, 20, 30, 35	$496

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
DB-15-300 Carbine	SA	3	2-Nil	4/6	3	Nil	46
DB-15-300 Pistol	SA	3	1-Nil	3	2	Nil	12
DB-15B Carbine	SA	3	1-Nil	4/6	2	Nil	42
DB-15B Pistol	SA	2	1-Nil	3	2	Nil	10

DoubleStar STAR-15 STARCAR/Dissipator

Notes: This is an arms venture by DoubleStar Corporation. The STARCAR and Dissipator are basically two of their versions of AR-15A2 rifles. The STARCAR is a basic semiautomatic version of the M4 assault rifle; the automatic fire capability has been removed, the carrying handle replaced by a Picatinny Rail, the bayonet lug removed, and the flash suppressor replaced by a pepperpot-type muzzle brake that passes US arms regulations. The Dissipator is the same, except that it uses full-length AR-15A2 handguards with the front sight post moved accordingly (so it is almost at the muzzle). It also normally still has the familiar carrying handle.

Twilight 2000 Notes: This weapon does not exist in the Twilight 2000 timeline.

Merc 2000 Notes: The Merc 2000 versions of these weapons are almost identical, but they still have the standard flash suppressor as an option, as well as the bayonet lug. In addition, they are normally sold with 20 or 30 round magazines.

Weapon	Ammunition	Weight	Magazines	Price
STARCAR	5.56mm NATO	3.22 kg	10, 20, 30	$630
Dissipator	5.56mm NATO	3.42 kg	10, 20, 30	$630

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
STARCAR	SA	3	1-Nil	4/5	2	Nil	40
Dissipator	SA	3	1-Nil	4/5	2	Nil	40

DPMS Panther 5.56mm

Notes: The Panther is DPMS's primary AR-15 clone. They are generally built to higher standards than the AR-15, often with heavy, floating, and/or bull barrels, target-crowned muzzles, flattop receivers, round aluminum handguards, closer tolerances in construction – basically a better version of the AR-15.

The Arctic Panther is an AR-15A3 variant designed for police use as a spur-of-the-moment sharpshooting rifle – to fulfill the same role in police forces as a designated marksman rifle would in the military. To this end, the Arctic Panther has a heavy, free-floating, fluted barrel with a crowned muzzle, round handguards (made of aluminum, not plastic), and a flattop upper receiver with a MIL-STD-1913 rail. (No optical sights are provided – the Arctic Panther is designed primarily to be used with a telescopic sight.) A secondary consideration gave the Arctic Panther its name – while the stock and pistol grip are the standard AR-15-type black, the handguards and receiver are finished in white, while the barrel is finished in light silver. The result is a silhouette that breaks up very well in snowy weather, as well as some urban environments. Normal magazines sold with the weapon are 10-round plastic magazines, but the Arctic Panther can also take standard AR-15 and M16 magazines.

The Lo-Pro Classic Precision is sort of an economy version of the Arctic Panther. It is finished in standard AR-15-style black, and the receiver is constructed of a somewhat lower-grade aluminum than the Arctic Panther. The barrel is still heavy, but not fluted or free-floating, and is shortened to 16 inches. It does not have a brass deflector nor a forward assist. The handguards are standard AR-15 carbine-type. Though it is basically a "no-frills" rifle, it is nonetheless accurate despite its short barrel.

The Panther A2 Tactical is a version of the Panther with full-length handguards, but only a 16-inch barrel (I must say it is rather odd looking to me for that reason). The barrel is a heavy barrel, and civilian versions have no flash suppressor or muzzle device of any sort (military/police versions have a flash suppressor). The construction of the A2 Tactical is heavy for extra stability. The A2 Tactical has a standard AR-15A2-type carrying handle with sights.

The Panther AP4 Post-Ban 5.56mm is a Panther with a heavy 16-inch barrel, a very effective Miculek muzzle brake, and a flattop receiver with a MIL-STD-1913 rail with a detachable carrying handle. The carrying handle has standard AR-15 iron sights. There is also a pre-ban version; this version has a sliding M4-style stock.

The Panther AP4 Carbines are sold only to military and law enforcement concerns. They are AP4s with standard-type barrels, but with sliding stocks, flash suppressors, short carbine handguards, and standard AR-15A2-type carrying handles. They come in two barrel lengths. It is rumored that DPMS will make full-auto versions upon request by proper agencies, but this is not confirmed; full auto stats are included in case. Later AP4s are equipped with a removable carrying handle (upon removal, the shooter can access a MIL-STD-1913 rail), forged receivers, and barrels that are cold-hammer forged.

The Panther Bull Classic is one of the original Panther series rifles; it has a 20-inch bull barrel, round aluminum handguards, but a standard AR-15-style stock and carrying handle. The Panther Bull Sweet Sixteen is, as the name would indicate, a Panther with a 16-inch floating bull barrel. The Sweet Sixteen has no iron sights, but does have a MIL-STD-1913 rail on the flattop receiver for the mounting of optics. The bolt carrier is chromed, and the bolt itself is phosphated for extra reliability. The Panther Bull Twenty is

virtually identical, but has a 20-inch barrel; the Panther Bull Twenty-Four has a 24-inch barrel. The Panther Bull Twenty-Four Special is a heavy version of the Panther Bull Twenty-Four; it has a heavy bull barrel which is fluted and has a palm rest on the pistol grip, and heavier construction for extra stability. The Panther Super Bull 24 has an extra-heavy bull barrel, skeletonized stock, the MIL-STD-1913 rail on a removable riser, and even heavier construction.

The Panther Carbine is a short version of the Panther, sold only to law enforcement and military concerns. It features an 11.5" barrel with a long 5-inch flash suppressor/muzzle brake, or a 16" barrel with a standard flash suppressor. It has a sliding stock, and a standard AR-15-type carrying handle. It is rumored that DPMS will make full auto versions of the Panther Carbine for the proper authorities, but this is not confirmed; full auto statistics are included in case.

The Panther Classic is virtually a standard AR-15 clone, for the most part. It does, however, have a heavy barrel (but with no flash suppressor). A police/military version is available, with a flash suppressor. The Panther Classic Sixteen is similar, but uses a 16-inch barrel. Another version, the Southpaw Panther exists, both in civilian and police/military versions; it is simply, as the name suggests, a left-handed version of the Panther Classic, with ejection to the left and the operating controls reversed.

The Panther CMP is a version of the Panther with standard handguards, a heavy stainless steel barrel, and special micro-adjustable sights for its role in national shooting matches. The rifle parts are made to especially close tolerances.

The Panther Kitty Kat is sold only to law enforcement and military concerns. It is a Panther with an abbreviated 7-inch free-floating barrel tipped with a flash suppressor, sliding M4-style stock, and round aluminum handguards. It is rumored that DPMS will make automatic versions upon request, but this is not confirmed. Just in case, stats for a full-auto version are included below.

The Panther Lite 16 has a carbon fiber stock that looks like an M4-style sliding stock, but is in fact fixed, and does not have the heavy barrel. A military/police version of the Panther Lite Sixteen is made; this has an actual sliding stock and a flash suppressor. They are very lightweight carbines.

The Panther Tuber is an odd-looking variant of the Panther, with a nearly full-length handguard and virtually no part of the barrel projecting from the handguard except for the very tip of the muzzle. This allows for a well-protected free-floating heavy barrel, but means there is no front sight. (The top of the receiver has a MIL-STD-1913 rail for optical sights.) The forward portion of this extended handguard is a round one similar to other Panther designs, while the rear portion of the handguard is patterned after an M-203 grenade launcher barrel, being ribbed. The weapon is otherwise similar to an AR-15A3, though it has only a 16-inch barrel.

One of the newest members of the Panther 5.56mm family is the Pardus. Intended to be a smaller, sleeker version of other Panther 5.56mm rifles, the Pardus featured tapered, almost dehorned lines, a 16-inch free-floating bull barrel (the barrel is so thick the Pardus almost looks like it has an integral silencer), and a 6-position sliding stock. Mil-STD-1913 rails festoon the Pardus, including a rail which extends from the receiver top to the end of the handguard, a streamlined gas block with a short MIL-STD-1913 rail, and three rails on the handguard. Another is on the left side of the receiver. Mechanically, the Pardus includes an internal recoil compensation device. The internal parts are plated with Titanium Nitride, which minimizes the need for lubrication. Both the upper and lower receiver are of aircraft-quality aluminum, hard-coated with Teflon. Many other parts, such as the trigger guard, trigger, and controls are also of aluminum, hard-coated with Teflon. The Pardus has no iron sights as sold.

One of the newest members of this line (as I write this in early November of 2012) is the DPMS Mid-Length Recon Rifle. (Believe it or not, I was alerted to the existence of the rifle by its appearance in article about the use of AR-15 clones against Zombies!) At its base, it appears as a standard sort of AR-15 clone; on the other hand, the Recon Rifle has a number of features marking it as thoroughly modern. The Recon Rifle, finished in black (including the color of the polymer) uses a large amount of Magpul furniture, including handguards with quad MIL-STD-1913 rails, BUIS, and a sliding stock. Even the pistol grip is an ergonomic model provided by Magpul. Aside from the BUIS, the Recon Rifle is sold with an EOTech Holographic Weapon sight. The free-floating, stainless steel. heavy-profile 16-inch barrel is tipped by an AAC Blackout flash suppressor.

Twilight 2000 Notes: The following weapons in this entry do not exist in the Twilight 2000 World – Arctic Panther, Lo-Pro Precision Classic, Panther AP4 Post-Ban, Panther Classic (though the Police/Military version DOES exist), Panther Classic Sixteen (except, again, for the Police/Military version), Panther Lite 16 (ditto), Panther Tuber, and the Recon Rifle. Many of the existing Panther series weapons, especially the AP4 Pre-Ban, Panther Classic, Panther Lite 16, and Panther Carbine have been issued to US forces as "substitute standards" for the M16 and M4. However, none of the weapons listed above as available in the Twilight 2000 timeline are available in any chambering except 5.56mm.

Weapon	Ammunition	Weight	Magazines	Price
Arctic Panther	5.56mm NATO	4.08 kg	5, 10, 20, 30	$610
Lo-Pro Precision Classic	5.56mm NATO	4.08 kg	5, 10, 20, 30	$564
Panther A2 Tactical	5.56mm NATO	4.42 kg	5, 10, 20, 30	$564
Panther A2 Tactical (Military/Police)	5.56mm NATO	4.45 kg	5, 10, 20, 30	$569
Panther AP4 Post-Ban	5.56mm NATO	3.29 kg	5, 10, 20, 30	$764
Panther AP4 Pre-Ban	5.56mm NATO	3.29 kg	5, 10, 20, 30	$784
Panther AP4 Carbine (16" Barrel)	5.56mm NATO	3.08 kg	5, 10, 20, 30	$585
Panther AP4 Carbine (14.5" Barrel)	5.56mm NATO	3.04 kg	5, 10, 20, 30	$569
Panther AP4 Carbine (16" Barrel)	6.8mm SPC	3.62 kg	5, 10, 20, 30	$759
Panther AP4 Carbine (14.5" Barrel)	6.8mm SPC	3.57 kg	5, 10, 20, 30	$743
Panther Bull Classic	5.56mm NATO	4.42 kg	5, 10, 20, 30	$610
Panther Bull Sweet Sixteen	5.56mm NATO	3.52 kg	5, 10, 20, 30	$568
Panther Bull Twenty	5.56mm NATO	4.31 kg	5, 10, 20, 30	$610

Panther Bull Twenty-Four	5.56mm NATO	4.45 kg	5, 10, 20, 30	$653
Panther Bull Twenty-Four Special	5.56mm NATO	4.65 kg	5, 10, 20, 20	$654
Panther Super Bull 24	5.56mm NATO	5.33 kg	5, 10, 20, 30	$656
Panther Carbine (11.5" Barrel)	5.56mm NATO	3.13 kg	5, 10, 20, 30	$584
Panther Carbine (16" Barrel)	5.56mm NATO	3.36 kg	5, 10, 20, 30	$585
Panther Classic	5.56mm NATO	4.08 kg	5, 10, 20, 30	$605
Panther Classic (Police/Military)	5.56mm NATO	4.14 kg	5, 10, 20, 30	$611
Panther Classic Sixteen	5.56mm NATO	3.2 kg	5, 10, 20, 30	$564
Panther Classic Sixteen (Police/Military)	5.56mm NATO	3.25 kg	5, 10, 20, 30	$569
Panther CMP 5.56mm	5.56mm NATO	4.08 kg	5, 10, 20, 30	$615
Panther Kitty Kat	5.56mm NATO	2.4 kg	5, 10, 20, 30	$493
Panther Lite 16	5.56mm NATO	2.59 kg	5, 10, 20, 30	$560
Panther Lite 16 (Military/Police)	5.56mm NATO	2.64 kg	5, 10, 20, 30	$585
Panther Tuber	5.56mm NATO	3.47 kg	5, 10, 20, 30	$565
Pardus	5.56mm NATO	3.67 kg	5, 10, 20, 30	$751
Recon Rifle	5.56mm NATO	3.49 kg	5, 10, 20, 30	$1463

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Arctic Panther	SA	3	1-Nil	6	2	Nil	59
Lo-Pro Classic Precision	SA	3	1-Nil	5	2	Nil	41
Panther A2 Tactical (Both)	SA	3	1-Nil	5	2	Nil	41
Panther AP4 Post-Ban	SA	3	1-Nil	6	2	Nil	41
Panther AP4 Pre-Ban	SA	3	1-Nil	4/6	2	Nil	41
Panther AP4 Carbine (16", 5.56mm)	5	3	1-Nil	4/5	3	6	40
Panther AP4 Carbine (14.5", 5.56mm)	5	3	1-Nil	4/5	2	6	34
Panther AP4 Carbine (16", 6.8mm)	5	3	1-2-Nil	5/6	3	6	54
Panther AP4 Carbine (14.5", 6.8mm)	5	3	1-2-Nil	4/6	2	6	47
Panther Bull Classic	SA	3	1-Nil	6	2	Nil	59
Panther Bull Sweet Sixteen	SA	3	1-Nil	5	2	Nil	43
Panther Bull Twenty	SA	3	1-Nil	6	2	Nil	59
Panther Bull Twenty-Four	SA	3	1-Nil	7	2	Nil	73
Panther Bull Twenty-Four Special	SA	3	1-Nil	7	2	Nil	73
Panther Super Bull 24	SA	3	1-Nil	7	2	Nil	74
Panther Carbine (11.5")	5	2	1-Nil	3/5	2	5	24
Panther Carbine (16")	5	3	1-Nil	4/5	2	6	40
Panther Classic (Both)	SA	3	1-Nil	6	2	Nil	57
Panther Classic Sixteen (Both)	SA	3	1-Nil	6	3	Nil	41
Panther CMP 5.56mm	SA	3	1-Nil	6	2	Nil	59
Panther Kitty Kat	5	2	1-Nil	3/4	3	7	10
Panther Lite 16	SA	3	1-Nil	5	3	Nil	40
Panther Lite 16 (Military/Police)	SA	3	1-Nil	4/5	3	Nil	40
Panther Tuber	SA	3	1-Nil	5	3	Nil	42
Pardus	SA	3	1-Nil	4/6	2	Nil	65
Recon Rifle	SA	3	1-Nil	4/6	2	Nil	42

DPMS Panther .22LR Series

Notes: These weapons were designed for a variety of purposes, ranging from inexpensive training and practice to accurate varmint hunting. They are all built on the DPMS Panther pattern (an AR-15 clone), and typically have heavy, match, or bull barrels.

The basic Panther .22LR has a floating bull barrel and a round aluminum handguard. It has no iron sights; instead, the upper receiver is topped with a MIL-STD-1913 rail for the mounting of a telescopic sight or other optics. It is primarily meant for varmint hunting, and is quite accurate for its type of rifle.

The Panther .22LR CMP was designed for those who use AR-15-type weapons to cheaply practice without the expense of firing mounds of more expensive 5.56mm NATO ammunition. It is basically a .22 Long Rifle-firing weapon that mimics as much as possible a competition-type AR-15 rifle (especially the DPMS 5.56mm Panther series). The .22LR CMP has a heavy stainless steel match floating barrel and sights made for a .22 Long Rifle round instead of 5.56mm NATO. The sling swivel is attached to the float tube instead of the front sight assembly. The magazines are housed inside a nylon shell and fit instead of a standard-sized magazine well. The trigger is match-grade two-stage.

The Panther AP4 Training Rifle is, as the name suggests, designed for inexpensive training for users of AR-15-type rifles. There are two variants, the Pre-Ban and Post-Ban versions; the Pre-Ban version is currently sold only to law-enforcement and military interests and includes an M16-style flash suppressor and a telescoping M4 style stock, as well as a flat-top receiver with a MIL-STD-

1913 rail and a detachable carrying handle. The Post-Ban version is available to civilians and is virtually identical to the Pre-Ban version, but has no flash suppressor and the M4-style stock is locked at the standard length for an M16-type stock.

Twilight 2000 Notes: These weapons do not exist.

Weapon	Ammunition	Weight	Magazines	Price
Panther .22 LR	.22 Long Rifle	3.54 kg	10	$232
Panther .22 LR CMP	.22 Long Rifle	3.95 kg	10	$294
Panther AP4 (Pre-Ban)	.22 Long Rifle	3.02 kg	10	$241
Panther AP4 (Post-Ban)	.22 Long Rifle	2.97 kg	10	$220

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Panther .22LR	SA	1	Nil	5	1	Nil	36
Panther .22LR CMP	SA	1	Nil	6	1	Nil	42
Panther AP4 (Pre-Ban)	SA	1	Nil	4/5	1	Nil	33
Panther AP4 (Post-Ban)	SA	1	Nil	5	1	Nil	33

DPMS Panther Race Gun

Notes: This is a version of the Panther .223 designed specifically for competitive target shooting. It doesn't look much like a normal Panther rifle, but shares the same lineage. The Race Gun has a free-floating stainless steel bull barrel a full 24 inches long, fluted with black Teflon in the flutes, inside "Hot Rod" aluminum hemispherical handguards and a palm rest. The pistol grip also has a palm rest, and is ergonomically shaped. The rifle includes micro-adjustable competition optical sights. The upper receiver is of polished aluminum, with a low flattop design. The lower receiver includes an adjustable trigger group. The stock is a skeletonized type known as "Ironstone" with brass weights for that perfect balance. The under the handguard is a stud for a bipod (not included in the cost of the rifle). The Race Gun is basically a Panther maxed out for accuracy.

Twilight 2000 Notes: This is a very rare weapon.

Weapon	Ammunition	Weight	Magazines	Price
Panther Race Gun	5.56mm NATO	7.26 kg	5, 10, 20, 30	$796

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Panther Race Gun	SA	3	1-Nil	7	2	Nil	85

DRC Custom Tactical Mini-14/Mini-30

Notes: These are Ruger Mini-14s and Mini-30s that are heavily modified to make them into tactical carbines for police use. The first change made is the shortening of the barrel from 20 inches to 16.25 inches, and the addition of a conical flash suppressor to the muzzle. A Weaver-style forward scope rail is added to mount optics; this rail will accommodate most Western optical mounts and scope rings. The original stock is refinished with a black epoxy finish, or if the user desires, is replaced with a black synthetic stock. A non-slip rubber butt pad is added to the stock in either case. An additional option for the stock the Hogue OverMolded Mini-14 stock; this is a rigid synthetic inner frame with a black rubber outer surface permanently molded onto it, with a pebbled non-slip finish. Whether or not the original Mini-14 or Mini-30 came with a sling, a tactical single-point sling is added (and the old sling and swivels removed, if necessary). The front sight is changed to a Choate protected post sight, and the rear sight is a removable XSS Ghost-Ring aperture sight.

Weapon	Ammunition	Weight	Magazines	Price
Custom Tactical Mini-14	5.56mm NATO	3.18 kg	5, 10, 20, 30	$567
Custom Tactical Mini-30	7.62mm Kalashnikov	3.4 kg	5	$815

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Custom Tactical Mini-14	SA	3	1-Nil	6	3	Nil	41
Custom Tactical Mini-30	SA	4	2-Nil	6	4	Nil	46

DSA LE MRP ZM4

Notes: The DSA LE (Law-Enforcement) MRP (Monolithic Rail Platform) ZM4 is an interesting take on the AR-15/M16/M4 clone. It has features that are found on many such clones, such as MIL-STD-1913 rails on top of the receiver and on the top, sides, and bottom of the handguards, and does not have a standard carrying handle. However, the ZM4 has one feature that currently other such clones do not have – it has a quick-change barrel, allowing the user to change to different lengths of barrel to suit the assault conditions. Changing the barrel does not change the zero (though telescopic sights may need to be reset for the range difference of the new barrel length) and can be accomplished in less than a minute. The extractor is greatly improved for reliability. Barrels range from a short 10.5-inch barrel for close assault to a heavy 18-inch barrel for sharpshooting. These barrels have the extra advantage of being free-floating, further enhancing accuracy. They are made of 4140 chrome/moly steel. Other features include a Magpul MOE sliding stock and a Hogue pistol grip. DSA does not intend this weapon for civilian use, even in its semiautomatic-only guise; it is sold strictly to Law Enforcement (and possibly military) agencies.

Twilight 2000 Notes: This weapon does not exist.

Weapon	Ammunition	Weight	Magazines	Price

ZM4 (10.5" Barrel)	5.56mm NATO	2.44 kg	5, 10, 20, 30	$534
ZM4 (12" Barrel)	5.56mm NATO	2.52 kg	5, 10, 20, 30	$550
ZM4 (14.5" Barrel)	5.56mm NATO	2.65 kg	5, 10, 20, 30	$577
ZM4 (16" Heavy Barrel)	5.56mm NATO	2.77 kg	5, 10, 20, 30	$601
ZM4 (18" Heavy Barrel)	5.56mm NATO	2.89 kg	5,10, 20, 30	$624
Set of 5 Barrels	NA	3.87 kg	NA	$775

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
ZM4 (10.5")	5	2	1-Nil	3/5	3	7	22
ZM4 (12")	5	3	1-Nil	4/5	3	7	27
ZM4 (14.5")	5	3	1-Nil	4/5	3	7	37
ZM4 (16")	5	3	1-Nil	4/6	3	7	46
ZM4 (18")	5	3	1-Nil	5/6	3	7	55

DSA/POF Z4GTC

Notes: This carbine is designed to address one of the greatest problems with the M16/AR-15/M4 series – the direct gas system upon which the weapon operates. This system, while providing simplicity and ample power for operation, also leads to numerous malfunctions due to carbon buildup, especially when the M16, AR-15, or M4 is even a little dirty. DSA entered a partnership with POF (Patriot Ordnance Factory) to solve this issue, by introducing the GTC (Gas Trap Carbine) system. Most of the weapon is designed around DSA's standard variants of the M16/AR-15/M4 series, but the GTC system is mostly POF's design. The GTC system is basically a modified FAL-type gas system, which is more reliable, easier to disassemble and clean (due to the greater simplicity and the chrome-plated operating parts), and more tolerant to dirt and carbon buildup; they also require less lubrication. The barrel is also POF's design, and is a heavy barrel which is also free-floating for added accuracy, fluted for part of its length and equipped with a Vortex muzzle brake. The handguards have mounting rails on four sides; and these can be equipped with rail covers when not in use. The top of the receiver also has a MIL-STD-1913 rail, which joins nearly seamlessly with the top MIL-STD-1913 rail of the handguard. The bottom and side rails are not standard MIL-STD-1913 rails; they are POF Predator rails with grooves that are deeper than normal MIL-STD-1913 rails. While POF Predator rails allow for the use of accessories which the MIL-STD-1913 rails cannot (such as the rail covers), they also make the use of some standard military accessories problematic, especially items like fore-grips which must be tight (though there are alternates for most of the problem accessories that will work as well with the POF Predator rails. Backup iron sights are also supplied, in the form of a Troy flip-up rear sight and a POF front sight which is nearly identical to a standard M16A2/M4 front sight. Needless to say, automatic versions are sold only to military, police, and certain Class III dealers.

Twilight 2000 Notes: Introduced in 2005, this rifle does not exist in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
Z4GTC (16" Barrel)	5.56mm NATO	3.63 kg	5, 10, 20, 30	$621
Z4GTC (20" Barrel)	5.56mm NATO	3.76 kg	5, 10, 20, 30	$664

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Z4GTC (16")	5	3	1-Nil	4/6	2	4	42
Z4GTC (20")	5	3	1-Nil	5/6	2	4	58

F-1 Firearms BDR-15-3G

Notes: Designed specifically for 3-Gun Competitions, the BDR-15-3G presents an almost skeletonized appearance, with lightening cuts at the end and rear of the handguards, along the receiver, and magazine well and in addition, uses a Magpul MOEopen, adjustable stock. There is a standard Rifle, but F-1 will customize a customer's BDR-15-3G in just about any way desired – caliber, color, trigger pack, barrel contour and length, buttstock, optics, and bolt carrier group. The handguards are F-1's custom 12.75-inch C7K Contoured Handguard. The top and underside of the handguard have full-length Picatinny Rails, while below the front lightening cuts are KeyMod points may also be used to attach short lengths of Rail or other accessories. Further KeyMod points are behind the rear handguard lightening cuts. Under the handguard is a heavy profile 16-inch stainless steel barrel tipped with F-1's Flat Face Compensating Muzzle Brake. The handguards make the barrel free-floating. The bolt carrier group is coated with nickel/boron, and is a FailZero bolt carrier which is strong enough to be used in a full-auto rifle (though the BDR-15-3G is a semiautomatic-only rifle). The charging handle is a further weight-saving AXTS Raptor. The upper and lover receiver are made from the standard 7075-T6 aluminum of most AR-15-type rifles, but it is Class 2 hard-anodized. The metalwork has a titanium finish. The trigger guard is oversized for use with gloves. The trigger itself is a Hiperfire Hipertouch 24 3G trigger, designed for 3G competition and with a low pull weight of 3.5 pounds, very fast reset, and clean breaks. The magazine well is beveled for quicker loads and reloads. The pistol grip is a black Magpul MOE grip. The BDR-15-3G does not come with iron sights – it is expected that since sights are so important to a 3G shooter, he will pick his own, and F-1 does sell several choices of open sights. Tolerances are high, and in some crucial places, hand-fitted.

One defect that has been called out is the stock, the Magpul MOE cannot be positively locked into position, leading to a bit of wobble. This is acceptable for a standard assault rifle, but not for 3G, and most BDR-15-3G owners do eventually change the stock.

Weapon	Ammunition	Weight	Magazines	Price
BDR-15-3G	5.56mm NATO	3.15 kg	5, 10, 20, 30	$650

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
BDR-15-3G	SA	3	1-Nil	4/6	2	Nil	45

Faxon Firearms ARAK-21

Notes: The ARAK-21 is sold both in upper form to mount on your lower receiver or in complete rifle form. For purposes, we will use the complete rifle form. The ARAK-21 uses a long-stroke piston, unlike the short-stroke pistons found on most piston-driven ARs. The uppers may have a 12.5-inch barrel with a permanently-attached suppressor, a 16.2-inch barrel, or a 20.2-inch barrel. The buyer may have a left-hand or right-hand receiver – this is especially important, because the charging handle is in the forward portion of the handguard instead of being at the rear of the receiver. Left-handed receivers also have reversed ejection ports and controls. The user may specify a "pencil" barrel, a medium contour barrel, or a heavy barrel, in the 16.2-inch or 20.2-inch barrels. The barrels are made of re-sulfurized 4140 chrome/moly steel, with a rifle-barrel-quality heat treatment. The gas block is pinned to the barrel, and is adjustable with three settings.

The ARAK-21 uses operation inspired by the AK and FAL. It's not a normal AR, since the operation is very different. The upper receiver is built around a modular, monolithic receiver, with a Picatinny Rail atop and below the handguard. Cooling slots are each side, and are also on the bottom, useful if you remove the lower rail. The top rail runs from the rear of the receiver to about the middle of the barrel, while the lower rail runs about six inches back from the front of the handguard. The front of the handguard is clamped to the gas block. The handguard and upper receiver may be colored/finished in black, red, olive, off-white, or blue. The barrel and lower receiver have a deep black Nitride finish, as do the controls. The upper is modular, able to change handguards or barrels of different calibers or lengths. The bolt is designed for use with all calibers offered for the ARAK-21. The receiver halves are manufactured from aluminum billets, 7075 for the lower and 6061-T6 metal for the upper. The action is contained completely in the upper receiver, meaning that the ARAK-21 can use folding, sliding, or collapsing stocks as desired. The charging handle does not reciprocate when firing, so it will not throw off aim or contribute to felt recoil, or pull the barrel to one side or the other. The charging handle may be folded down when not in use. The rifle comes with a set of Magpul MBUIS for use if optics are not used. The stock is also deep black, and is a B5 SOPMOD Bravo collapsible stock with a recoil pad.

Weapon	Ammunition	Weight	Magazines	Price
ARAK-21 (12.5" Suppressed Barrel)	5.56mm NATO	2.95 kg	5, 10, 20, 30	$962
ARAK-21 (12.5" Suppressed Barrel)	.300 Blackout	3.05 kg	5, 10, 20, 30	$1354
ARAK-21 (12.5" Suppressed Barrel)	7.62mm Kalashnikov	3.09 kg	5, 10, 20, 30, 40	$1458
ARAK-21 (16.2" Pencil Barrel)	5.56mm NATO	2.7 kg	5, 10, 20, 30	$722
ARAK-21 (16.2" Pencil Barrel)	.300 Blackout	3.13 kg	5, 10, 20, 30	$918
ARAK-21 (16.2" Pencil Barrel)	7.62mm Kalashnikov	3.18 kg	5, 10, 20, 30, 40	$987
ARAK-21 (20.2" Pencil Barrel)	5.56mm NATO	2.79 kg	5, 10, 20, 30	$764
ARAK-21 (20.2" Pencil Barrel)	.300 Blackout	3.23 kg	5, 10, 20, 30	$960
ARAK-21 (20.2" Pencil Barrel)	7.62mm Kalashnikov	3.28 kg	5, 10, 20, 30, 40	$1029
ARAK-21 (16.2" Medium Barrel)	5.56mm NATO	3.18 kg	5, 10, 20, 30	$723
ARAK-21 (16.2" Medium Barrel)	.300 Blackout	3.28 kg	5, 10, 20, 30	$920

ARAK-21 (16.2” Medium Barrel)	7.62mm Kalashnikov	3.32 kg	5, 10, 20, 30, 40	$988
ARAK-21 (20.2” Medium Barrel)	5.56mm NATO	3.29 kg	5, 10, 20, 30	$766
ARAK-21 (20.2” Medium Barrel)	.300 Blackout	3.38 kg	5, 10, 20, 30	$962
ARAK-21 (20.2” Medium Barrel)	7.62mm Kalashnikov	3.42 kg	5, 10, 20, 30, 40	$1031
ARAK-21 (16.2” Heavy Barrel)	5.56mm NATO	3.31 kg	5, 10, 20, 30	$726
ARAK-21 (16.2” Heavy Barrel)	.300 Blackout	3.41 kg	5, 10, 20, 30	$922
ARAK-21 (16.2” Heavy Barrel)	7.62mm Kalashnikov	3.45 kg	5, 10, 20, 30, 40	$991
ARAK-21 (20.2” Heavy Barrel)	5.56mm NATO	3.41 kg	5, 10, 20, 30	$769
ARAK-21 (20.2” Heavy Barrel)	.300 Blackout	3.51 kg	5, 10, 20, 30	$965
ARAK-21 (20.2” Heavy Barrel)	7.62mm Kalashnikov	3.55 kg	5, 10, 20, 30, 40	$1035

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
ARAK-21 (12.5” Suppressed Barrel, 5.56mm)	SA	2	1-Nil	7/8	2	Nil	23
ARAK-21 (12.5” Suppressed Barrel, .300)	SA	3	2-Nil	7/8	2	Nil	26
ARAK-21 (12.5” Suppressed Barrel, 7.62mm)	SA	3	2-Nil	7/8	3	Nil	27
ARAK-21 (16.2” Pencil Barrel, 5.56mm)	SA	3	1-Nil	4/6	2	Nil	40
ARAK-21 (16.2” Pencil Barrel, .300)	SA	3	2-Nil	4/6	3	Nil	46
ARAK-21 (16.2” Pencil Barrel, 7.62mm)	SA	4	2-Nil	4/6	3	Nil	46
ARAK-21 (20.2” Pencil Barrel, 5.56mm)	SA	3	1-Nil	5/6	2	Nil	56
ARAK-21 (20.2” Pencil Barrel, .300)	SA	4	2-Nil	5/6	3	Nil	59
ARAK-21 (20.2” Pencil Barrel, 7.62mm)	SA	4	2-3-Nil	5/6	3	Nil	62
ARAK-21 (16.2” Medium Barrel, 5.56mm)	SA	3	1-Nil	4/6	2	Nil	41
ARAK-21 (16.2” Medium Barrel, .300)	SA	3	2-Nil	4/6	3	Nil	46
ARAK-21 (16.2” Medium Barrel, 7.62mm)	SA	4	2-Nil	4/6	3	Nil	47
ARAK-21 (20.2” Medium Barrel, 5.56mm)	SA	3	1-Nil	5/6	2	Nil	56
ARAK-21 (20.2” Medium Barrel, .300)	SA	4	2-Nil	5/6	3	Nil	59
ARAK-21 (20.2” Medium Barrel, 7.62mm)	SA	4	2-3-Nil	5/6	3	Nil	62
ARAK-21 (16.2” Heavy Barrel,	SA	3	1-Nil	4/6	2	Nil	42

5.56mm)							
ARAK-21 (16.2" Heavy Barrel, .300)	SA	3	2-Nil	4/6	3	Nil	47
ARAK-21 (16.2" Heavy Barrel, 7.62mm)	SA	4	2-Nil	4/6	3	Nil	48
ARAK-21 (20.2" Heavy Barrel, 5.56mm)	SA	3	1-Nil	5/6	2	Nil	58
ARAK-21 (20.2" Heavy Barrel, .300)	SA	4	2-Nil	5/6	3	Nil	60
ARAK-21 (20.2" Heavy Barrel, 7.62mm)	SA	4	2-3-Nil	5/6	3	Nil	63

Franklin Armory XO-26

Notes: The XO-26 is sort in a nebulous class of firearms by US law – it is too long to be a pistol, but it lacks many of the features of a short-barreled rifle (SBR), as it has no stock (though there is a padded tube at the rear for the recoil spring and mass to operate), and it has no bayonet stud. It is not sold with a sling, but has attachment points for several types of sling swivels. The XO-26 has a flash suppressor, but it is not a standard AR flash suppressor. Essentially, by US law, The XO-26 is classified as a "non-gun" as well as a "non-pistol;" it goes on an "other" line. Even more strangely, California *does* consider it a pistol for purposes of its laws. The XO-26 is considered too large by the US and California governments to be concealable. (In essence, I put the XO-26 here because I don't know how to classify it in game terms either.)

The XO-26 uses a modification of the AR platform, with the same upper and lower receiver as an AR as well as an A2 grip (though it may be white or black). The barrel is 11.5 inches long, tipped by a notched flash suppressor (or a Ross Schuler muzzle brake on the .450 Bushmaster version), and a folding front sight over the gas block that is otherwise based on an AR front sight. The rear sight is again folding but otherwise based on the AR sight. Connecting the two sights is a full-length top MIL-STD-1913 rail, above the receiver and continuing down the top of the handguard. The handguards also have rails on the sides and underneath and the AO-26 is sold with a foregrip.

The XO-26b is essentially a more streamlined XO-26. The metal parts are given special hardening and protection against corrosion. The handguard has only a lower "rail block," designed primarily to mount a foregrip. Above the gas block is a mounting point for a folding or non-folding front sight assembly. The upper receiver is topped with a MIL-STD-1913 rail. No actual sights are sold with the XO-26b version, though the sling attachment points remain. Chamberings are very limited on the XO-26b, and the XO-26b does have an A2-type flash suppressor.

In both cases, the barrels are contained in free-float handguards.

Weapon	Ammunition	Weight	Magazines	Price
XO-26	5.56mm NATO	2.42 kg	5, 10, 20, 30	$494
XO-26	6.8mm SPC	2.58 kg	5, 10, 20, 30	$660
XO-26	.300 Blackout	2.64 kg	5, 10, 20, 30	$674
XO-26	7.62mm Kalashnikov	2.7 kg	5, 10, 20, 30, 40	$743
XO-26	.450 Bushmaster	3.13 kg	2, 3, 6, 9	$1849
XO-26b	5.56mm NATO	2.18 kg	5, 10, 20, 30	$494
XO-26b	7.62mm Kalashnikov	2.43 kg	5, 10, 20, 30, 40	$743

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
XO-26/XO-26b (5.56mm)	SA	2	1-Nil	4	3	Nil	24
XO-26 (6.8mm)	SA	3	1-2-Nil	4	3	Nil	32
XO-26 (.300)	SA	3	2-Nil	4	3	Nil	27
XO-26/XO-26b (7.62mm)	SA	3	2-Nil	4	3	Nil	27
XO-26 (.450)	SA	6	1-3-Nil	4	4	Nil	32

Fulton Armory FAR-15

Notes: The FAR-15 is advertised as being "as close to an M16 as legally possible." Depending on the version, it may have a 20-inch or 16-inch barrel, long or short handguards, round or AR-15A1-type handguards, a barrel that has a standard, heavy or

government profile, and railed or plain handguards. FAR-15s are equipped with a plastic Accu-Wedge, with solidifies the joint between the barrel and receiver.

The FAR-15A2 Service Rifle is basically an AR-15A2, with a fixed stock instead of the sliding stock so common on ARs these days. It has a 20-inch heavy-profile barrel, fed from a Wylde chamber. The handguards are round, A2-type handguards, with a standard heat shield. Operation is by the standard direct gas impingement method. The end of the handguards has a sling swivel, but also has an FA Power wedge, to which optics or a bipod can be attached (in some cases with an adapter). The sights are standard A2, with a rear sight adjustable for windage and elevation and a front sight adjustable for elevation. The stock has a butt trap for a cleaning kit or other items, something I have not seen on most AR-15A2s and M16A2s. For the most part, this is a standard AR-15A2, built with Fulton Armory parts. The FAR-15A4 is mostly the same for game purposes, but has a flattop receiver with a MIL-STD-1913 rail atop it.

The FAR-15 Legacy Rifle is essentially a copy of the AR-15, with largely Milspec parts and no Mil-STD-1913 rails; it has the standard carrying handle atop the receiver. It looks just like an AR-15. Internally, it has an HPT/MPT Bolt with an HD extractor spring. The Bolt Carrier is chromed inside and out, slick-sided, with no forward assist notches or forward assist. The barrel is 20 inches long, of lightweight profile, and tipped with a three-prong flash suppressor. The handguards are standard AR-15-type; the stock and pistol grip are standard AR-15-type. The stock has a metal, checkered buttplate. A departure from the AR-15-type rifle is a rear sight adjustable for elevation and windage (Fulton calls this a Power Wedge), and the front sight is also a standard AR-15-type, adjustable for elevation.

The Liberator-H comes with an A4-type receiver-top, with a MIL-STD-1913 rail. The handguard is a Daniel Defense Lite Quad Rail, with full-length rails on top and below and 2/3-length rails on either side from the rear of the handguards. Rail covers come with the rifle. The chamber is a Wylde chamber. The gas block is low-profile. The barrel is 20 inches, is of heavy profile, and tipped with an A2-type flash suppressor. The stock is checkered metal, with a buttplate door for storage. The pistol grip is an Ergo Sure Grip. The trigger is two stage, with the first stage having a 4.5-pound pull weight. The Liberator-H comes with BUIS. The Liberator-L is the same rifle, with a lightweight profile barrel.

For game purposes, the Guardian-H is almost identical to the Liberator H, with a slight weight difference and a non-adjustable trigger, as well as slightly longer handguards (the Liberator has 12-inch handguards; the Guardian has 13.5-inch handguards). The barrel is free-floating in addition to being of heavy profile and specially-bedded. The Guardian-L is the same, but uses a lightweight barrel.

The Predator Varmint Rifle starts with an A4 receiver and stock, but uses a 24-inch bull barrel that is free-floating and specially-bedded, as well as having a target crown. As with most varmint rifles, it is heavy-barreled, heavy in weight, and very accurate at short to medium ranges. The handguard is one-piece, round, and made of PVR, with no MIL-STD-1913 rails (though it has a sling swivel and attachment point, which could be used to mount certain bipods). The top of the receiver does have a MIL-STD-1913 rail. Grip points on the handguard are knurled to increase hold. The Predator Varmint does not have a forward assist, nor forward assist grooves on the bolt carrier. The stock is an A2 stock, with a metal buttplate and a compartment in the butt. The pistol grip is an Ergo SureGrip. The gas block uses a compression fit. The trigger is two-stage, with the first stage breaking at 4.5 pounds. The Predator Varmint Lite is similar, but uses a heavy match-quality floating 20-inch barrel tipped with an A2 flash suppressor.

The Peerless NM A2 Service Rifle is basically a standard AR-15A2, but improved to National Match standards. This includes a rear sight block like an A2, but micrometer-adjustable, a 20-inch heavy floating match-quality stainless steel specially-bedded barrel tipped with an A2 flash suppressor and with a Wylde chamber, able to use civilian and military ammunition. The front sight post is also adjustable for elevation, the triangular front sight riser is also adjustable for windage. They are also NM quality (though they are not micrometer adjustable), and can be set and locked in place. The twist rate is 1:8, so it is a compromise between civilian and military twist rates. The trigger is two-stage breaking at 4.5 pounds and is specially tuned by Fulton Armory. The handguards look like normal A2 handguards, but are made of steel. The entire rifle is reinforced to prevent bending and flexing, and parts are hand-fitted. The Peerless NM A4 is similar, but has a flattop receiver with a MIL-STD-1913 rail. The front sight is as the NM A2, but the rear sight is a BUIS with the same characteristics as the sight block on the NM A2, and of course, it can take a variety of optics. The barrel and chamber is the same as on the NM A2. The trigger pack is also the same as on the NM A2. It is the same weight as the NM A2, and shoots the same and costs the same.

The FAR-15 line also includes a number of carbines. The M4 Service Carbine is for the most part as a civilianized version of the M4A3 military carbine, with a flattop receiver with MIL-STD-1913 rail. The barrel is 16 inches, of heavy profile, and match quality; it is tipped with an A2 flash suppressor. It has a Wylde chamber. Most other parts are Milspec, including the bore, which is chromed and has a 1:9 twist, and the bayonet lug at the base of the front sight. The A2 Service Carbine is essentially the same, but has a carrying handle instead of a MIL-STD-1913 rail. For game purposes, it is identical to the M4.

The Phantom Carbine is immediately identifiable by its extended MIL-STD-1913 rail, which goes over the carbine-length gas system and cooling slots and is continuous with the rail above the receiver. The rest of the Diamondhead VRS-T handguard is round and has holes along its top and sides for the attachment of further MIL-STD-1913 rails (though it is not sold with them). The 16-inch barrel is of heavy profile and match-quality, specially-bedded, and the barrel floats. The chamber is a Wylde chamber. The gas block is low profile and made of stainless steel. The stock is a standard M4-type collapsible stock, and the pistol grip is an Ergo SureGrip. The trigger is two-stage and breaks at the first stage at 4.5 pounds, but is not adjustable.

The Liberator Carbine is, as its name suggests, a carbine version of the Liberator-H Rifle. It shares the Rifle's handguards (with a carbine-length gas system beneath them), and has a 16-inch heavy profile, floating, and match-quality barrel, tipped with an A2-type flash suppressor and specially-bedded. Like the rest of the carbines of this series, it has an M4-type collapsible stock. The pistol grip

and the sling swivels are the same as the Rifle, as is the trigger pack. The Guardian Carbine is virtually the same as the Liberator Carbine; the primary difference is the shorter handguards, no MIL-STD-1913 rails on the sides of the handguards (though there are mounting holes) and lighter weight.

Weapon	Ammunition	Weight	Magazines	Price
FAR-15A2/A4	5.56mm NATO	3.65 kg	5, 10, 20, 30, 35	$609
FAR-15 Legacy Rifle	5.56mm NATO	3.06 kg	5, 10, 20, 30, 35	$606
FAR-15 Liberator-H	5.56mm NATO	3.67 kg	5, 10, 20, 30, 35	$617
FAR-15 Liberator-L	5.56mm NATO	3.18 kg	5, 10, 20, 30, 35	$615
FAR-15 Guardian-H	5.56mm NATO	3.61 kg	5, 10, 20, 30, 35	$624
FAR-15 Guardian-L	5.56mm NATO	3.11 kg	5, 10, 20, 30, 35	$621
FAR-15 Predator Varmint	5.56mm NATO	4.2 kg	5, 10, 20, 30, 35	$659
FAR-15 Predator Varmint Lite	5.56mm NATO	3.65 kg	5, 10, 20, 30, 35	$622
FAR-15 Peerless NM A2/A4	5.56mm NATO	4.47 kg	5, 10, 20, 30, 35	$627
FAR-15 M4/A2 Service Carbine	5.56mm NATO	2.97 kg	5, 10, 20, 30, 35	$591
FAR-15 Phantom Carbine	5.56mm NATO	3.15 kg	5, 10, 20, 30, 35	$604
FAR-15 Liberator Carbine	5.56mm NATO	3.15 kg	5, 10, 20, 30, 35	$607
FAR-15 Guardian Carbine	5.56mm NATO	3.08 kg	5, 10, 20, 30, 35	$604

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
FAR-15A2/A4	SA	3	1-Nil	6	2	Nil	56
FAR-15 Legacy Rifle	SA	3	1-Nil	6	3	Nil	55
FAR-15 Liberator-H	SA	3	1-Nil	6	3	Nil	57
FAR-15 Liberator-L	SA	3	1-Nil	6	3	Nil	56
FAR-15 Guardian-H	SA	3	1-Nil	6	2	Nil	60
FAR-15 Guardian-L	SA	3	1-Nil	6	3	Nil	58
FAR-15 Predator Varmint	SA	3	1-Nil	7	2	Nil	75
FAR-15 Predator Varmint Lite	SA	3	1-Nil	6	2	Nil	62
FAR-15 Peerless NM A2/A4	SA	3	1-Nil	7	2	Nil	64
FAR-15 M4/A2 Service Carbine	SA	3	1-Nil	4/6	3	Nil	42
FAR-15 Phantom Carbine	SA	3	1-Nil	4/6	3	Nil	45
FAR-15 Liberator Carbine	SA	3	1-Nil	4/6	3	Nil	45
FAR-15 Guardian Carbine	SA	3	1-Nil	4/6	3	Nil	45

Fulton Armory Ultimate M-1 Carbine

Notes: The Ultimate M-1 Carbine is usually a conversion of existing M-1 Carbines, though some are built from new parts. The parts are first gauged and modified if necessary to accurize the weapon, and then the M-1 is turned into something quite different from the original M-1 Carbine, making it into a useful police carbine or military PDW.

The stock is totally replaced with a Choate composite fiberglass folding stock. This not only makes the weapon easier to store and use from a vehicle, it also slightly lowers the receiver and barrel in the stock and slightly reduces the already small recoil by making the recoil path more in a straight line. The length of pull is also slightly longer, making the weapon more comfortable for most people to shoot. The stock also has a pistol grip, and the recoil is light enough that the Ultimate M-1 can be fired one-handed with the stock folded if necessary. The receiver and barrel are drilled and tapped for use with optics, and a MIL-STD-1913 rail is mounted on the weapon to allow use with virtually any accessory. Under the fore-end is another MIL-STD-1913 rail. Three sling swivels are mounted, at the front of the fore-end, at the pistol grip, and at the stock hinge, allowing maximum utility. A “recoil check” muzzle brake is also added, though it really isn’t necessary with a weapon firing .30 Carbine cartridges; it is more for looks than anything else, though it is an effective flash suppressor.

Twilight 2000 Notes: This weapon does not exist in the Twilight 2000 timeline as such, though conversions similar to it are

occasionally carried out by private armorers and tinkerers, on M-1s as well as M-2s.

Merc 2000 Notes: In addition to the M-1 Carbine-based Ultimate Carbine, Fulton Armory also makes an M-2-based Ultimate Carbine, primarily for police work, though some civilians possess them as well.

(It should be noted that the Ultimate M-2 Carbine *is* fictional; Fulton Armory does not make them in the real world.)

Weapon	Ammunition	Weight	Magazines	Price
Ultimate M-1 Carbine	.30 Carbine	3.32 kg	15, 30	$391
Ultimate M-2 Carbine	.30 Carbine	3.32 kg	15, 30	$395

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Ultimate M-1 Carbine	SA	2	1-Nil	4/5	1	Nil	50
Ultimate M-2 Carbine	5	2	1-Nil	4/5	1	2	50

Geissele Super Duty

Notes: Essentially a high-quality AR-15/M16 clone, the Super Duty, also known as the Super Duty AR-15, is a small family of AR-15s with varying features, lengths, and automatic fire capability. It is rumored that some countries' troops or police who use the M16/M4 as their standard assault rifle have tested the Super Duty for use by their special operations units.

There are some features across the entire Super Duty family that are common. The barrel is lighter and stronger without having to use fluting. External metal is nitrided, and the aluminum upper and lower receiver is further anodized under the nitriding. The gas port is intermediate length allowing softer recoil while also allowing the Super Duty to digest almost any .223/5,56mm ammunition. (This is also aided by a better barrel extension and feed ramp design. Bill Geissele also once worked law enforcement in a northern mining industrial site, and says that a Super Duty will continue to run normally down to -40 degrees Fahrenheit. Handguards are from A1G Defense and have numerous MLOK slots, and usually also lengths of Picatinny Rail. The bolt is made of an improved Carpenter 158 steel alloy, while the BCG is of 8620 Alloy steel.. The stock is a B5 Systems Enhanced SOPMOD stock. The charging handle is an Airborne Charging Handle, which has wide, flat wings and it easier to actuate. The inner part of the receivers and the bolt carrier assembly is Nanoweapon coated, which resists fouling due to dirt of carbon. These rifles come in OD Green, Desert, Gray, Luna Black, and 40mm Green.

The base rifle is the Super Duty Rifle, which features a 16-inch tapered-profile manganese-phosphated barrel which is cold hammer forged, and tipped with a birdcage-type flash suppressor. The handguards are octagonal in profile, with the rail atop the receiver and the top of the handguards forming a continuous Picatinny Rail. The other seven flats of the handguards have MLOK slots in them. The SSA-E X Lightning Bow trigger has been installed, a two-stage trigger pack which uses a compromise between a wide, flat competition trigger and a standard AR-15-type.

Geissele makes several LE/MIL versions of the Super Duty, which are collectively called Super Duty LE rifles. The MK16 features a 16-inch CMV steel chrome-lined military-profile barrel tipped by an A2-type flash suppressor. The trigger is an A1G QMS combat-type trigger, with a pull wright of about 6 pounds (lighter than most assault rifles). The handguard is a Super Modular Rail MK16. There are "thin blue lines" literally marked un the front of the handguards, denoting it's primary purpose as a law-enforcement weapon. The upper receiver and upper handguard join to make a continuous length of Picatinny Rail. As bought, the Super Duty LE does not come with any iron sights, as it is designed for optics to be mounted, though of course iron sights may also be mounted. The handguard is octagonal in profile, and the other seven flats have MLOK slots. The Super Duty LE is currently available to LE or military concerns, and it is rumored that Gaissele will make fully-automatic versions of the Super Duty LE upon request. Geissele will also equip Super Duty LE rifles with a wide range of desired accessories.

A variant of the Super Duty LE MK16, called simply the Super Duty LE 16, has different A1G V2X LE Aluminum handguards. These are also octagonal handguards, but have MLOK slots at only every other flat except the top of the handguard., and a short length of rail above the gas block and a rail above the receiver. Another variant is the Super Duty LE 14.5, which is essentially the same, but has a 14.5-inch barrel.

Though not assault rifles, a couple of other versions deserve mention here (for completeness, if nothing else). The Super Duty Pistol is essentially the same as the Super Duty series, while the Super Duty LE Pistols are essentially the same as the Super Duty MK 16 LE. They are, of course, shorter, with 10.3-inch barrels. The lower receivers are, in fact, the same as their larger brethren. They are equipped with SB Tactical's SBA3 arm braces.

Weapon	Ammunition	Weight	Magazines	Price
Super Duty	5.56mm NATO	3.01 kg	5, 10, 20, 30	$598
Super Duty MK16 LE	5.56mm NATO	3.05 kg	5, 10, 20, 30	$605
Super Duty 16 LE	5.56mm NATO	3.03 kg	5, 10, 20, 30	$603
Super Duty 14.5 LE	5.56mm NATO	2.96 kg	5, 10, 20, 30	$588
Super Duty Pistol	5.56mm NATO	2.37 kg	5, 10, 20, 30	$521
Super Duty Pistol LE	5.56mm NATO	2.4 kg	5, 10, 20, 30	$522

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Super Duty	SA	3	1-Nil	4/5	3	Nil	43
Super Duty MK16 LE	5	3	1-Nil	4/5	3	6	45
Super Duty 16 LE	5	3	1-Nil	4/5	3	6	45
Super Duty 14.5 LE	5	3	1-Nil	4/5	3	6	39
Super Duty Pistol	SA	2	1-Nil	3	2	Nil	23
Super Duty Pistol LE	5	2	1-Nil	3	3	7	23

Grendel S16

Notes: Realizing the crop of 9mm Parabellum-based silenced weapons lacked much in the way of punch or range, and loading standard assault rifle cartridges with the lesser amount of powder to reduce their power to the point where they could function properly with a silencer also reduced their damaging and penetration abilities to the point of ineffectiveness, Grendel designed a new round that would have decent range, good damaging ability, and some capability to penetrate body armor. They reduced the length of a standard 7.62mm NATO bullet and added a heavy metal core, then loaded it in a reduced-length case and added just enough powder to propel it as fast as possible without breaking the sound barrier. They coupled this with a barrel that has a very rapid twist, and then

modified an M16 to fire the new round. The result is a weapon that is very quiet, but rather lethal, even at ranges out to 300 meters. The magazines are modified 20-round M16 magazines. The cost of this weapon includes a telescopic sight. There has been some experimentation by US military snipers, and it is rumored to have received its first battle testing recently in Afghanistan.

Twilight 2000 Notes: This weapon was quite popular with NATO special operations forces, especially their snipers, and some even filtered down to regular military snipers.

Merc 2000 Notes: The S16 is listed by Grendel has having a decent amount of sales, but always to "unnamed parties."

Weapon	Ammunition	Weight	Magazines	Price
Grendel S16	7.62mm Grendel Subsonic	4.3 kg	20	$765

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Grendel S16	3	3	1-Nil	6	2	3	33

Grey Ghost Precision Specter

Notes: The Specter is a series of high-quality assault rifles, as well as one DMR. Though branded Grey Ghost Precision, the Specters are actually built by Mega Arms, though the parts are supplied by Grey Ghost. Prototypes of the Specter were put through their paces by troops training for deployment to Afghanistan (though those particular troops never actually got posted to Afghanistan), and they found that the Specter was a tough, durable, accurate set of rifles. The Specter has also been tested by US special operations forces and received high marks. Those troops' feedback contributed to the eventual design, and the current production lot is the fifth generation of the rifles. Other frequent users of the Specter are 3-Gun Competition shooters.

The barrel of the Specter-Light is a 16-inch 416 stainless steel barrel tipped with compact Gemtech Jake muzzle brakes. (If the muzzle brake is removed, you will find an 11-degree target crown when the cap is put on.) The barrels have a black nitride finish inside and out, as does the muzzle brake, which gives the Specter excellent corrosion resistance without affecting accuracy. The barrels are specially-bedded and are match-quality. They are surrounded with Mega MKM KeyMod handguards; these are hexagonal in shape and may have MIL-STD-1913 rails on all six sides through the KeyMod system, though the normal rifle as received from the factory has a continuous receiver/upper handguard rail and a bottom and sides short rails. The handguards are 14 inches long and almost entirely enclose the barrel, with little more than the muzzle brake protruding from the handguards. Grey Ghost intends to have M-LOK versions of the handguards in the near future. The handguards are hand-fitted to the upper receiver using Mega Arms' custom lockup system, which is stronger than a standard Mil-spec attachment. Atop the receiver is a red-dot sight, though it may be removed and replaced with other optics.

The receiver halves are of 7075-T651 aluminum billet finished with True Black Type III hard anodization with a surface hardness of 60 RC. Lower receivers have ambidextrous controls and enhanced takedown pins. The triggers have a pull weight of a mere 4.5 pounds and are single-stage triggers. The stock is a Magpul ACS sliding six-position stock, and the grip is a Magpul MOE+ pistol grip. The bolt carrier group is made from case-hardened 9130 steel and has an enhanced extractor (and in my experience, extraction failure is the number one failure on M16-type rifles). The gas block is a low-profile, mid-length gas block. The selector lever is a Battle Arms BAD-CASS selector, slightly extended.

The Specter-Heavy has the addition of a heavy barrel, and as it is a DMR, is treated in game terms as a sniper rifle instead of an assault rifle (though it is included here for completeness). The barrel is phosphated in addition to its black nitride finish, as are the receiver halves and handguards. The gas block is adjustable, for use under adverse conditions and for use with suppressors. It also allows the rifle to function much cooler and cleaner, and reduces felt recoil. The Specter-Heavy uses a Lantac Dragon muzzle brake. It is topped by a PST 6-24x50mm riflescope.

The Specter-Dark is mostly the same as the Specter-Light, except for what is necessary for caliber differences. It too uses a Lantac Dragon muzzle brake.

The Specter rifles have a center of gravity slightly to the rear, to balance out the results of adding optics and accessories.

Weapon	Ammunition	Weight	Magazines	Price
Specter-Light	5.56mm NATO	3.89 kg	5, 10, 20, 30	$799
Specter-Dark	.300 Blackout	4.27 kg	5, 10, 20, 30	$975
Specter-Heavy	7.62mm NATO	6.88 kg	5, 10, 20	$1859

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Specter-Light	5	3	1-Nil	4/6	2	4	44
Specter-Dark	5	3	2-Nil	4/6	3	6	48
Specter-Heavy	SA	4	2-3-Nil	5/6	2	Nil	50
With Bipod	SA	4	2-3-Nil	5/6	1	Nil	65

Hardened Arms AR-15

Notes: The Hardened Arms AR-15 comes in several versions, most of which differ in color or camouflage pattern or handguards. Colors are added by a Cerekote finish for the receivers and barrel. Colors include Gray, Pink, Purple (though it looks more like mauve), Black, Blue, Green (*international* green), and Red, Snow Camo, Flat Dark Earth, Desert Camo, Jungle Camo, Bi-Tone Black/Silver, Woodland Camo. There are several versions with different handguards and chamberings, and these will be gone into in

more detail in this entry.

Standard Hardened Arms AR-15s have 16-inch stainless steel spiral-fluted heavy barrels, tipped by a beefy 4150CMV Short Comp muzzle brake. The chamber uses M4 feed ramps, and is a Wylde chamber. The receiver tops have MIL-STD-1913 rails, in the same color as their receivers. The rail continues onto the upper handguard, and the sides and bottom of the handguard have KeyMod holes for the attachment of further rails. The SDX Rail free-float handguard is round, with a raised section on top for the MIL-STD-1913 rail. The pistol grip is A2, with an M4-type stock. The gas block is low-profile and is adjustable; it is a carbine-length gas system.

The AR-15 Socom Quad Rail has an 18-inch Socom (Heavy) Profile barrel, free-floating, and is tipped with an A2-type flash suppressor. The 4150CMV Stainless Steel barrel is machined in-house and hand-fitted and inspected. The chamber is a Wylde chamber, with an M4 extension. The handguards have four MIL-STD-1913 rails, one of which is continuous with the rail atop the receiver. A low-profile gas block is used, along with a carbine-length gas system. Finish for the receiver and barrel is Melonite. The internal parts are largely Milspec parts. The pistol grip is an A2 grip, while the stock is an M4 stock.

A variant of the AR-15 Socom Quad Rail is the 300 BLK Quad Rail. It is essentially the same weapon, with a carbine-length 16-inch barrel tipped by a muzzle brake, and firing a different cartridge. The M4 Quad Rail is essentially the same rifle, except for the caliber. The AR-15 SS Quad Rail is basically the same as the M4 Quad Rail, except for the bull barrel tipped with a target crown. This crown may be unscrewed and replaced with most muzzle devices. The AR-15 Straight Fluted Bull Barrel is similar, but has lightning flutes on a shorter 20-inch bull barrel which also increase heat dissipation. It is also tipped by a muzzle brake.

The 20” HBAR Quad Rail is essentially the same as the M4 Quad Rail, but with a 20-inch barrel and 15-inch handguards. The 6.8mm Quad Rail goes back down to a 16-inch barrel and 10” Handguards, but is chambered for 6.8mm SPC. The AR-15 7.62x39mm HBAR Quad Rail is the same carbine in a different caliber. The AR-15 20” 6.5 Grendel Quad Rail is the same rifle as the 20” HBAR Quad Rail, except for the different caliber. The AR-15 16” 6.5 Grendel Quad Rail is the same, including the long handguards, but with a shorter barrel.

The AR-15 Black Widows are versions in .300 Blackout with a 10.5-inch rifled length of barrel and a 16-inch length of integral suppressor. They come with either a 15-inch or 10-inch handguard and have quad rails. Finishes are in black Melonite.

The AR-15 M4 Scorpion Rail and the AR-15 M4 Talon Tactical Rail versions are equivalent to the M4 Quad Rail for game purposes, and differ primarily in their handguards and rails. The AR-15 300 BLK SDX Rail is identical to the AR-15 300 BLK Quad Rail for game purposes.

Weapon	Ammunition	Weight	Magazines	Price
Standard AR-15	5.56mm NATO	2.86 kg	5, 10, 20, 30, 35	$796
AR-15 Socom Quad Rail	5.56mm NATO	2.76 kg	5, 10, 20, 30, 35	$623
AR-15 300 BLK Quad Rail	.300 Blackout	3.06 kg	5, 10, 20, 30	$780
AR-15 M4 Quad Rail	5.56mm NATO	2.74 kg	5, 10, 20, 30, 35	$599
AR-15 SS Quad Rail	5.56mm NATO	3.76 kg	5, 10, 20, 30, 35	$598
AR-15 Straight Fluted Bull Barrel	5.56mm NATO	3.27 kg	5, 10, 20, 30, 35	$690
AR-15 20” HBAR Quad Rail	5.56mm NATO	2.91 kg	5, 10, 20, 30, 35	$637
AR-15 6.8mm Quad Rail	6.8mm SPC	3.14 kg	5, 10, 20, 30	$758
AR-15 7.62x39mm HBAR Quad Rail	7.62mm Kalashnikov	3.29 kg	5, 10, 20, 30, 75D	$841
AR-15 20” 6.5 Grendel Quad Rail	6.5mm Grendel	3.12 kg	5, 10, 20, 30	$716
AR-15 16” 6.5 Grendel Quad Rail	6.5mm Grendel	3.02 kg	5, 10, 20, 30	$671
AR-15 Black Widow	.300 Blackout	3.59 kg	5, 10, 20, 30	$818

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Standard AR-15	SA	3	1-Nil	4/6	2	Nil	43
AR-15 Socom Quad Rail	SA	3	1-Nil	5/6	3	Nil	51
AR-15 300 BLK Quad Rail	SA	3	2-Nil	5/6	4	Nil	48
AR-15 M4 Quad Rail	SA	3	1-Nil	4/6	3	Nil	43
AR-15 SS Quad Rail	SA	3	1-Nil	4/6	2	Nil	44
AR-15 Straight Fluted Bull Barrel	SA	3	1-Nil	5/6	2	Nil	61
AR-15 20” HBAR Quad Rail	SA	3	1-Nil	5/6	3	Nil	59
AR-15 6.8mm Quad Rail	SA	3	1-2-Nil	4/6	3	Nil	58
AR-15 7.62x39mm HBAR	SA	3	2-Nil	4/6	4	Nil	48

Quad Rail							
AR-15 20" 6.5 Grendel Quad Rail	SA	3	1-2-Nil	5/6	3	Nil	76
AR-15 16" 6.5 Grendel Quad Rail	SA	3	1-2-Nil	5/6	3	Nil	57
AR-15 Black Widow	SA	3	2-Nil	4/6	2	Nil	24

High Standard/Interarms AKM47

Notes: High Standard is a company more known for their sporting rifles, pistol-caliber carbines, and rimfire pistols. However, in about 2015, they entered an agreement with Interarms to make their first assault rifles – an AK clone. Interarms was primarily responsible for importation of parts kits, particularly receivers, and internal parts, from Bulgaria and Hungary.

The AKM47 is the base member of the line. It is essentially an AKM, with dark beech furniture and a heat-treated receiver and receiver cover. The 16.25-inch barrel is US-manufactured, hard-chrome lined, and the muzzle device is threaded on, allowing a flash suppressor or muzzle brake to be mounted. The barrel and receiver are also laser boresighted to ensure straightness of the barrel and muzzle device as well as the lines of the piston and bolt. The trigger group is also US-made (by Texas Trigger), but is essentially the same trigger group as on the standard AKM. The magazine sold with the rifle is polymer and made by Magpul. Basically, what you have here is a close-to-standard AKM. The AKMS-47 is basically an AKMS, built with the AKM47's improvements, and with an underfolding metal stock. The AKM-Hungarian and AKMS-Hungarian are the same rifles for game terms, but built using Hungarian parts, and with blond beech furniture. They are also available in Military Gray Parkerization or KG Performance Gun Kote in one of several colors, such as black, gray, or OD Green.

The AKM-T 47 is an enhanced version of the AKM47, with Magpul MOE AKM furniture, including handguards, pistol grip, and fixed stock. The furniture may be black, gray, OD green, or Flat Dark Earth. The polymer furniture means that the AKM-T 47 is considerably lighter than the AKM47. The handguards accommodate M-LOK attachments, including Picatinny or Weaver rails, though most are not included in the basic AKM-T 47; there is one short section of anodized aluminum rail under the fore-end (five slots). The receiver and internal parts are Hungarian, and the magazine provided is also polymer, by Magpul. The finish is Parkerized gray under a KG Gun Kote finish. The trigger pack is manufactured in the US (again by Texas Trigger), and has been tuned to 5 pounds of pull weight. The barrel is slightly longer at 16.3 inches, but otherwise conforms to the AKM47 barrel.

The AK-T 47 is the same rifle with a forward-folding metal stock.

The AKM-Z Zhukov is basically the same, but uses Magpul's Zhukov-S furniture kit, including an ergonomic pistol grip, a stainless steel heat shield inside the handguards, a full-length Picatinny rail on the front handguard a lip on the front of the lower handguard to protect the fingers, and a sliding/side-folding stock with a raised cheekpiece; the stock is part polymer and part light alloy. It uses a 16.5-inch barrel that otherwise conforms to the AKM47's barrel. It uses the trigger pack of the AKM-T 47. It is, however, much heavier than even the AKM47.

Weapon	Ammunition	Weight	Magazines	Price
AKM47	7.62mm Kalashnikov	3.4 kg	5, 10, 20, 30, 40, 75D	$792
AKMS-47	7.62mm Kalashnikov	3.55 kg	5, 10, 20, 30, 40, 75D	$822
AKM-T 47	7.62mm Kalashnikov	2.86 kg	5, 10, 20, 30, 40, 75D	$806
AK-T 47	7.62mm Kalashnikov	3.01 kg	5, 10, 20, 30, 40, 75D	$826
AKM-Z Zhukov	7.62mm Kalashnikov	3.63 kg	5, 10, 20, 30, 40, 75D	$837

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AKM47	SA	4	2-Nil	6	4	Nil	46
AKMS-47	SA	4	2-Nil	4/6	4	Nil	46
AKM-T 47	SA	4	2-Nil	6	4	Nil	46
AK-T 47	SA	4	2-Nil	4/6	4	Nil	46
AKM-Z Zhukov	SA	4	2-Nil	4/6	4	Nil	47

JP Enterprises JP15

Notes: Though JP Enterprises generally sells its AR-15-type products as precision-made and added-feature uppers, they will occasionally make complete rifles upon request from certain users, especially in response to law-enforcement requests. When they make a rifle, it is composed of 7075 aluminum upper and lower receiver halves, with a matte black Teflon coating over hard anodizing. The barrel is 16 inches, and is a match-quality heavy-profile barrel (JP calls this a Supermatch barrel) which is air-gauged, button rifled, and cryogenically treated, which results in a strong barrel that has precise measurements for the bore and precise rifling. The barrel is not chromed, but has a polished stainless bore instead; indeed, the entire barrel is made of stainless steel underneath its finish. The barrel is tipped with a JP-designed titanium multi-baffle muzzle brake. The stock may be a fixed AR-15A2-type stock or an ACE ARFX sliding stock, with has compartments for batteries and other minor accessories. Another option is a fixed tubular stock which has padding on its upper (and wider) tube; this has the advantage of being lighter than the standard rifle, though of course it is not adjustable. The handguards are round and circular, with long oval ventilation holes on the sides and top. The pistol grip is a Hogue ergonomic grip. The gas system is adjustable, to allow use without problems in a dirty environment, when fouling increases, or

when used with a suppressor. As the buyer's choice, the JP15 may have an LMOS (Low-Mass Operating System) or FMOS (Full-Mass Operating System), though in game terms this has no effect. The buyer may also equip his JP15 with one of two trigger packs, one with a 3-pound pull weight and one with a 4.5-pound pull weight, though again in game terms this has no effect. Trigger pull is described as very crisp either way. Three chamberings are available; though only a few police departments use the JP15 and civilian sales have been slow, the overwhelming choice of chamberings has been .223/5.56mm. The upper receiver is topped with a MIL-STD-1913 rail equipped with a flip-up rear sight; the rail is continuous with the rail that extends down the top of the handguard, which has a flip-up front sight at the other end. The JP15 chambered for 5.56mm can take any magazine that can fit into a standard AR-15, M16, or M4, even some market brands sold by several companies in the US; JP15s chambered for .204 or 6.5mm can take any magazine designed for those rounds with a few exceptions. The magazines listed below for the .204 and 6.5mm chamberings are for the magazines that JP Enterprises sells for their rifles.

Twilight 2000 Notes: The JP15 is not available in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
JP15 (A2 Stock)	.204 Ruger	3.07 kg	5, 10, 20	$576
JP15 (ACE ARFX Stock)	.204 Ruger	3.07 kg	5, 10, 20	$596
JP15 (Tubular Fixed Stock)	.204 Ruger	2.92 kg	5, 10, 20	$566
JP15 (A2 Stock)	5.56mm NATO	3.18 kg	5, 10, 20, 30	$626
JP15 (ACE ARFX Stock)	5.56mm NATO	3.18 kg	5, 10, 20, 30	$646
JP15 (Tubular Fixed Stock)	5.56mm NATO	3.02 kg	5, 10, 20, 30	$616
JP15 (A2 Stock)	6.5mm Grendel	3.33 kg	10, 25	$696
JP15 (ACE ARFX Stock)	6.5mm Grendel	3.33 kg	10, 25	$717
JP15 (Tubular Fixed Stock)	6.5mm Grendel	3.16 kg	10, 25	$687

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
JP15 (A2 Stock/Tubular Stock, .204)	SA	2	1-Nil	6	2	Nil	38
JP15 (ACE ARFX Stock, .204)	SA	2	1-Nil	4/6	2	Nil	38
JP15 (A2 Stock/Tubular Stock, 5.56mm)	SA	3	1-Nil	6	2	Nil	43
JP15 (ACE ARFX Stock, 5.56mm)	SA	3	1-Nil	4/6	2	Nil	43
JP15 (A2 Stock/Tubular Stock, 6.5mm)	SA	3	1-2-Nil	6	2	Nil	58
JP15 (ACE ARFX Stock, 6.5mm)	SA	3	1-2-Nil	4/6	2	Nil	58

IO AKM-247

Notes: IO, Inc advertises its AK clones as "All-American-made rifles," and that while they are AK clones, they are built to American manufacturing standards. The original blueprints are Polish (long thought to be the best of Warsaw Pact AK clones), but the receiver and internal parts built to US Mil-Spec standards. The charging handle track has a notch at the rear to hold the bolt open for inspections and troubleshooting. The AKM-247 has a 16.5-inch nitrided 4140 steel barrel that is cold-hammer finished, a threaded muzzle, a bolt hold open, an extended magazine release, and the ability to accept all AK/RPK magazines as well as Western light alloy, polymer (though Magpul P-MAGs seat a bit loosely), and steel magazines. (The rifle ships with two 30-round polymer magazines.) Working parts, the sights, and the gas block are also of 4140 steel. The trigger pack is by Tapco and breaks at an amazing 3.5 pounds, light and crisp. The furniture is polymer, and while the pistol grip is also polymer, it is shaped like that of the AKM. Inside the handguard is a stainless steel heat shield. The stock of the AKM-247 has a lightening groove on either side of the stock and is shaped like that of the AK-74. The furniture is black polymer, and the finish is black manganese phosphate over Parkerization as well. The AKM-247 has a functional bayonet lug. However, the cleaning kit supplied is cheap in quality, and there is no butt trap for the kit. Some shooters say that the AKM-247 is less-then-pleasant to shoot, having high recoil (though having no effect in game terms).

The AKM-247-C (C for "Classic") is built to the same standards as the AKM-247, but uses dark laminated wood furniture except for

the polymer pistol grip, also shaped like a standard AKM. It is essentially an AKM built to US standards. The AKM-247-C also comes with a side-mounted rail for optics mounting. It is heavier than the AKM-247, but shoots about the same. The AKM-247-CUF (Classic UnderFolder), is the same as the AKM-247-C, but with a steel strut underfolding stock.

The AKM-247-T (T for Tactical) is for the most part the same as the AKM-247, but the handguards have four-way MIL-STD-1913 rails (with the one on top being half-length to make room for the rear sight, as well as having a side-mounted optics rail. It also has a fixed stock, but it is a Tactical Club Foot stock instead of the AK-74-type stock. The pistol grip is an ergonomic grip, with finger swells, and is overmolded with a layer of rubber. It is equipped with sling swivels, but not the bayonet lug of the AKM-247. The barrel is tipped by a Phantom Flash Hider, which is a long type of flash suppressor.

The AKM-247-UF is basically an AKM-247 with an underfolding steel-strut stock.

The M214 is an update of the AKM-247-T. Improvements include longer handguards (all the way out to the gas block), with full-length quad rails around the handguards. The sights are taken from the RPK design instead of the AKM, allowing adjustments to both elevation and windage. In addition to the rails, a side-mounted optics rail comes with the M214. The M214 is in general heavier and more ruggedly-built, though this makes little difference when shooting them in *Twilight 2000* terms. The trigger pull weight is not only light, but adjustable. Barrel length remains the same, but the barrel is match-grade. Stock is a fixed Tactical Club Foot stock. The M214SF is essentially the same rifle, but with a triangular polymer sliding/side-folding stock.

The M214 Sniper, also called simply the M214S, is meant for longer-range hunts as well as to be a military or police sniper rifle or DMR. It is built to the same standards as the standard AK-214, but the handguards and MIL-STD-1913 rails are as long as those of the standard M214. The barrel, in addition to being match-quality, is of heavy profile, and a full 21.4 inches, tipped with the same semi-birdcage flash suppressor as on the rest of the M214 series. It also has a two-stage, adjustable, match-grade trigger which has the same light touch as the standard M214. It comes with a forward-folding light alloy bipod which is adjustable for height and cant and has rubberized flat ends. This attached to the bottom MIL-STD-1913 rail, and is removable. It also comes with a 1.5-5x40 scope (I have not been able to find out which scope this is). The stock is fixed, and is the same as that of the standard M214, but has a raised cheek pad.

Weapon	Ammunition	Weight	Magazines	Price
AKM-247	7.62mm Kalashnikov	3.18 kg	5, 10, 20, 30, 40, 75D	$807
AKM-247-C	7.62mm Kalashnikov	3.63 kg	5, 10, 20, 30, 40, 75D	$794
AKM-247-CUF	7.62mm Kalashnikov	3.63 kg	5, 10, 20, 30, 40, 75D	$824
AKM-247-T	7.62mm Kalashnikov	3.21 kg	5, 10, 20, 30, 40, 75D	$817
AKM-247-UF	7.62mm Kalashnikov	3.63 kg	5, 10, 20, 30, 40, 75D	$827
M214	7.62mm Kalashnikov	4.08 kg	5, 10, 20, 30, 40, 75D	$811
M214SF	7.62mm Kalashnikov	3.63 kg	5, 10, 20, 30, 40, 75D	$981
M214 Sniper	7.62mm Kalashnikov	4.76 kg	5, 10, 20, 30, 40, 75D	$1613

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AKM-247	SA	4	2-Nil	6	4	Nil	47
AKM-247-C	SA	4	2-Nil	6	4	Nil	47
AKM-247-CUF	SA	4	2-Nil	4/6	4	Nil	47
AKM-247-T	SA	4	2-Nil	6	4	Nil	47
AKM-247-UF	SA	4	2-Nil	4/6	4	Nil	47
M214	SA	4	2-Nil	6	3	Nil	48
M214SF	SA	4	2-Nil	4/6	3	Nil	48
M214 Sniper	SA	4	2-3-Nil	7	3	Nil	69
With Bipod	SA	4	2-3-Nil	7	2	Nil	90

IO "The Sporter"

Notes: The Sporter is an AK variant designed…well, for plinking, competition shooting, and medium-game hunting. The Sporters are 100% American-made, but built using Polish AK plans. The Sporter comes in several versions, including the base Sporter, Sporter Economy, Sporter Wood and M214. Most of these vary in the stocks, forearms, and accouterments on the rifle. though The basic Sporter looks basically like something out of the AK-100 series, with a polymer AK-100-type stock, with a textured non-slip rubber liner on the butt. The pistol grip and forearm are also polymer. The Sporters have tactical sling swivels and adjustable front and rear sights and a CNC-machined side optics rail. The rear sight is an RPK-type sight, while the front sight is an IO-designed adjustable post with ears. The barrel is nitrided and tipped with an AKM-type muzzle device, and is 16.25 inches long. The receiver is coated in Manganese Phosphate, and is finished in a brownish-dark gray color that IO calls "Muddy Girl." The Sporters have a single-stage trigger with a trigger pull that is only 3.5 pounds, much lighter than most assault rifles.

The Sporter Economy is for the most part the same as the base Sporter, but does not have the optics rail, the finish is Parkerized, and the finish is black with black polymer. Virtually none of this affects it's *Twilight 2000 v2.2* stats. The Sporter Wood has a beech stock, forearm, and pistol grip (all of which are weather-sealed with polyurethane varnish). Some shooters prefer the wood to the polymer furniture. It's a bit heavier than the basic Sporter, but not much different in *Twilight 2000 v2.2* rules.

Weapon	Ammunition	Weight	Magazines	Price
The Sporter	7.62mm Kalashnikov	3.18 kg	5, 10, 20, 30, 40, 75D	$803

Sporter Economy	7.62mm Kalashnikov	3.08 kg	5, 10, 20, 30, 40, 75D	$793
Sporter Wood	7.62mm Kalashnikov	3.38 kg	5, 10, 20, 30, 40, 75D	$793

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
The Sporter	SA	4	2-Nil	6	4	Nil	46
Sporter Economy	SA	4	2-Nil	6	4	Nil	46
Sporter Wood	SA	4	2-Nil	6	4	Nil	46

Krebs Custom AC15

Notes: This version of the AKM/AK-47 has been dubbed by firearms expert James Tarr as “the future of the AK.” Krebs Custom is currently building the AC15 using the Saiga Rifle as a base, but future production will switch to a Molot Vepr base in the near future. The Vepr is easier to modify to AC15 standards, but the Saiga is what is available now for current production, and Krebs Custom wanted to get the rifle on the market.

Rebuilding the Saiga into the AC15 includes a large change in furniture, a shortened barrel tipped with a long, pinned flash suppressor to make comply to US regulations, hand-fitted moving parts, tuned action, polished bolt face, chromed barrel, and an M4-type stock (which is actually a Magpul CTR stock). The flash suppressor can have fit over it a compact muzzle brake, which essentially seals the bottom slot of the flash suppressor and angles the rest of the slots rearward.

The top of the receiver has a MIL-STD-1913 rail, continuous with the rail above the handguards. The lower receiver has rows of KeyMod openings to attach accessories or MIL-STD-1913 rails, along with vent holes; it is in fact a KCI UFM KeyMod handguard. Instead of polymer, it is machined from aluminum, and is lighter than an equivalent polymer handguard. The handguard is secured by place and wedge-lock bedding to make sure the handguard does not wiggle. The rear sight has been moved to the rear of the receiver’s rail; the front sight is a standard AK sight; adjustments are generally done from the rear sight, though windage adjustments may also be done on the front sight. The receiver cover is likewise wiggle-free (though it can be slightly bend from side to side). The pistol grip has been changed out for a Magpul MOE grip. The Magpul CTR stock is locked throughout its length to prevent wiggle and vibration.

The guts of the AC15 are standard AK (or more properly, Saiga), and the gun is cared-for, disassembled, and loaded the same as an AK. Even the trigger takes an increase in stability, with the installation of a KCI Trigger Pin Retaining Plate. The trigger is well tuned and has a very light pull weight of merely 2.5 pounds. In addition to the standard AK safety, there is another safety switch near the pistol grip and trigger. (Both may be engaged simultaneously for greater control.)

The rifled portion of the barrel is 14.25 inched, but 16.25 inches with the permanently-attached flash suppressor. The barrel is considered specially-bedded.

The entire rifle has been tumbled and dehorned to remove the sharp edges that are normally present on AK-series weapons are not present on the AC15. The finish of the metal is a proprietary coating referred to as a “baked on synthetic alkyd KrebsCoat.”

Weapon	Ammunition	Weight	Magazines	Price
AC15	7.62mm Kalashnikov	3.18 kg	5, 10, 20, 30, 40, 75D	$874

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AC15	SA	4	2-Nil	5/6	3	Nil	46

Krebs Custom KV13 Mod 2

Notes: The KV13 is, unusually for an AK clone, built with a Vepr sporting rifle at its core instead of an AK-47, AKM, or RPK. It comes in two barrel lengths – 14.25 inches (for police and military), and 16 inches (the civilian version). The muzzle is tipped with a birdcage-type flash suppressor, or a titanium muzzle brake for the police/military version. The barrels are chrome-lined and cold-hammer forged, and precision crowned (and for military/police versions, threaded). The handguards are polymer and extend past the front sight and gas block, almost to the flash suppressor. They do not have Picatinny rails as they are sold by Krebs, but they are literally covered by KeyMod slots so almost anything could be mounted, including rails. The stock is a Magpul CTR sliding triangular-shaped polymer stock, with room for battery storage for most types of optics batteries. The trigger guard is polished and widened. The gas block is Krebs-designed and chrome-lined. The rear sight is also Krebs-designed, but similar to the standard AK sight, and the rear sight is on the receiver cover and is a peep sight adjustable for windage and elevation. At the rear of the top of the handguard is a medium-length Picatinny rail, and the left side also has an optics mount. The receiver cover is designed not only to not move when mounted, but to allow the rear sight to return to zero. The ALG AKT trigger pack is machined, polished, and tuned by Krebs’ Custom Specs shop. The action and working parts are also tuned and polished. The safety/selector is movable by the firing hand (called a Custom MK6 Enhanced Safety). This device also incorporates a bolt hold-open. The entire rifle is industrially dehorned and tumbled to remove sharp edges. Finish is the same proprietary coating as on the AC15. The KV13 comes with a full cleaning kit, though there are no compartments in the rifle for such a kit.

Weapon	Ammunition	Weight	Magazines	Price
KV13 Mod 2 (Military)	7.62mm Kalashnikov	3.86 kg	5, 10, 20, 30, 40, 75D	$860
KV13 Mod 2 (Civilian)	7.62mm Kalashnikov	3.91 kg	5, 10, 20, 30, 40, 75D	$832

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
KV13 Mod 2 (Military)	5	3	2-Nil	4/6	3	6	39
KV13 Mod 2 (Civilian)	SA	4	2-Nil	5/6	3	Nil	45

Krebs Custom Tactical Carbine

Notes: This assault carbine is made primarily for police use, meant to be a patrol and SRT carbine. Similar in concept (though not design) to the Galil, it basically tries to combine the best features of the AK series and the AR-15 into a superior assault weapon. The Tactical Carbine retains the AK series 7.62mm Kalashnikov cartridge, and most of the receiver; however, the flash suppressor is a modified M16A2 type, the sights are new ones of Krebs design (basically modified M16A2 sights), the fore-end is entirely different, including a MIL-STD-1913 rail under the barrel for the attachment of accessories (with modification, even the M-203 can be mounted), the top of the receiver also has a MIL-STD-1013 rail (where the rear sight is mounted, and can be removed), and the stock can be an M4-type collapsible stock or any of those modified stocks which are compatible with the M16/M4/AR-15 or AK series. The pistol grip is plastic and borrowed from the M-249 SAW. The left side of the receiver has another sight mount to allow it to use Bloc-type sights. The handguards themselves are a Krebs design, and are made from high-impact plastic; the Tactical Carbine will also accept Krebs' 3-position rail handguards. In fact, all the wood on the weapon has been replaced by plastic and synthetic materials. The Tactical Carbine is normally sold with synthetic 30-round magazines, but can also take standard AK-series magazines. Semiautomatic operation is the standard; automatic fire ability is available only to law enforcement, government, or military concerns.

Twilight 2000 Notes: This carbine does not exist in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
Tactical Carbine	7.62mm Kalashnikov	3.29 kg	5, 10, 20, 30, 40, 75D	$831

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Tactical Carbine	5	4	2-Nil	6	4	9	46

Kurt's Kustom Firearms P109

Notes: Though I would normally put such a carbine under submachineguns since it fires a pistol cartridge, this carbine is semiautomatic-only, so I am placing here. Kurt's Kustom Firearms is a Florida company primarily concerned with producing upper receivers and other parts for AR-15-series rifles, but Kurt Wala will, upon occasion produce custom complete firearms, normally based on the AR-15 series, M-1911-series pistol, or various shotguns. The P109 is one of these weapons, being a highly-modified AR-15 firing the .357 SiG cartridge. It was originally produced at the request of firearms expert Paul Markel, and it is unknown whether any further sales have taken place, though it would seem ideal for law enforcement work. The upper receiver has no carrying handle, but instead sports a flat top with a MIL-STD-1913 rail. The handguard also has a four-way rail of the same type. The flash suppressor is post-ban AR-15 muzzle-brake/flash suppressor, and the carbine has a sliding M4-style stock. One problem with this weapon is that the extraction process is violent and empty brass cannot be generally be reloaded.

Weapon	Ammunition	Weight	Magazines	Price
P109	.357 SiG	2.87 kg	10, 20, 30	$316

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
P109	SA	2	1-Nil	3/5	1	Nil	37

LaFrance M16K

Notes: An assault carbine based on the M16, also known as the K-gun. The M16K is a shortened M16, with stubby handguards and no sights. It is designed for close combat use and ease of manufacture. It found acceptance mostly in the survival market, with only limited use by the special operations personnel it was designed for.

Twilight 2000 Notes: Due to the high standards of manufacture and the special coatings LaFrance designed for the parts, the M16K was adopted as a close combat weapon for use by US military forces operating in Arctic climates. As such, the M16K could often be found among certain troops fighting in Norway, Alaska, and other Arctic areas.

Weapon	Ammunition	Weight	Magazines	Price
M16K	5.56mm NATO	2.5 kg	20, 30	$523

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
M16K	5	2	1-Nil	3/4	3	7	19

Lancer L15

Notes is a relatively new comer to the assault rifle scene; they are more known for precision uppers, though they now make complete rifles. The L15 is one of these complete rifles, though L15 uppers are also made and sold. The L15 carbine is built around

the company's L15 receiver group, which is of the standard 7076-T6 aluminum. Stocks vary from fixed to sliding sticks depending on the model – and fixed stocks are of the near A2-type and has a tactical carbon-fiber construction. They operate by direct gas impingement, and have a low-profile gas blocks, usually topped with a very short length of Picatinny rail, to match the A3-type upper receiver with monolithic Picatinny rail. Barrel are tipped by a flash suppressor or compact muzzle brake, again depending on the model. The magazine wells are funneled to increase speed when reloading (not applicable in game terms). Virtually any L15 upper can be turned into any other rifle in the series by swapping upper of the other. There is no dust cover, but there is a port wiper/shell sweeper.

The base version of the L15 is the Recon. It is a basic AR-type rifle, but uses an Ergo F93 sliding stock and shaped like a club foot. The stock has a compartment for batteries to supply the optics or accessories. The telescoping position is secured by a large knob on the right of the stock. The 16-inch barrel is a standard Mil-Spec barrel, and is tipped with A2-type flash suppressor. The pistol grip is also by Ergo, and has finger swells and a soft-touch overmolding. The handguards are a tube of carbon fiber with an upper short length of Picatinny rail about two inches long, primarily for the mounting BUIS. The trigger is also Mil-Spec. The recon is no longer being produced, and does not appear on Lancer's current web site.

The Sporter is sort of an improved version of the Recon, and for most purposes, one cannot tell the rifles apart. The rifle uses a medium-profile 16-inch barrel, with a low-profile gas block under the 16-inch carbon fiber tube, tipped by an A2-type flash suppressor. The slots on the 2, 4, and 7 o'clock positions on the handguard have KeyMod mounting holes (the stock is shaped like a diamond) and cooling slots are on the one and 3-o'clock positions. The stock is the same Ergo F93 sliding stock, with same Ergo pistol grip of the Recon. The barrel bore, barrel extension, and chamber are chromed. The upper receiver is an A3-type. Lancer recommends the L5AWM 30-round smoky clear magazines, though it can take virtually any sort of 5.56mm magazine.

The Competition was, of course, designed for competition, particularly 3-Gun competitions. The 18-inch medium weight stainless steel is match-quality and is in a free-float handguard, it is tipped with a Lancer Nitrous muzzle brake. The Lancer LCH5 Octagon 15" handguard is used. The LCS-A1-R stock is fixed and covered with carbon fiber, and is an extreme club-foot design. The stock, nonetheless is an Ergo LCR-A1-R stock with an Ergo grip as above. The handguards are Lancer designed, 15-inches long and more amenable to the forward grips that are becoming more common with competition shooters, and some veterans of Iraq and Afghanistan. The handguards are well-ventilated, with some of the slots being not for cooling, but MLOK slots. The gas block is inside the handguard under the handguard. The upper receiver is an A3-type receiver, with a monolithic Picatinny rail; the rear sight provided is a Magpul MBUS. But a front sight base must be mounted in one of the MLOK slots to have a front sight (and is not included in any case). The trigger unit is a Lancer 2-stage trigger. Again, Lancer issues two L5AWM 20-round translucent magazines, though the rifle can take virtually any sort of magazine.

The Outlaw was also designed for 3-Gun Competition, though ones which place more restrictions of the firearms used. The barrel is a 17-inch medium-weight Bartlein barrel, which essentially match-grade. The barrel is tipped with Lancer Nitrous muzzle brake and a Lancer LCR5 tubular carbon-fiber handguard that is a free-float handguard. The trigger unit is a Geissele Super Dynamic SD-3G unit, which is two-stage and adjustable for pull weight. The magazine well is flared for quicker reloads. The upper receiver is an A3-type, including a monolithic Picatinny Rail. The handguard is rifle-length and has several MLOK slots down its length. It uses the same LCR-A1-R stock as the Competition. The gas block is under the end of the handguard and the gas pressure is adjustable. The pistol grip is an Ergo model, overmolded with soft-touch rubber.

The DMR was designed as a military designated marksman rifle, but is just as useful as a hunting or competition rifle. The barrel is something special – a White Oak-made 18-inch barrel with a threaded muzzle; if the cap it put on, the rifle has a target crown. Taken off, any sort of muzzle device may be used. The barrel is medium weight. The handguard is an extra long Lancer LCH5 15-inch free-float handguard with MLOK slots at 11, 2, 4, and 8 o'clock, and cooling slots on the other surfaces. Under the end of the handguard is low-profile gas block, and atop the end of the handguard is a further MLOK slot for a BUIS. The lower receiver is A2, and the upper an A3, with a monolithic Picatinny rail. The stock is a telescoping B5 Sopmod Bravo, which is a bit more solid than an M4-type stock yet is largely made of polymer. The grip is the standard L15 Ergo overmolded grip. The trigger is a Geissele Hi-Speed National Match 2 Stage. The magazine well is flared for easier reloads. Despite its light weight, the DMR is solid.

Despite it's obvious utility as a military/police rifle, the Patrol's target audience is hunters primarily and competition shooters secondarily. It is light and easy to handle. The 16-inch medium-weight CHF steel barrel is tipped by a Lancer Battle Comp muzzle brake. The handguard is an LCH5 12-inch with a 2-inch sight rail at the end of the top of the handguard. The handguard is otherwise a round carbon fiber tube with large cooling slots on the sides, and a sling swivel/bipod mounting point. The stock is the B5 Sopmod Bravo, and the pistol grip is a BCM Gunfighter textured polymer grip. As with other L15-series rifles, the Patrol has an A3 upper receiver with monolithic Picatinny Rail.

The Patrol Professional is essentially an enhanced Patrol. It has the general features of the Patrol, but the handguards, though nearly the same as those of the patrol, have MLOK slots on either side of the handguard. The stock is a FAB GL stock which is a lot more meaty than the B5 Sopmod Bravo, though it is made almost entirely of polymer, with an aluminum frame. The barrel has been cut down to 14.5 inches, and is medium-weight and made of CHF steel. The muzzle has a Smith's Vortex flash suppressor; it is pinned and welded, technically making the barrel a legal 16 inches long. The trigger is MilSpec, and the Grip is an overmolded Ergo grip. The magazine grip is flared to ease loading, and extra care has been taken so the magazine will fall free when released. The Patrol Professional was Lancer's entry into the US Army's Enhanced Carbine Competition; reportedly, the troops loved it, while the brass poked holes in it and it's performance. Since it was designed as a military rifle, automatic fire figures are given for this version.

Weapon	Ammunition	Weight	Magazines	Price
Recon	5.56mm NATO	3.02 kg	5, 10, 20, 30	$591

Sporter	5.56mm NATO	3.36 kg	5, 10, 20, 30	$592
Competition	5.56mm NATO	3.49 kg	5, 10, 20, 30	$649
Outlaw	5.56mm NATO	3.06 kg	5, 10, 20, 30	$637
DMR	5.56mm NATO	3.31 kg	5, 10, 20, 30	$600
Patrol	5.56mm NATO	2.95 kg	5, 10, 20, 30	$637
Patrol Professional	5.56mm NATO	2.95 kg	5, 10, 20, 30	$577

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Recon	SA	3	1-Nil	4/5	3	Nil	40
Sporter	SA	3	1-Nil	4/5	2	Nil	40
Competition	SA	3	1-Nil	6	2	Nil	52
Outlaw	SA	3	1-Nil	6	2	Nil	47
DMR	SA	3	1-Nil	6	2	Nil	53
Patrol	SA	3	1-Nil	4/5	2	Nil	40
Patrol Professional	5	3	1-Nil	4/5	3	6	35

Les Baer Special Tactical Rifle

Notes: Introduced at the end of 2012, the STR is designed for use as a patrol rifle for police as well as for personal defense and varmint hunting. The STR is more an AR mutation than a clone, as it has a number of features that depart from the standard AR-15. The upper & lower receivers are mated – they are designed to go together (or with other STR halves) and putting one half together with a half of another design won't work well. The rear sight assembly of the STR is within a removable carrying handle on a MIL-STD-1913; the top rail is designed to be continuous with the rail on the top of the handguards. The rear sight is designed by Les Baer and is of National Match standard, adjustable by 0.25 MOE and 0.25 windage per click. This is also a flip-type sight. It can be removed and replaced with another flip-type sight, or the handle can be removed and replaced with a BUIS or any number of optics. At the front of the handguards are short lengths (about 10 cm) of MIL-STD-1913 rails on the sides and on the bottom. The front sight is fixed, removable, and folds down. The barrel is of heavy profile and match-quality, and is made of stainless steel. The barrel is 16 inches long and fluted, and is free-floated. The trigger is a Geissele two-stage match trigger. The standard STR has a target crown with no flash suppressor; a flash suppressor which is continuous with the barrel is an option. The standard STR also has an A2-type fixed stock; an M4-type sliding stock is an option. (If the STR in question has a target crown instead of a flash suppressor, subtract $5 from the price and 0.05 kg from the weight.)

Weapon	Ammunition	Weight	Magazines	Price
STR (Fixed Stock)	5.56mm NATO	3.34 kg	5, 10, 20, 30	$579
STR (Folding Stock)	5.56mm NATO	3.34 kg	5, 10, 20, 30	$599

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
STR (Fixed Stock)	SA	3	1-Nil	6	2	Nil	43
STR (Folding Stock)	SA	3	1-Nil	4/6	2	Nil	43

Les Baer Custom Ultimate Super Varmint

Notes: The LBC Ultimate Super Varmint is a highly-accurized version of the AR-15. It is chambered for 5.56mm NATO ammunition, as well as the new .204 Ruger, but the Ultimate Super Varmint boasts almost sniper-rifle-like accuracy (1/2 MOA with *factory* ammunition). Like most Les Baer weapons, the Ultimate Super Varmint is built almost entirely from scratch, using parts which Les Baer produces for himself. The barrel, bolt, bolt carrier group, and extractor are chromed for extra reliability, and all parts are precision-machined. The firing pin is made from titanium and generally will not break, nor will it corrode. The exterior of the rifle has a custom finish called "Baer Coat." The upper receiver has a MIL-STD-1913 rail and in front of the barrel shroud is another very short rail (the rifle is not normally used with iron sights, but the rails can mount them).

Twilight 2000 Notes: The 5.56mm NATO version is extremely rare, and the .204 Ruger version does not exist at all.

Weapon	Ammunition	Weight	Magazines	Price
Ultimate Super Varmint (18" Barrel)	5.56mm NATO	4.36 kg	10	$1035
Ultimate Super Varmint (20" Barrel)	5.56mm NATO	4.44 kg	10	$1099
Ultimate Super Varmint (22" Barrel)	5.56mm NATO	4.52 kg	10	$1163
Ultimate Super Varmint (24" Barrel)	5.56mm NATO	4.59 kg	10	$1227
Ultimate Super Varmint (18" Barrel)	.204 Ruger	4.25 kg	10	$986
Ultimate Super Varmint (20" Barrel)	.204 Ruger	4.33 kg	10	$1050
Ultimate Super Varmint (22" Barrel)	.204 Ruger	4.41 kg	10	$1114
Ultimate Super Varmint (24" Barrel)	.204 Ruger	4.49 kg	10	$1178

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Ultimate Super Varmint (18", 5.56mm)	SA	3	1-Nil	6	2	Nil	51
Ultimate Super Varmint (18", 5.56mm, Bipod)	SA	3	1-Nil	6	1	Nil	66
Ultimate Super Varmint (20", 5.56mm)	SA	3	1-Nil	6	2	Nil	59
Ultimate Super Varmint (20", 5.56mm, Bipod)	SA	3	1-Nil	6	1	Nil	77
Ultimate Super Varmint (22", 5.56mm)	SA	3	1-Nil	6	2	Nil	67
Ultimate Super Varmint (22", 5.56mm, Bipod)	SA	3	1-Nil	6	1	Nil	87
Ultimate Super Varmint (24", 5.56mm)	SA	3	1-Nil	7	2	Nil	73
Ultimate Super Varmint (24", 5.56mm, Bipod)	SA	3	1-Nil	7	1	Nil	95
Ultimate Super Varmint (18", .204)	SA	3	1-1-Nil	6	2	Nil	44
Ultimate Super Varmint (18", .204, Bipod)	SA	3	1-1-Nil	6	1	Nil	58
Ultimate Super Varmint (20", .204)	SA	3	1-1-Nil	6	2	Nil	52
Ultimate Super Varmint (20", .204, Bipod)	SA	3	1-1-Nil	6	1	Nil	67
Ultimate Super Varmint (22", .204)	SA	3	1-1-Nil	6	2	Nil	60
Ultimate Super Varmint (22", .204, Bipod)	SA	3	1-1-Nil	6	1	Nil	77
Ultimate Super Varmint (24", .204)	SA	3	1-1-Nil	7	2	Nil	65
Ultimate Super Varmint (24", .204, Bipod)	SA	3	1-1-Nil	7	1	Nil	85

Les Baer Super Match

Notes: Designed to be a precision rifle for civilian shooting matches, the Super Match can double as a sniping rifle as well. It is basically a VERY well made version of the AR-15A3/4 (with a flattop receiver and a Picatinny rail). Most of the parts inside are both stronger than the originals, built to exacting tolerances, and chromed for added reliability. The handguards have rails on four surfaces for the mounting of accessories, and the barrel is a beautiful chromed heavy barrel. (Being designed for civilians, it does not have a flash suppressor, nor does it have any sort of muzzle brake.) There are no iron sights on the rifle. Four barrel lengths are available.

Twilight 2000 Notes: This weapon does not exist.

Weapon	Ammunition	Weight	Magazines	Price
Super Match (18" Barrel)	5.56mm NATO	4.23 kg	10, 20, 30	$582
Super Match (20" Barrel)	5.56mm NATO	4.33 kg	10, 20, 30	$603
Super Match (22" Barrel)	5.56mm NATO	4.44 kg	10, 20, 30	$623
Super Match (24" Barrel)	5.56mm NATO	4.54 kg	10, 20, 30	$644

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Super Match (18")	SA	3	1-Nil	6	2	Nil	49
Super Match (20")	SA	3	1-Nil	6	2	Nil	57
Super Match (22")	SA	3	1-Nil	7	2	Nil	65
Super Match (24")	SA	3	1-Nil	7	2	Nil	71

Lakeside Machine LM7

Notes: This weapon is brought to you by Lakeside Machine, the same eccentric geniuses who invented the BF1 Vindicator belt-fed rimfire assault rifle. It is basically a kit to convert the M16/M4/AR-15 series into a belt-fed rimfire weapon, similar in concept to the BF1. The conversion is extensive; the entire upper receiver and barrel, bolt, bolt carrier, buffer and buffer spring, and sometimes the hammer spring (some, but not all M16-series weapons have a hammer spring that is too heavy for the LM7 conversion to operate correctly). The upper and its contents are changed easily enough, but the hammer spring change are probably best left to a gunsmith, and sometimes headspace and timing adjustments must be made when first mounting the conversion.

When you are done, you have a belt-fed rimfire version of an M4. The LM7 has a quick-change barrel feature; overheating is not really a problem with rimfire ammunition unless you are firing real large gobs through the barrel, but the LM7 comes with two lengths of barrel, each in three styles. The two barrel lengths are 16.25 and 7.5 inches; each may use either a standard M16/M4-type flash suppressor or a Lakeside-designed muzzle brake, or an AWC Mk II suppressor. The barrel attachment makes the barrel free-floating, and any sort of handguard which will fit the M16/M4/AR-15 series will fit the LM7. At the rear of the upper receiver is a 4.25-inch MIL-STD-1913 rail; if the 16.25-inch barrel is fitted, another 1.75-inch MIL-STD-1913 rail is available over the gas block. Unlike the BF1, the LM7 is fed by disintegrating link belts, and an attachment is available which doubles as a belt carrier and a brass/link catcher. The LM7, like the BF1, is currently designed to fire .22 Long Rifle and .17 Mach 2 Rimfire ammunition (and fire both only a barrel change), but versions which fire .22 Winchester Magnum Rimfire and .17 Hornady Magnum Rimfire are possible in the future depending upon customer demand. I have included them below just in case. The figures below are for a telescoping stock and an automatic sear, but a standard M16/AR-15 stock may be used, and semiautomatic-only versions are also made.

Twilight 2000 Notes: The LM7 does not exist in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
LM7 (7.5" Barrel, Flash Suppressor)	.22 Long Rifle and .17 Mach 2 Rimfire	1.97 kg	25 Belt, 50 Belt, 100 Belt, 200 Belt	$300

LM7 (7.5" Barrel, Muzzle Brake)	.22 Long Rifle and .17 Mach 2 Rimfire	2.08 kg	25 Belt, 50 Belt, 100 Belt, 200 Belt	$349
LM7 (7.5" Barrel, Suppressor)	.22 Long Rifle and .17 Mach 2 Rimfire	2.1 kg	25 Belt, 50 Belt, 100 Belt, 200 Belt	$379
LM7 (7.5" Barrel, Flash Suppressor)	.22 Winchester Magnum Rimfire and .17 Hornady Magnum Rimfire	2.1 kg	25 Belt, 50 Belt, 100 Belt, 200 Belt	$381
LM7 (7.5" Barrel, Muzzle Brake)	.22 Winchester Magnum Rimfire and .17 Hornady Magnum Rimfire	2.22 kg	25 Belt, 50 Belt, 100 Belt, 200 Belt	$429
LM7 (7.5" Barrel, Suppressor)	.22 Winchester Magnum Rimfire and .17 Hornady Magnum Rimfire	2.24 kg	25 Belt, 50 Belt, 100 Belt, 200 Belt	$468
LM7 (16.25" Barrel, Flash Suppressor)	.22 Long Rifle and .17 Mach 2 Rimfire	2.29 kg	25 Belt, 50 Belt, 100 Belt, 200 Belt	$396
LM7 (16.25" Barrel, Muzzle Brake)	.22 Long Rifle and .17 Mach 2 Rimfire	2.42 kg	25 Belt, 50 Belt, 100 Belt, 200 Belt	$444
LM7 (16.25" Barrel, Suppressor)	.22 Long Rifle and .17 Mach 2 Rimfire	2.44 kg	25 Belt, 50 Belt, 100 Belt, 200 Belt	$519
LM7 (16.25" Barrel, Flash Suppressor)	.22 Winchester Magnum Rimfire and .17 Hornady Magnum Rimfire	2.44 kg	25 Belt, 50 Belt, 100 Belt, 200 Belt	$472
LM7 (16.25" Barrel, Muzzle Brake)	.22 Winchester Magnum Rimfire and .17 Hornady Magnum Rimfire	2.58 kg	25 Belt, 50 Belt, 100 Belt, 200 Belt	$520
LM7 (16.25" Barrel, Suppressor)	.22 Winchester Magnum Rimfire and .17 Hornady Magnum Rimfire	2.6 kg	25 Belt, 50 Belt, 100 Belt, 200 Belt	$467

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
LM7 (.22 LR, 7.5", Flash Suppressor)	10	1	Nil	2/3	1	4	15
LM7 (.22 LR, 7.5", Muzzle Brake)	10	1	Nil	2/3	1	3	15
LM7 (.22 LR, 7.5", Suppressor)	10	1	Nil	2/3	1	4	14
LM7 (.17 M2, 7.5", Flash Suppressor)	10	1	Nil	2/3	1	6	15
LM7 (.17 M2, 7.5", Muzzle Brake)	10	1	Nil	2/3	1	4	15
LM7 (.17 M2, 7.5", Suppressor)	10	1	Nil	2/3	1	5	14
LM7 (.22 WMR, 7.5", Flash Suppressor)	10	1	Nil	2/3	1	4	18
LM7 (.22 WMR, 7.5", Muzzle Brake)	10	1	Nil	2/3	1	3	18
LM7 (.22 WMR, 7.5", Suppressor)	10	1	Nil	2/3	1	4	14
LM7 (.17 HMR, 7.5", Flash Suppressor)	10	1	Nil	2/3	1	6	18
LM7 (.17 HMR, 7.5", Muzzle Brake)	10	1	Nil	2/3	1	4	18
LM7 (.17 HMR, 7.5", Suppressor)	10	1	Nil	2/3	1	5	14
LM7 (.22 LR, 16.25", Flash Suppressor)	10	1	Nil	3/4	1	4	34
LM7 (.22 LR, 16.25", Muzzle Brake)	10	1	Nil	3/5	1	3	34
LM7 (.22 LR, 16.25", Suppressor)	10	1	Nil	4/5	1	3	34
LM7 (.17 M2, 16.25", Flash Suppressor)	10	2	1-Nil	3/4	1	6	36
LM7 (.17 M2, 16.25", Muzzle Brake)	10	2	1-Nil	3/5	1	5	36
LM7 (.17 M2, 16.25", Suppressor)	10	2	Nil	4/5	1	6	34
LM7 (.22 WMR, 16.25", Flash Suppressor)	10	1	Nil	3/5	1	4	42
LM7 (.22 WMR, 16.25", Muzzle Brake)	10	1	Nil	3/5	1	3	42
LM7 (.22 WMR, 16.25", Suppressor)	10	1	Nil	4/5	1	3	34
LM7 (.17 HMR, 16.25", Flash Suppressor)	10	2	1-Nil	3/5	1	6	42
LM7 (.17 HMR, 16.25", Muzzle Brake)	10	2	1-Nil	3/5	1	4	42
LM7 (.17 HMR, 16.25", Suppressor)	10	2	Nil	4/5	1	6	34

LMT PDW Compressor

Introduced at the 2016 Shot Show, the Compressor is a very abbreviated AR firing one of two types of ammunition. LMT uses a new upper on a standard M4 lower. This includes an M4-type stock, abbreviated by LMT, and 2.75 inches shorter than the standard M4 stock; a shortened extension tube, a redesigned buffer tube assembly, and a drop-in weight for the bolt carrier. Like other LMT rifles, the Compressor has a monolithic upper MIL-STD=1913 rail, which means that it is machined into the upper receiver, and this is continued down the handguards. The lower handguard also has a handguard-length rail. The barrel is only 10.5 inches long, and the overall length with the stock fully slid in is only 24 inches. Though it does not come with a suppressor, the tip of the muzzle is threaded and may take a suppressor. It normally comes with an A2-type flash suppressor. Sights are folding BUIS sights, with the rear adjustable for windage and elevation.

Weapon	Ammunition	Weight	Magazines	Price
Compressor	5.56mm NATO	2.68 kg	10, 20, 30	$528

Compressor	.300 Blackout	3.48 kg	5, 10, 20	$706

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Compressor (5.56mm)	5	2	1-Nil	3/4	3	6	20
Compressor (.300)	5	3	2-Nil	4/5	2	6	24

LMT LM8 SLK8

Notes: The core of this rifle is the 16-inch match-quality stainless steel barrel with a medium profile. It is tipped with an LMT-designed flash suppressor; this flash suppressor has threads for the attachment of suppressors, or removes exposing threads for a muzzle brake. The upper receiver has a monolithic MIL-STD-1913 which is continuous with the rail atop the handguard. Unlike most assault carbines, the SLK8 has the ability to quickly change barrels in the field. The handguard is 13 inches and is a rounded square profile with, as mentioned, the rail on top and MLOK slots on the bottom. The gas block is under the top handguard rail and is full-size. The lower receiver is an LMT Defender 2000 equipped with a SOPMOD telescoping buttstock, a two-stage match-quality LMP2400 trigger, and ambidextrous controls. The rifle comes with Dueck Defense Rapid Transition sights (BUISs). The inside of the receiver halves, the barrel extension, the feed ramps, and the bolt carrier group and parts have been given a treatment that LMT calls the Long Slick treatment.

The LM8MRP SC20 SLK8 is essentially the same rifle, but has a 20-inch barrel. The LM8MRP SCCA SLK8 is the same rifle as the LM8MRP SC SLK8, but it is California compliant; for game purposes, it is identical to the base rifle. The LM8MRP SC20CA is essentially the same as the LM8MRP SC20 SLK8, but California compliant and identical to the former rifle for game purposes.

Weapon	Ammunition	Weight	Magazines	Price
LM8MRP SC SLK8	5.56mm NATO	3.31 kg	5, 10, 20, 30	$517
LM8MRP SC20 SLK8	5.56mm NATO	3.55 kg	5, 10, 20, 30	$641

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
LM8MRP SC SLK8	SA	3	1-Nil	4/6	2	Nil	42
LM8MRP SC20 SLK8	SA	3	1-Nil	5/6	2	Nil	59

LWRCI-DI

Notes: The “DI” stands for “Direct Impingement” and notes that the rifle uses the Stoner direct impingement gas system as a base for operation. LWRCI is known for its quality, the DI is probably the best direct impingement rifle on the market today. The gas system and gas block are designed to avoid most of the fouling that is endemic in direct impingement systems, by using a wider, NiCorr-treated gas tube, chromed feed ramp, chromed bolt carrier, and NiCorr-coated interior of the receiver. The fore-end/handguards are one piece aluminum and made out of the same material as the receiver. It is also a free-floating tube. The controls are fully ambidextrous, the sling mount is ambidextrous, and the charging handle is ambidextrous. The LWRCI sliding stock is equivalent to an M4 stock, but has six positions, and the pistol grip is a MagPul MOE. There is a receiver/upper handguard Picatinny rail on top, and a lower handguard rail. The lower rail has an angled handgrip about ¾ the way down and a hand stop at the end of the handguard. The gas block is NiCorr-treated, like the gas tube. The 16.1-inch barrel is spiral-fluted, heavy-profile, cold-hammer-forged, and NiCorr-treated. The barrel is tipped with an A2-type flash suppressor. The receivers are done in a style of production known as Monoforge. The trigger guard is enlarged for use with gloves. Finish is a Type III black hardcoat anodization.

Weapon	Ammunition	Weight	Magazines	Price
DI	5.56mm NATO	2.9 kg	10, 20, 30	$595

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
DI	SA	3	1-Nil	4/6	3	Nil	44

LWRCI IAR

Notes: The IAR (Infantry Automatic Rifle) began with a request from the DoD for a lighter, more manageable automatic rifle for close assaults than even the ParaSAW version of the M-249 is. As the IAR is essentially a modified M16A2, it sort of blurs the line between assault rifle and automatic rifle. The US Army has since passed on the IAR, but the US Marines plan to replace 2000 of their M-249s with 4100 IARs. (The US Army is instead planning to replace some of their M-249s with the Mk 46 automatic rifle instead.) The Marines are already issuing them in Iraq and Afghanistan, and expect to have issued all 4100 IARs by 2010.

The IAR, though built on an M16 platform, has a very different operation – instead of the Stoner direct gas impingement system of the M16 series, the IAR couples a much more reliable gas piston system with a selector group that uses a closed bolt on semiautomatic and open bolt fire on automatic (called OBA, for Open Bolt Automatic, by LWRC). The closed bolt in semiautomatic allows very accurate rifle fire for long-range shots, and means the IAR can be used as sort of a DMR if necessary. However, in the IAR’s primary role as a close-assault support weapon, the open bolt fire keeps the chamber cool and prevents cookoffs, while decreasing the possibility of a mis-strike on the primer causing a stoppage. (Even in OBA, the first round fired will still be from a

closed bolt.) Other improvements have increased feed reliability. The IAR is designed to use any magazine that can be used by the M16 series; this led to US Army objections that the ammunition supply would be way too small at 30 rounds maximum. However, the Marines pointed out that as 100-round C-Mags and other increased-capacity magazine become more common, this is really not an issue. In addition, even a C-Mag is less unwieldy in a close assault than the belt boxes or bags of the M-249.

The IAR therefore looks externally like a modified M16. The IAR's barrel is a 16-inch barrel that is so heavy that it is essentially a bull barrel; in addition, the section of the barrel under the handguards is finned to aid in cooling. Other, unrevealed methods are also used to aid in barrel and chamber cooling. The barrel is surrounded by handguards that feature 4-point MIL-STD-1913 rails, and also act as a float tube for the barrel. The barrel can be tipped by a standard M16A2-type flash suppressor, a muzzle brake, or various other designs of flash suppressors or muzzle brakes. The quality of the metal of the receivers and internal parts is generally higher than that of standard M16-series rifles. A variety of stocks can be fitted, though the Marines are primarily looking at sliding stocks like that of the M4 or made by Vltor.

Twilight 2000 Notes: The IAR does not exist in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
IAR (Flash Suppressor)	5.56mm NATO	3.72 kg	20, 30	$1285
IAR (Muzzle Brake)	5.56mm NATO	3.87 kg	20, 30	$1331
IAR Bipod	N/A	1 kg	N/A	$66

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
IAR (Flash Suppressor)	10	3	1-Nil	4/6	2	11	42
(With Bipod)	10	3	1-Nil	4/6	1	5	55
IAR (Muzzle Brake)	10	3	1-Nil	4/6	2	8	42
(With Bipod)	10	3	1-Nil	4/6	1	4	55

LWRCI Six8

Notes: This weapon was designed for Saudi Arabia to replace the MP-5 in PDW role. They went up one on the caliber, which increases effective range and striking power. The Six8, in the Saudi Role, is finished in white Cerakote, except for the pistol grip, stock, and barrel, as well as smaller parts such as the ambidextrous selector lever and trigger. Operation is by short-stroke piston instead of direct impingement for greater reliability. The buffer is part of the bolt carrier, leaving the recoil buffer tube unnecessary and allowing for a shorter recoil spring, and allows for a secondary spring inside a smaller recoil tube to further enhance accuracy. The recoil springs are made from flat wire instead of round wire, to reduce the amount of travel necessary for the recoil springs. The piston is very close to the gas block, even further increasing reliability (though it was a design challenge). This design also increases cleanliness. The top of the receiver has a monolithic MIL-STD-1913 rail, and the sides and lower handguards have MIL-STD-1913 rails. rail covers are part of the package. The front rail is half the length of the receiver and normally mounts a folding foregrip. Of course, the field stripping procedure is a bit more complicated than a normal AR, primarily due to the recoil spring design and the piston. That said, breakdown is easy, even more so for an armorer. The sliding stock is designed for the shorter-stature Saudis, and has been described as "hobbit-sized." Construction of the lower receiver is from bar stock and the top from standard AR light alloy. The stock is steel and gives a straight in line with the barrel, and concentrates recoil into a small area. The barrel is 8 inches and is tipped with a birdcage flash suppressor. The suppressor is user-removable, but a short barrel is not conducive to a muzzle brake. It is a mere 62 centimeters with the stock fully open and 50 centimeters with the stock fully closed.

The Six8 is also available as a civilian SBR, in semiautomatic only. Reduce price by $4 for such a rifle.

Weapon	Ammunition	Weight	Magazines	Price
Six8	6.8mm SPC	2.81 kg	30	$659

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Six8	5	3	1-1-Nil	3/4	3	7	17

LWRCI SRT Carbine

Notes: Like many gunsmiths and manufacturers, LWRC realized that one of the big defects in the AR-15/M16 was the Stoner direct gas impingement system. This led to LWRC to use the now common gas piston operation on their SRT Carbine. The gas piston system they used is similar to the German World War 2 G-43 rifle, which itself is derived from the Soviet SVT-40. This has fixed piston and a reciprocating cylinder. This assembly is fixed to a low-profile gas block. The bolt carrier group has no gas holes, as no gas passes through it. Interior parts are phosphate finished and then coated with Teflon. The insides of the upper receiver have a Sandstrom finish like the M16A1. Iron sights which are folding and attach to the ends of the MIL-STD-1913 rail are included; they essentially duplicate standard M4 sights.

The SRT Carbine is designed for Law Enforcement and military use, and both semiautomatic and automatic versions exist. To this end, the SRT Carbine uses a 14.5-inch heavy barrel tipped with an M16A2-type flash suppressor (16-inch and 10.5-inch barrels are also available). It is also a flattop rifle; the upper receiver has a MIL-STD-1913 rail that is continuous with the rail on the upper handguard. Three other rails are on the handguards, bottom and on the sides. The SRT Carbine can readily accept a bayonet, underbarrel grenade launcher, foregrip, of a plethora of other accessories. LWRC will sell this carbine as an upper receiver group or

complete rifle, so the SRT Carbine may have a variety of stocks (the stats below simplify this to fixed stock and folding stock). Likewise, LWRC will install various pistol grips of the buyer's choice; this has no effect in game terms. Controls duplicate those on an M16A2, but provide full auto fire instead of a burst. The magazines provided by LWRC are made by Brownells, but any AR-15/M16 magazine will fit the SRT Carbine.

The SRT Carbine is a relative of LWRC's M-6A2 rifle, but it's modifications make unrecognizable as being kin to the M-6A2. Nonetheless, one will often find it referred to as the "SRT/M-6A2."

Twilight 2000 Notes: This weapon is extremely rare in the Twilight 2000 timeline, and found mostly in the Continental US.

Weapon	Ammunition	Weight	Magazines	Price
SRT Carbine, Fixed Stock (10.5" Barrel)	5.56mm NATO	2.92 kg	5, 10, 20, 30	$517
SRT Carbine, Fixed Stock (14.5" Barrel)	5.56mm NATO	3.03 kg	5, 10, 20, 30	$559
SRT Carbine, Fixed Stock (16" Barrel)	5.56mm NATO	3.08 kg	5, 10, 20, 30	$575
SRT Carbine, Sliding Stock (10.5" Barrel)	5.56mm NATO	2.92 kg	5, 10, 20, 30	$537
SRT Carbine, Sliding Stock (14.5" Barrel)	5.56mm NATO	3.03 kg	5, 10, 20, 30	$579
SRT Carbine, Sliding Stock (16" Barrel)	5.56mm NATO	3.08 kg	5, 10, 20, 30	$595

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
SRT Carbine, Fixed Stock (10.5" Barrel)	5	2	1-Nil	4	2	6	21
SRT Carbine, Fixed Stock (14.5" Barrel)	5	3	1-Nil	5	3	6	35
SRT Carbine, Fixed Stock (16" Barrel)	5	3	1-Nil	6	3	6	41
SRT Carbine, Sliding Stock (10.5" Barrel)	5	2	1-Nil	2/4	2	6	21
SRT Carbine, Sliding Stock (14.5" Barrel)	5	3	1-Nil	4/5	3	6	35
SRT Carbine, Sliding Stock (16" Barrel)	5	3	1-Nil	4/6	3	6	41

M+M Vintage M10-762

Notes: Unusually for a company named M+M Vintage, the M10-762, though based on a Romanian AKM manufactured by Cugir, is wrapped in almost totally polymer furniture, so it is not, as one might think, a vintage AKM. It is normally equipped with a sliding M4-type stock called by the company a Kicklite stock, but it can be equipped with a Phoenix Technology Survival Stock or an AR Field Stock (ie, a fixed A2-type stock) if desired. The handguards are polymer, as it the butt and the pistol gripped (though they are both overmolded in non-slip rubber). The pistol grip is also ergonomic, with finger indentations and swells. The handguards are short, but have a polymer MIL-STD-1913 rail on top, and longer ones on the bottom and sides, with rail covers supplied that are overmolded with rubber. The cold-hammer forged barrel is chrome-lined and 16.25 inches long, and is tipped with a hybrid muzzle brake/flash suppressor designed by M+M. The rifle is light, due to the large amount of polymer used, and the polymer magazine supplied with the M10-762. The sights are RPK-type sights instead of AK-type sights, adjustable for windage and elevation, and the rear graduated to 1000 meters. The trigger pack is a single-hook design which uses a direct trigger-to-hammer interface. The fire control plate is removable, and M+M will replace it with conventional controls if desired.

Weapon	Ammunition	Weight	Magazines	Price
M10-762 (Fixed Stock)	7.62mm Kalashnikov	3.31 kg	5, 10, 20, 30, 40, 75D	$864
M10-762 (Sliding Stock)	7.62mm Kalashnikov	3.18 kg	5, 10, 20, 30, 40, 75D	$884

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
M10-762 (Fixed Stock)	SA	4	2-Nil	6	3	Nil	46
M10-762 (Sliding Stock)	SA	4	2-Nil	5/6	3	Nil	46

Maxim Defense MDX Series

Notes: The MDX series is a collection of military and civilian pistols and short-barreled rifles, in full-auto and semiautomatic versions. Barrels range from 5.5 to 10.3 inches, and are tipped with the Maxim Hatebrake muzzle device which attenuates recoil and adds some weight to the muzzle of the rifle, as well as reducing muzzle flash. The chassis is almost identical o that of the AR-15/M16 series, with some differences such as selector switches and magazine releases on both sides of the receiver. Most members of the MDX series are similar except for barrel lengths, stocks/braces, and handguard profiles.

The MD:1505S has a 5.5-inch free-floating barrel with Maxim Slimline handguards which have a full-length Picatinny Rail on top, going from the receiver to the gas block. The handguards are hexagonal, and the other five surfaces have M-LOC slots. The SCW stock is a folding compact stock which folds almost to the end of the receiver. The trigger group is an ALG Combat Trigger, which lightens the trigger pull weight and is essentially a match trigger. Three caliber choices are available. The MD:1505SPB is a pistol variant with an SCW brace; the MD:1505SPS is the same weapon, but without a brace.

The MD:15 is similar in profile to the MD:1505, but the handguards are a bit wider. The MD:15 comes in two barrel lengths, 8.5 inches and 10.3 inches. The weapon may be ordered with a PDW stock, or an SCW stock (identical for most game purposes, though the PDW stock is a bit longer than the SCW stock), or a pistol-type CQB brace.

The MDX:508 is essentially the same, but uses only an 8.5-inch barrel, and is a bit lighter.

The MDX:510 uses a 10.3-inch barrel, but may be fitted with a special compact Gen 7 stock which adds only 13.4 centimeters to the receiver when fully collapsed, but extends to a full 25 centimeters. The Gen 6 brace is designed for when the weapon is being used as a long-barreled pistol for CQB purposes. Both were designed with input from the special operations community. Other adds include a Radian Raptor charging handle, ambidextrous QD sling mounts, an adjustable gas block, a BCM Gunfighter pistol grip, receivers made from billet aluminum, and a handguard with a Picatinny Rail (including the receiver) as well as M-RAX and M-SLOT attachment points. On the whole, the MDX:510 is a bit lighter than its counterparts.

It should be noted that Maxim Defense does not recommend that a suppressor be fitted to the MDX series, to the point of stating on their website that mounting a suppressor on the MDX series will void the weapon's warranty. This does not mean that some people haven't done it…

Weapon	Ammunition	Weight	Magazines	Price
MD:1505S	5.56mm NATO	3.8 kg	10, 20, 30	$874
MD:1505S	.300 Blackout	4.29 kg	10, 20, 30	$1060
MD:1505S	7.62mm Kalashnikov	4.48 kg	10, 20, 30	$1134
MD: 1505SPB	5.56mm NATO	3.56 kg	10, 20, 30	$762
MD: 1505SPB	.300 Blackout	4.02 kg	10, 20, 30	$949
MD: 1505SPB	7.62mm Kalashnikov	4.2 kg	10, 20, 30	$1022
MD: 1505SPS	5.56mm NATO	3.17 kg	10, 20, 30	$741
MD: 1505SPS	.300 Blackout	3.58 kg	10, 20, 30	$928
MD: 1505SPS	7.62mm Kalashnikov	4.14 kg	10, 20, 30	$1001
MD:15 (8.5" Barrel, Stock)	5.56mm NATO	4 kg	10, 20, 30	$908
MD:15 (8.5" Barrel,	.300 Blackout	4.52 kg	10, 20, 30	$1093

Stock)				
MD:15 (8.5" Barrel, Stock)	7.62mm Kalashnikov	5.28 kg	10, 20, 30	$1166
MD:15 (10.3" Barrel, Stock)	5.56mm NATO	4.12 kg	10, 20, 30	$927
MD:15 (10.3" Barrel, Stock)	.300 Blackout	4.66 kg	10, 20, 30	$1113
MD:15 (10.3" Barrel, Stock)	7.62mm Kalashnikov	5.44 kg	10, 20, 30	$1187
MD:15 (8.5" Barrel, Brace)	5.56mm NATO	3.87 kg	10, 20, 30	$797
MD:15 (8.5" Barrel, Brace)	.300 Blackout	4.25 kg	10, 20, 30	$982
MD:15 (8.5" Barrel, Brace)	7.62mm Kalashnikov	4.96 kg	10, 20, 30	$1055
MD:15 (10.3" Barrel, Brace)	5.56mm NATO	3.99 kg	10, 20, 30	$816
MD:15 (10.3" Barrel, Brace)	.300 Blackout	4.38 kg	10, 20, 30	$1002
MD:15 (10.3" Barrel, Brace)	7.62mm Kalashnikov	5.11 kg	10, 20, 30	$1075
MDX:508 (Stock)	5.56mm NATO	3.6 kg	10, 20, 30	$908
MDX:508 (Stock)	.300 Blackout	4.07 kg	10, 20, 30	$1093
MDX:508 (Stock)	7.62mm Kalashnikov	4.75 kg	10, 20, 30	$1166
MDX:508 (Brace)	5.56mm NATO	3.49 kg	10, 20, 30	$797
MDX:508 (Brace)	.300 Blackout	3.95 kg	10, 20, 30	$982
MDX:508 (Brace)	7.62mm Kalashnikov	4.61 kg	10, 20, 30	$1055
MDX:510 (Stock)	5.56mm NATO	3.71 kg	10, 20, 30	$928
MDX:510 (Stock)	.300 Blackout	4.19 kg	10, 20, 30	$1115
MDX:510 (Stock)	7.62mm Kalashnikov	4.9 kg	10, 20, 30	$1188
MDX:510 (Brace)	5.56mm NATO	3.6 kg	10, 20, 30	$817
MDX:510 (Brace)	.300 Blackout	4.06 kg	10, 20, 30	$1003
MDX:510 (Brace)	7.62mm Kalashnikov	4.75 kg	10, 20, 30	$1076

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
MD:1505S (5.56mm)	5	2	1-Nil	3/4	1	3	5
MD:1505S (.300)	5	3	1-Nil	3/4	1	3	8
MD:1505S (7.62mm)	5	3	1-Nil	3/4	1	3	7
MD:1505SPB (5.56mm)	5	2	1-Nil	3	1	4	5
MD:1505SPB (.300)	5	3	1-Nil	3	1	4	6
MD:1505SPB (7.62mm)	5	3	1-Nil	3	1	4	6
MD:1505SPS (5.56mm)	5	2	1-Nil	2	1	4	4
MD:1505SPS (.300)	5	3	1-Nil	3	1	4	5
MD:1505SPS (7.62mm)	5	3	1-Nil	3	1	4	5
MD:15 (5.56mm, 8.5", Stock)	5	2	1-Nil	3/4	1	3	15
MD:15 (.300, 8.5", Stock)	5	3	2-Nil	3/5	1	3	17
MD:15 (7.62mm, 8.5", Stock)	5	3	1-Nil	3/5	1	3	17
MD:15 (5.56mm, 10.3", Stock)	5	2	1-Nil	3/5	1	3	21
MD:15 (.300, 10.3", Stock)	5	3	2-Nil	4/5	1	3	24
MD:15 (7.62mm, 10.3", Stock)	5	3	2-Nil	4/5	1	3	24
MD:15 (5.56mm, 8.5", Brace)	5	2	1-Nil	3	1	4	12
MD:15 (.300, 8.5", Brace)	5	3	2-Nil	4	1	4	15
MD:15 (7.62mm, 8.5", Brace)	5	3	1-Nil	4	1	4	14
MD:15 (5.56mm, 10.3", Brace)	5	2	1-Nil	4	1	4	17
MD:15 (.300, 10.3", Brace)	5	3	2-Nil	4	1	4	20
MD:15 (7.62mm, 10.3", Brace)	5	3	2-Nil	4	1	4	20
MDX:508 (5.56mm, Stock)	5	2	1-Nil	3/4	1	3	15
MDX:508 (.300, Stock)	5	3	2-Nil	3/5	1	3	17
MDX:508 (7.62mm, Stock)	5	3	1-Nil	3/5	1	3	17
MDX:508 (5.56mm, Brace)	5	2	1-Nil	3	1	4	12

MDX:508 (.300, Brace)	5	3	2-Nil	4	1	4	15
MDX:508 (7.62mm, Brace)	5	3	1-Nil	4	1	4	14
MDX:510 (5.56mm, Stock)	5	2	1-Nil	3/4	1	3	21
MDX:510 (.300, Stock)	5	3	2-Nil	4/5	1	3	24
MDX:510 (7.62mm, Stock)	5	3	2-Nil	4/5	1	3	24
MDX:510 (5.56mm, Brace)	5	2	1-Nil	4	1	4	17
MDX:510 (.300, Brace)	5	3	2-Nil	4	1	4	20
MDX:510 (7.62mm, Brace)	5	3	2-Nil	4	1	4	20

MGI Hydra

Notes: One of the “holy grails” of US special operations troops is a weapon which can use a number of different rounds, both domestic and enemy, without having to carry around a huge amount of replacement parts for the weapon (or worse, having to carry around several different weapons). Mack Gwynn Sr and Mack Gwynn Jr, both retired US Special Forces troops, have been working on this problem for a long time; Mack Gwynn Sr, in particular, has been working on it since his time in Vietnam. The result of all this research and work has been the Hydra carbine.

The Gwynns began with the M-4A1 as a base; however, the changes in the M-4A1 they made are quite radical and fundamental. The first change is the quick-change barrels for the different calibers able to be fired (currently 7, hence the name “Hydra”, though more are planned – primarily the 7.62mm NATO and 7.62mm Nagant). The Hydra also uses two interchangeable bolt-carrier groups, one for 5.56mm NATO and rimfire rounds, and one for everything else. As a by-product, the system also allows the user to clean his weapon far more easily than a standard M-4 series weapon. The entire Hydra package is surprisingly light in weight.

The ejection port is enlarged slightly, primarily to allow proper extraction of the .50 Beowulf cartridge. The sights have been redesigned to allow the various chamberings to be accurately aimed. A magazine well adapter is also required for use with 7.62mm Kalashnikov rounds. In some cases, the bolt carrier must be adjusted somewhat, but this is built into the bolt carriers. For the rimfire rounds, a magazine insert must also be used. The barrels come in the standard 14.5 inches for military use; law enforcement and civilian versions are semiautomatic-only and use 16-inch barrels. The barrels are threaded at the muzzle to allow the detachment of the standard military flash suppressors and their replacement by muzzle attachments of the user’s choice (including suppressors and silencers). Military versions use a 3-round burst selective-fire mechanism. The receiver is topped by a MIL-STD-1913 rail, and more are found on the handguards. The Hydra uses a Vltor 5-position sliding stock, which is similar but superior to the standard M-4 sliding stock, and offers an adjustable cheekpiece and a compartment in the rear to accommodate anything up to the size of the standard US military cleaning kit. The sling sold with the Hydra is the Button Sling, but this too can be replaced with a variety of slings. All accessories, barrels, and magazine well adapters lock in solidly and the shooter need not fear that anything will come loose once attached properly.

Note: The weights used here are an estimate; I could not find any solid information on the actual weights as of Feb 07.

Twilight 2000 Notes: The Hydra does not exist in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
Hydra (14.5” Barrel)	.22 Long Rifle	2.63 kg	30	$229
Hydra (16” Barrel)	.22 Long Rifle	2.66 kg	30	$244
Hydra (14.5” Barrel)	.22 Winchester Magnum Rimfire	2.63 kg	30	$250
Hydra (16” Barrel)	.22 Winchester Magnum Rimfire	2.66 kg	30	$265
Hydra (14.5” Barrel)	5.56mm NATO	2.63 kg	20, 30	$575
Hydra (16” Barrel)	5.56mm NATO	2.66 kg	20, 30	$591
Hydra (14.5” Barrel)	6.5mm Grendel	2.7 kg	5, 10, 18, 28	$647
Hydra (16” Barrel)	6.5mm Grendel	2.73 kg	5, 10, 18, 28	$663
Hydra (14.5” Barrel)	6.8mm SPC	2.76 kg	5, 10, 18, 28	$716
Hydra (16” Barrel)	6.8mm SPC	2.79 kg	5, 10, 18, 28	$732
Hydra (14.5” Barrel)	7.62mm Kalashnikov	2.91 kg	30	$826
Hydra (16” Barrel)	7.62mm Kalashnikov	2.94 kg	30	$840
Hydra (14.5” Barrel)	.50 Beowulf	2.72 kg	7, 12	$587
Hydra (16” Barrel)	.50 Beowulf	2.75 kg	7, 12	$604
Complete Caliber Change Set (14.5”)	NA	4.18 kg	NA	$843
Complete Caliber Change Set (16”)	NA	4.23 kg	NA	$868

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Hydra (.22 Long Rifle, 14.5”)	3	1	Nil	4/5	1	1	29
Hydra (.22 Long Rifle, 16”)	SA	1	Nil	4/5	1	Nil	33
Hydra (.22 Magnum, 14.5”)	3	1	Nil	4/5	1	1	44
Hydra (.22 Magnum, 16”)	SA	1	Nil	4/5	1	Nil	49
Hydra (5.56mm, 14.5”)	3	3	1-Nil	4/5	3	4	34
Hydra (5.56mm, 16”)	SA	3	1-Nil	4/5	3	Nil	40

Hydra (6.5mm, 14.5")	3	3	1-Nil	4/5	3	4	39
Hydra (6.5mm, 16")	SA	3	1-Nil	4/6	3	Nil	45
Hydra (6.8mm, 14.5")	3	3	2-Nil	4/6	3	4	38
Hydra (6.8mm, 16")	SA	3	2-Nil	5/6	3	Nil	45
Hydra (7.62mm, 14.5")	3	3	2-Nil	5/6	4	6	39
Hydra (7.62mm, 16")	SA	4	2-Nil	5/6	4	Nil	45
Hydra (.50, 14.5")	3	5	1-2-Nil	4/5	5	7	38
Hydra (.50, 16")	SA	5	1-2-Nil	4/6	4	Nil	45

Military Manufacturing M-16X/C/S

Notes: This weapon was designed as a private venture by Military Manufacturing (not actually affiliated with the US military), but was quickly picked up by a number of agencies in the US, such as the Secret Service, US Customs, and particularly firms providing bodyguard services to executives and celebrities. It is basically an M-16 assault rifle with a radically-cut-down barrel; the M-16X uses a 105.2mm barrel, the M-16C a 152.4mm barrel, and the M-16S a 213mm barrel. A shoulder harness was also manufactured for concealed carry, and despite its small size, the muzzle brake on the weapon is very effective. The handguard doubles as a weight to help fight barrel climb.

Weapon	Ammunition	Weight	Magazines	Price
M-16X	5.56mm NATO	2.38 kg	20, 30	$509
M-16C	5.56mm NATO	2.48 kg	20, 30	$528
M-16S	5.56mm NATO	2.6 kg	20, 30	$552

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
M-16X	5	2	1-Nil	2/3	2	5	10
M-16C	5	2	1-Nil	2/4	2	5	11
M-16S	5	2	1-Nil	3/4	2	5	14

Mossberg MMR

Notes: The Mossberg MMR (Mossberg Modern Rifle) is a high-accuracy-type version of the AR-15 platform, designed for use primarily as a varmint rifle, but also capable of taking down small game and if you aim right, medium game. Originally, the MMR was simply called the "MMR," but with the addition of a new model, the MMR was renamed to "MMR Hunter." Unusually, the MMR Hunter is a civilian rifle that is optimized for 5.56mm NATO instead of .223 Remington (which, of course, has no effect in game terms). Though the exterior finish listed on Mossberg's web site is all-black, an option listed on the site are MMR Hunters finished almost completely in Mossy Oak Camo Pattern, Treestand Camo, or Brush Camo. Underneath the finish, aluminum parts are anodized and phosphated. The handguard is aluminum, but has a checkered surface for a better grip. Under the handguard and butt are sling swivels, but the front swivel mounting can be used as a bipod mounting, with the swivel being easily removed for this purpose. Most rifles with aluminum handguards have a diameter of about 51mm, but the handguard of the MMR Hunter steps down to 38mm just beyond the barrel attachment to give the shooter a better grip. The handguard are removed via a rotating ring, unlike most AR handguards, which can be difficult to remove. The fire controls and magazine release are ambidextrous, though the bolt catch remains on the left side only. The charging handle is oversized at the end, with the locking mechanism for the bolt handle also being oversized. As the barrel is designed using target specs, it is not chromed, which of course means assiduous bore cleaning is essential. The barrel is of heavy profile and match-quality, and is free-floating. There is no muzzle device of any sort, though the MMR Hunter's barrel does have a target crown. Atop the receiver is a MIL-STD-1913 rail; the front sight post on its triangular riser remains, and the very rear of the receiver's rail has a folding BUIS. The upper and lower receivers are machined instead of stamped for greater strength. The stock is an A2-type fixed stock. Mossberg sells the MMR Hunter with a 5-round magazine for maximum compatibility with most US or foreign jurisdictions, but the MMR Hunter can take any magazine that a 5.56mm NATO rifle can take.

The new version, the MMR Tactical, turns the MMR platform into a tactical rifle that is aimed not only at civilians, but police forces and military forces. (It is rumored that military forces and police special operations teams like SWAT/SRT teams and the FBI HRT team have been supplied fully automatic versions, and I have taken account of this rumor below.) The core of the Tactical is basically the same as that of the Hunter, with a machined receiver and ambidextrous controls and oversized charging handle. The Tactical also has a MIL-STD-1913 rail atop the receiver, but it also has four-point rails on the handguards, and the top handguard rail joins to the rail atop the receiver. Both the front and rear sights are BUIS. The stock of the Tactical is a collapsible stock of the M-4-type, though at the buyer's option Mossberg will put an A2-type fixed stock on it. The 16.25-inch barrel is only of medium profile (compared to the Hunter), and is tipped with an A2-type flash suppressor. The bore of the Tactical is chromed, unlike the Hunter. The barrel is of medium profile, and free-floating like the Hunter. It is not match-quality, however. The MMR Tactical is definitely a tactical rifle; though it has the core of a Hunter, it is otherwise very different.

Twilight 2000 v1\V2\V2.2 Timeline: These rifles do not exist in the Twilight 2000 timeline.

Twilight 2013 Timeline: The MMR Hunter has been available for several years, and one will encounter partisan groups, especially in the US and Canada, being used mostly as sniper rifles. The Tactical can be found in the hands of US units in small numbers, as it was issued as an "emergency issue" to US troops when supplies of M-16s and M-4s became short. Some special operations units will

also have small numbers of them, not all of them US units. Finally, some SWAT/SRT units in the US as well as the FBI HRT will have small numbers of the Tactical.

Weapon	Ammunition	Weight	Magazines	Price
Mossberg Hunter	5.56mm NATO	3.4 kg	5, 10, 20, 30	$623
Mossberg Tactical	5.56mm NATO	3.18 kg	5, 10, 20, 30	$596

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Mossberg Hunter	SA	3	1-Nil	6	3	Nil	61
Mossberg Tactical	SA	3	1-Nil	4/6	2	6	42

Mossberg Tactical .22

Notes: The Tactical .22 is a rimfire rifle which follows the lines and appearance of one of the later iterations of the M-16. The Tactical .22 has an M-4-type sliding stock (a fixed stock is also available), a carrying handle with a MIL-STD-1913 rail on it, and handguards with MIL-STD-1913 rails at the 12, 3, 6, and 9-o'clock positions. The carrying handle and M-16-style front triangle have sights which mimic the appearance of those of the M-16 and adjust in the same way, but are calibrated for the Tactical .22 and its rimfire ammunition. The pistol grip is also virtually identical to that of the M-16A2/A3/A4, and the Tactical .22 even has a forward assist (though it's not really necessary). The magazine well and adapter are designed to mimic the appearance of an M-16's magazine, but the actual Tactical .22's magazine is inserted into the bottom of the faux magazine, and the faux magazine has a small "window" in it, allowing the shooter to check his ammunition supply. Unlike the M-16, the bolt of the tactical .22 is chromed, as is the barrel extension and barrel. Internally, however, the Tactical .22 has more in common with Mossberg's Model 702, and uses blowback operation instead of the M-16's gas operation. The barrel is 18 inches long and has no flash suppressor or muzzle device of any kind (or even a provision for one to be attached). Finish is a combination of black polymer, black steel, or anodized black light alloy.

Weapon	Ammunition	Weight	Magazines	Price
Mossberg Tactical .22 (Fixed Stock)	.22 Long Rifle	2.27 kg	10, 25	$243
Mossberg Tactical .22 (Sliding Stock)	.22 Long Rifle	2.27 kg	10, 25	$268

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Mossberg Tactical .22 (Fixed Stock)	SA	1	Nil	5	1	Nil	37
Mossberg Tactical .22 (Sliding Stock)	SA	1	Nil	3/5	1	Nil	37

National Ordinance Modified M-1 Carbine

Notes: Introduced in the late 1980s, this modified M-1 Carbine was not made in large numbers by National Ordinance. However, several other companies in the years to follow (Plainfield, Iver Johnson, and others) manufactured this variant, and as such there are quantities of these weapons to be found. It is one of those "experiments" that shooters seem to enjoy.

Twilight 2000 Notes: These weapons were popular, especially late in the Twilight War when the government was handing out lots of 5.56mm NATO ammunition.

Weapon	Ammunition	Weight	Magazines	Price
National Ordinance Modified M-1 Carbine	5.56mm NATO	3 kg	5, 10, 20, 30	$567

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
National Ordinance Modified M-1 Carbine	SA	3	1-Nil	6	3	Nil	47

Noveske Lo-Pro NSR

Notes: John Noveske started designing this rifle as a personal defense and general dream rifle after a stint in the Army after 9/11. Many of his friends were still in the Army and serving in Iraq and Afghanistan. The idea was to create a rifle with a barrel that could be used by designated marksmen, the spotter of a sniper team, and the sniper himself (if not expected to engage at extremely long ranges). He felt that no expense should be spared if your life is on the line. He therefore chose the best components available, while still being of a (high) reasonable price.

The rifle started with the caliber. The 5.56mm was a non-starter; Noveske felt it just didn't have the needed stopping power. 7.62mm NATO was also out – the resulting rifles and ammunition were too heavy for prolonged carry. He started out with .300 Fireball and built a few prototypes in that caliber, but settled on .300 Blackout for a good compromise between stopping power and range, and weight. The .300 Fireball is also a limited-availability round, while the .300 Blackout has grown to be one of the most popular medium-caliber rounds in the US. The compact SBR format was ideal for rifle that was designed to work with a suppressor, and can also be used for CQB.

The barrel is 10.2 inches long, and Noveske had in mind the AAC 762-SDN-6 suppressor to work with it. This fits over the compact

muzzle brake and onto the threaded portion of the barrel. The barrel picks up 6.1 inches with the suppressor attached, and is actually more accurate with the suppressor attached, especially when using supersonic ammo. Noveske meant for the rifle to be used suppressed, as .300 Blackout from a 10.2-inch barrel creates massive amounts of muzzle blast and is not ear-safe. The barrel is of stainless steel; polished in the bore and the exterior bead-blasted. The barrel is free-floating. The barrel extension has polished feed ramps. The low-profile gas block is adjustable for normal fire without a suppressor, for a suppressor with subsonic ammo, and for a suppressor with supersonic ammunition.

Noveske designed a special handguard called the NSR for the Lo-Pro NSR. 7, 9, 11, and 13.5-inch handguards are available. He felt that most people don't need fully-railed handguards because they are bulky, often need blank outserts to avoid chewed-up hands, and often not used in the first place. The NSR allows for the attachment of MIL-STD-1913 rails on the lower handguard using the KeyMod system, but this is not included in the basic build. The bottom is enlarged and flattened to allow for a better grip with the nonfiring hand. The Lo-Pro NSR's rail has perfect alignment with the receiver rail, and has an extended barrel nut for improved support. Handguards are made of aircraft aluminum. And an internal aluminum heat shield is in the works.

The receiver rail on Noveske's rifle is topped by a Schmidt & Bender 1.1-4x Short Dot scope; this is the same found on the Army's M-240 machineguns. It is mounted using an American Defense Recon Scope Mount, which is on a slight riser and gives easy adjustments to windage and elevation when zeroing. It generally holds its zero, however, and the mount allows for the swapping of optics while retaining its zero. The mount is tool-less. The Lo-Pro NSR used a BCM Gunfighter charging handle, since it's easier to grip and hold onto when charging. The receiver halves are made of 6046-T6 aluminum, forged rather than being stamped or pressed. This gives it extra strength. It has a flared magazine well that will accept most AR magazines; not, however, that it will not accept SureFire's new 60 and 100-round magazines, as they are contoured differently from most AR magazines. The trigger pack is a Geissele Super Dynamic 3 Gun (SD-3G) trigger, which has a flat trigger face that allows a high or low finger position on the trigger. The pistol grip is a one-piece MagPul MOE grip. The stock uses a Noveske-designed Quick Disconnect End Plate, and is otherwise a standard MagPul CTR stock. It is made of steel, and is 6-point sliding.

A .300 Fireball chambering has been included below as a point of interest.

Weapon	Ammunition	Weight	Magazines	Price
Lo-Pro NSR (Basic Rifle)	.300 Blackout	2.7 kg	5, 10, 20, 30	$757
Lo-Pro NSR (Fully Loaded)	.300 Blackout	4.07 kg	5, 10, 20, 30	$1109
Lo-Pro NSR (Basic Rifle)	.300 Fireball	2.83 kg	5, 10, 20	$840
Lo-Pro NSR (Fully Loaded)	.300 Fireball	4.27 kg	5, 10, 20	$1197

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Lo-Pro NSR (Basic Rifle, .300 BLK)	SA	3	2-Nil	3/5	2	Nil	23
Lo-Pro NSR (Fully Loaded, Supersonic, .300 BLK)	SA	3	2-Nil	6/7	3	Nil	52
Lo-Pro NSR (Fully Loaded, Subsonic, .300 BLK)	SA	3	1-Nil	6/7	3	Nil	43
Lo-Pro NSR (Basic Rifle, .300 FB)	SA	4	2-Nil	4/5	3	Nil	23
Lo-Pro NSR (Fully Loaded, Supersonic, .300 FB)	SA	4	2-Nil	6/8	3	Nil	52
Lo-Pro NSR (Fully Loaded, Subsonic, .300 FB)	SA	4	1--Nil	6/8	3	Nil	43

Olympic Arms K8-MAG

Notes: This variant of the AR-15A2 is designed to fire more powerful Winchester Super Short Magnum rounds -- .223, .243, and .25. The lower receiver is the same as a standard AR-15, but the upper receiver, bolt, handguards, and magazines are modified to take the new rounds. The upper receiver is a flattop type, with a MIL-STD-1913 rail to allow it to mount virtually any sort of optics. The barrels are heavy barrels, 24-inches long, target crowned, and designed specifically for these magnum rounds and made from 4140 chrome-molybdenum steel. Though the basic rifle does not come with a bipod, an interface for mounting a Harris-type bipod is included with the rifle. A complaint of the K8-MAG is that the MIL-STD-1913 rail is far enough back on the receiver that the charging

handle (a standard AR-15 charging handle) can be difficult to reach under a large scope. Prototypes of this rifle were available as early as late 2003, but production examples were not available until late 2004.

Twilight 2000 Notes: This weapon does not exist in the Twilight 2000 timeline.

Merc 2000 Notes: The US Army and Marines as well as various police forces and mercenaries are using the K8-MAG in combat as sharpshooter's weapon, or even a faux sniper rifle.

Weapon	Ammunition	Weight	Magazines	Price
K8-MAG	.223 Winchester Super Short Magnum	4.02 kg	8, 12	$634
K8-MAG	.243 Winchester Super Short Magnum	4.18 kg	8, 12	$695
K8-MAG	.25 Winchester Super Short Magnum	4.3 kg	8, 12	$743

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
K8-Mag (.223)	SA	4	1-1-Nil	7	2	Nil	90
K8-MAG (.243)	SA	4	1-2-Nil	7	2	Nil	96
K8-MAG (.25)	SA	4	1-2-Nil	7	3	Nil	96

Olympic Arms PCR-8 MAG

This is an AR-15A3 clone chambered for the new .243 Winchester Super Short Magnum cartridge or .223 Winchester Super Short Magnum cartridge. These cartridges, along with barrels 4 inches longer than normal, gives the weapons great accuracy. The weapon has been modified as little as possible to accommodate the new caliber, with changes to the barrel, bolt carrier group, and magazine well, as well as the recoil spring and mass. The weapon retains the flattop receiver with a MIL-STD-1913 rail. It does not, however, have any sort of flash suppressor or muzzle brake. The barrel is, however, of match quality.

Twilight 2000 Notes: This weapon does not exist.

Weapon	Ammunition	Weight	Magazines	Price
PC-8 MAG	.243 Winchester Super Short Magnum	3.31 kg	10	$689
PC-8 MAG	.223 Winchester Super Short Magnum	3.33 kg	10	$693

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
PC-8 MAG (.243)	SA	4	1-2-Nil	6	3	Nil	94
PC-8 MAG (.223)	SA	4	1-2-Nil	6	3	Nil	94

Olympic Arms Plinker Plus

Notes: The Plinker Plus is meant to be a "fun" rifle for self-defense, plinking, and recreation. They are inexpensive by RL terms. There are basically three forms of the Plinker Plus: the basic Plinker Plus, the Flattop Plinker Plus, and the Plinker Plus 20. They are basic ARs, with the first two being carbines with a 16-inch stainless steel (but non-chromed) bores that are called "Long-Life" bores by Olympic Arms. They have an A2-type flash suppressor and pistol grip, an M-4-type collapsible stock, and A1-type sights. They are otherwise ordinary ARs.

The Flattop Plinker Plus has a MIL-STD-1913 rail atop the receiver, a low-profile gas block with a small rail, and the other Plinker plus construction except for the sights and carrying handle. They don't come with BUIS, though several are sold by Olympic Arms. The Plinker Plus 20 is the same as the Plinker Plus, but has a 20-inch barrel and a standard A2 stock with a butt trap; it is essentially an AR-15A2 with A1 sights.

Weapon	Ammunition	Weight	Magazines	Price
Plinker Plus	5.56mm NATO	3.34 kg	5, 10, 20, 30, 35	$585
Plinker Plus Flattop	5.56mm NATO	3.38 kg	5, 10, 20, 30, 35	$591
Flinker Plus 20	5.56mm NATO	3.84 kg	5, 10, 20, 30, 35	$607

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Plinker Plus	SA	3	1-Nil	4/6	2	Nil	40
Plinker Plus Flattop	SA	3	1-Nil	4/6	2	Nil	40
Flinker Plus 20	SA	3	1-Nil	6	2	Nil	56

Olympic Arms P Series and K Series

Notes: This is an AR-15A2 clone chambered for pistol cartridges. The weapon is mostly unmodified except for the modifications necessary for adaptation to the 9mm Parabellum cartridge, such as barrel (which is also shorter than normal), bolt-carrier group, magazine well, and sights; in addition, the weapon has no flash suppressor or muzzle brake of any kind. The handguards are short M-4-style handguards. The weapon is sold with 10-round magazines, but will in fact accept any sort of Glock-compatible magazine of the appropriate caliber. The PCR-30 is also similar to the other weapons of the PCR series, but is of lighter construction, and uses any magazine compatible with an M-1 Carbine. In addition, Olympic Arms also makes extended 40-round magazines for the PCR-30.

These rifles were largely discontinued after the demise of the Assault Weapons Ban, but in their place came the K series. These are for the most part identical to the PCR series, but being post-ban weapons, they are equipped with sliding stocks, flash suppressors, and can use larger-capacity magazines. All are available with 10 and 14-round magazines, but the K-9 is also able to use a modified Sten SMG magazine, while the others may use magazines modified from Uzi magazines. These magazines are proprietary, unfortunately. 16-inch barrels are standard; 20-inch barrels are optional.

It should be noted that on both the PCR series and the K series, there are forward assists; they don't actually do anything however, being there simply for looks and in imitation of the AR-15.

Twilight 2000 Notes: The PCR-30 is not available, nor are any of the K series.

Weapon	Ammunition	Weight	Magazines	Price
PCR-9	9mm Parabellum	3.18 kg	10, 17, 19, 33	$279
PCR-10	10mm Colt	3.18 kg	10, 17	$337
PCR-40	.40 Smith & Wesson	3.18 kg	9, 10, 15	$317
PCR-45	.45 ACP	3.18 kg	6, 10, 13	$360
PCR-30	.30 Carbine	2.93 kg	10, 15, 30, 40	$302
K-9 (16" Barrel)	9mm Parabellum	3.11 kg	10, 14, 32	$301
K-9 (20" Barrel)	9mm Parabellum	3.27 kg	10, 14, 32	$342
K-10 (16" Barrel)	10mm Colt	3.11 kg	10, 14, 30	$361
K-10 (20" Barrel)	10mm Colt	3.27 kg	10, 14, 30	$402
K-40 (16" Barrel)	.40 Smith & Wesson	3.11 kg	10, 14, 30	$340
K-40 (20" Barrel)	.40 Smith & Wesson	3.27 kg	10, 14, 30	$380
K-45 (16" Barrel)	.45 ACP	3.11 kg	10, 14, 30	$385
K-45 (20" Barrel)	.45 ACP	3.27 kg	10, 14, 30	$425

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
PCR-9	SA	2	1-Nil	5	1	Nil	35
PCR-10	SA	2	1-Nil	5	2	Nil	39
PCR-40	SA	2	1-Nil	5	2	Nil	37
PCR-45	SA	2	1-Nil	5	2	Nil	38
PCR-30	SA	2	1-Nil	5	1	Nil	44
K-9 (16")	SA	2	1-Nil	3/5	1	Nil	35
K-9 (20")	SA	2	1-Nil	4/5	1	Nil	46
K-10 (16")	SA	2	1-Nil	4/5	2	Nil	39
K-10 (20")	SA	2	1-Nil	4/6	2	Nil	50
K-40 (16")	SA	2	1-Nil	3/5	2	Nil	37
K-40 (20")	SA	2	1-Nil	4/5	2	Nil	48
K-45 (16")	SA	2	1-Nil	4/5	2	Nil	38
K-45 (20")	SA	2	1-Nil	4/6	2	Nil	49

Palmetto State Armory PSAK-47

Notes: Described by some as "the Cadillac of AKs" and by some as having lingering quality control issues, the PSAK-47 and its siblings are generally thought well by the AK community, both for quality and real-world price (which is lower than the *Twilight 2000 v2.2* price below). However, there *have* been some nagging issues by some owners about problems with jamming and general fit and finish; Palmetto State's quality control seems to be somewhat uneven, though generally good. Palmetto State has reportedly changed the way they assemble the PSAK-47 and how they conduct quality control; as well as adjusting the way the parts are machined, since their introduction in 2015. They are not made to Mil-Spec, like many US-made AKs; Palmetto State, upon experimenting with their prototype rifles, found that strict Mil-Spec is not necessarily a good thing in an AK-type rifle. The PSAK-47 (Palmetto State AK) has a number of variants, mostly in color or construction of the furniture. The PSAK-47 series is 100% American, Palmetto State and many other shooters not being impressed with the quality of the Russian, Eastern European, Egyptian, and Chinese AKs and AK clones on the market today.

The base rifle of the series, the PSAK-47 GB2 Classic Polymer, uses a Magpul MOE AK furniture kit, with polymer AK-shaped handguards enclosing a stainless steel heat shield. The polymer pistol grip and the polymer stock mimic that of the AK-100 series, complete with lightning grooves on either side of the stock. (The magazine supplied with the rifle is also polymer.) The stock has a butt trap for a cleaning kit and batteries for optics. The barrel is 16 inches of 4150 chrome/moly/vanadium steel, tipped with a standard AKM-type muzzle device, and with a nitride finish. The muzzle device is removable and can be replaced by a flash suppressor or muzzle brake; there is not enough room on the barrel for a suppressor. The barrel is pressed into a billet steel, heat-treated barrel block; "GB2" indicates such a barrel block configuration, which will also have a star on the front trunnion. The receiver is stamped from 1045 carbon steel which is heat-treated and hardened. Finish for the polymer is flat dark gray; the external metalwork is black. Internal parts are machined from billet steel, except for the bolt carrier, which is cast steel. And this appears to be a sometimes-problem with the PSAK-47, in that the parts are not quite shaped properly and can lead to jams and warranty replacement of parts and sometimes whole rifles. The trigger module is single-stage but a light touch, and uses a double-hook configuration inside; operation is

described as silky by many shooters, with a crisp break. The internals are also heat-treated. The selector lever moves easily, is not loose, and can be manipulated with the firing hand. The sights are the best of AK sight designs, graduated to 800 meters and with a leaf rear sight adjustable for elevation and windage. The PSAK-47 also comes with a side-mounted AK-type optics mount, but "Americanized" and able to mount a Picatinny or Weaver rail. The large amount of polymer makes for a light rifle.

The PSAK-47 GB2 MOEkov, has, as the name suggests, a combination of the Magpul MOE AKM furniture kit, combined with a Zhukov-S right-side folding stock and MOE A2 pistol grip. The stock has a club-foot profile, but no trap for a cleaning kit (though the front mounts the traditional AK-type cleaning rod, and comes with the same cleaning kit as the Classic Polymer). For the most part, the rest of the rifle conforms to that of the Classic Polymer. The barrel, however, is not only nitrided but finished in black Melonite. It is slightly different in weight and price, but for game purposes, shoots the same as the Classic Polymer.

Palmetto State also makes two US-made classic AKM-type rifles, the PSAK-47 GB2 Classic Blonde Rifle (with light-colored classic AK hardwood for the furniture), and the Classic Red Rifle, which has dark hardwood AK-type furniture. They are essentially AKMs built to the PSAK-47 standard, and are sold with steel magazines instead of polymer magazines, though like the other PSAK-47s, can use polymer, aluminum, or steel magazines. Metal and sight finish is semigloss black. Furniture is of standard AKM design. Both are the same for game purposes, and shoot the same as the rest of the rifles (technically, the spreadsheet says that the recoil on these wood-furniture rifles is about 0.4 points less, but this does not translate out for game purposes).

Weapon	Ammunition	Weight	Magazines	Price
PSAK-47 GB2 Classic Polymer	7.62mm Kalashnikov	3.08 kg	5, 10, 20, 30, 40, 75D	$805
PSAK-47 GB2 MOEkov	7.62mm Kalashnikov	3.18 kg	5, 10, 20, 30, 40, 75D	$825
PSAK-47 GB2 Classic Rifle	7.62mm Kalashnikov	3.63 kg	5, 10, 20, 30, 40, 75D	$792

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
PSAK GB2 Classic Polymer	SA	4	2-Nil	6	4	Nil	45
PSAK-47 GB2 MOEkov	SA	4	2-Nil	4/6	4	Nil	45
PSAK-47 GB2 Classic Rifle	SA	4	2-Nil	6	4	Nil	45

Primary Weapons Systems Diablo

Notes: Primarily sold as upper receiver kits for existing AR-15/M-16/M-4-type rifles, the Diablo system provides several options to users of those rifles without sacrificing the muscle memory that troops and veterans have developed from their long use of the M-16 and M-4. The smallest member of the series, the DC-7 5.56mm (Diablo Carbine), features a 7-inch stainless steel barrel with a long-stroke gas piston system replacing the direct gas impingement system of the standard M-16 or M-4, and a slightly faster rifling twist, tipped by a PWS-designed muzzle brake. The DC-7 features a Vltor MUR-1 upper receiver machined from a solid aluminum billet, a Mil-Spec bolt carrier group, a charging handle also machined from a solid billet, TangoDown SCAR four-point MIL-STD-1913 rails as well as a MIL-STD-1913 rail atop the receiver. The entire assembly is coated in a tough, corrosion-resistant coating called QPQ. The DC-7 7.62mm is similar in concept, but is chambered for 7.62mm Kalashnikov. The DC-10 is similar to the DC-7 5.56mm, but has a 10.5-inch barrel tipped with an M-16A2-type flash suppressor. The DC-12 has a 12.5-inch barrel with an A2-type flash suppressor, while the DC-16 is a 16-inch barrel carbine with an A2-type flash suppressor. The series is available in automatic versions for law enforcement, bodyguard and military concerns.

Twilight 2000 Notes: the Diablo series does not exist in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
DC-7 5.56mm	5.56mm NATO	2.61 kg	20, 30	$544
DC-7 7.62mm	7.62mm Kalashnikov	2.61 kg	30	$790
DC-10	5.56mm NATO	3.06 kg	20, 30	$534
DC-12	5.56mm NATO	3.12 kg	20, 30	$555
DC-16	5.56mm NATO	3.22 kg	20, 30	$591

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
DC-7 5.56mm	5	2	1-Nil	3/4	2	5	9
DC-7 7.62mm	5	3	2-Nil	3/4	2	3	11
DC-10	5	2	1-Nil	3/4	2	6	20
DC-12	5	3	1-Nil	4/5	2	6	27
DC-16	5	3	1-Nil	4/5	2	6	40

Primary Weapons Systems MK-109

Notes: The Mk-109 is designed for the subsonic round .300 Blackout, and for use with a suppressor, which is included with the rifle (in these rules). Like most PWS rifles, the Mk-109 uses a long-stroke piston-driven system in an M-4-type carbine. The barrel is equipped with a screw-on suppressor; the issue suppressor is a Gemtech GMT-300BLK which actually covers the Triad flash

suppressor and a good portion of the barrel, back to the end of the handguard. The barrel is a 9.75-inch chrome-lined barrel, which is only a little longer than the .300 Blackout round requires to develop optimum power. The barrel has an Isonite QPQ coating that enhances strength and resists corrosion. Due to its design, PWS recommends that using full-power 110-130-grain bullets only; though heavier .300 Blackout ammo does exist, do not use it in the Mk-109.

The handguards are KeyMod Mk 1s. They are of aircraft-quality aluminum and have a full length Picatinny rail that connects to the receiver rail on top, and half-length rails along the side at the front. A shorter length of rail under the handguard is generally used for a tactical light or bipod (not included). The rails are forged as a part of the receiver and handguards. The receivers are of 7075-T6 aluminum, and machined to high tolerances; they are anodized. The bolt carrier and buffer mass tube are designed with increased mass to soak up felt recoil. The buffer mass locks in on the left and right, and does not require a castle nut. The inner works are also built to close tolerances, and are nickel/Teflon-coated. A BCM Gunfighter charging handle is installed. The Mk-109 comes with MagPul BUIS and a British-made Shield CQS red-dot optical sight, as well as a MagPul MOE sliding 6-position stock.

Weapon	Ammunition	Weight	Magazines	Price
Mk-109	.300 Blackout	2.75 kg	5, 10, 20	$849
With Suppressor	.300 Blackout	3.21 kg	5, 10, 20	$947

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Mk-109	5	3	2-Nil	4/5	3	6	21
With Suppressor	5	3	2-Nil	4/6	2	5	17

Rebel Arms Renegade

Notes: The Renegade is a more-or-less standard civilianized M4 carbine with enough special mods to make it more than ordinary. The first is its Mission First Tactical (MFT) furniture, which includes round, short ECO handguards with rails at the top and bottom and a short rail above the low-profile carbine-length gas system; the handguards also have KeyMod mounts on the sides. The pistol grip is the Engage Arts AR-15/M16 grip, which is essentially an AR-15A2 grip with a soft tough padded cover. The Minimalist stock is a sliding stock featuring a single strut with an actuating bar and a seemingly unsupported butt and buttplate. The bolt carrier has a QPQ Nitride treatment for lower friction, and the inside of the receiver also receives this treatment. The 16-inch barrel is premium (Match-grade) barrel with a 1:7 twist, best for stabilizing civilian ammunition or older military ammunition. It is specially bedded, using the SLR ION barrel nut, and is tipped with a Griffon Armament muzzle brake. The receivers are from AR-standard 7075 heat-treated aluminum, finished with black hard anodization. The bolt catch and magazine release are lowered to make them more ergonomic. The detent pins snap in securely, and must be deliberately pulled out. The fire control group for the civilian version allows only semiauto and safe, but an automatic fire version exists for automatic weapon enthusiasts, police, and military concerns. For these concerns, the Renegade also comes with a 14.5-inch barrel. The Renegade in its standard configuration is New Jersey compliant unless using large-capacity magazines.

Weapon	Ammunition	Weight	Magazines	Price
Renegade (16" Barrel)	5.56mm NATO	3.44 kg	5, 10, 20, 30, 35	$644
Renegade (14.5" Barrel)	5.56mm NATO	3.4 kg	5, 10, 20, 30, 35	$628

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Renegade (16" Barrel)	5	3	1-Nil	4/6	2	4	42
Renegade (14.5" Barrel)	5	3	1-Nil	4/5	2	4	36

Red Jacket KS-KP Mor

Notes: Red Jacket has long been known for its customization and improvement of stock firearms. However, these days, it is probably better known as gunsmithing firm on the Discovery Channel's *Sons of Guns* series. (Admit it, you watch it too.) They rarely market whole firearms, though the KS-KP Mor is an exception. The KS-KP Mor is a highly accurized and modified Saiga rifle.

Starting with the AK-74 as a base, modifications begin. Tolerances are lowered and tightened to match Western standards. The 16-inch barrel is tipped with an A1-type flash suppressor, though the barrel is threaded at the muzzle and other muzzle devices must be added. An extended charging handle is added. The G2 trigger pack is moved slightly forward, making room for the customized pistol grip. The stock is a Magpul sliding stock which is also skeletonized. Metalwork is then blasted and refinished in baked-on Gun-Kote, and finally, a matte black finish.. The gas block is US-Made. The handguards have a quad MIL-STD-1913 rail, as does the upper receiver. This is mounted on a TWS Dog Leg receiver cover. BUIS are provided. The receiver rail comes with a Trijicon SRS short-range scope.

Weapon	Ammunition	Weight	Magazines	Price
KS-KP Mor	5.45mm Kalashnikov	3.4 kg	10, 20, 30, 40, 75D	$786

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
KS-KP Mor	5	3	1-Nil	4/5	2	Nil	44

Remington ACR

Notes: Magpul has long been known in the firearms world for their excellent add-ons to existing weapons, particularly their stocks for various weapons (most notably better sliding stocks for the AR-15/M16/M4 series than the issue stocks). Their accessories are in widespread use around the world, by civilians, military, and police forces. It is only recently, however, that Magpul attempted to enter the market with a complete firearm (or more like a firearm system), called the Masada Adaptive Combat Weapon System (ACWS). First shown at the 2007 SHOT Show, the Masada design was finalized in 2008. Civilian and military versions were anticipated.

However, Magpul quickly realized that they did not have the facilities for large-scale manufacture of complete firearms – much less a complicated firearms system like the Masada. They therefore partnered with Bushmaster to produce the Masada, selling Bushmaster a license to build the Masada and jointly sell them with Magpul. However, before this in 2006, a large investment firm named Cerberus Capital Management had bought Bushmaster; in 2007, they also bought Remington, and DPMS, in 2008 Marlin, and in 2009 AAC, Barnes Bullets, and Dakota Arms. These were all brought under the umbrella of a part of Cerberus called the Freedom Group. In the process, the Masada got shelved for several years. The design re-emerged in early 2010 as the Remington Defense ACR (Adaptive Combat Rifle). The Remington ACR is now being tested by US special operations units, the US Marines, and some other countries and police forces in other parts of the world as a possible supplement to the FN SCAR, or possibly to be acquired in place of the FN SCAR. Some versions will also be built for sale to civilians (primarily the same as the military version with the 16.5" barrel, but with semiautomatic-only capability), and to police forces who do not need an automatic weapon.

The Magpul version of the Masada was designed to be a modular system, with the capability to use several barrel lengths and calibers with a minimum of modification. Magpul intended to have 5.56mm NATO, 6.8mm SPC, and 7.62mm Kalashnikov as chamberings, with barrels of 10.5, 11.5, 14.5, 16, 18, and 20 inches. Most versions were equipped with stocks that fold to the right side, but sliding stocks were being considered, as well as any number of other stocks that Magpul makes (whether fixed, folding, sliding, or collapsible). The 20-inch barrel version was intended to be a designated marksman's weapon, and had a heavier match-quality barrel. Muzzles could be tipped by flash suppressors or muzzle brakes, or (for civilian use) no attachment. Magpul was considering equipping the Masada with threaded muzzles to allow changing of muzzle devices or use of a suppressor. The stocks envisioned by Magpul for the Masada are generally equipped with a recoil pad on the butt.

The Remington ACR version is specifically a carbine version, with barrel choices of 10.5", 14.5", 16.5", and 18", tipped by an A2-type flash suppressor. These barrels are designed to allow the flash suppressor to be removed and a silencer used instead. Currently, the Remington ACR is being manufactured only in 5.56mm NATO, though a version chambered for 6.8mm SPC is in the final stages of development as of May 2010. Prototypes have been built in 5.45mm Kalashnikov, 6.5mm Grendel, and 7.62mm Kalashnikov. As with the Masada, these alternate chamberings are designed as caliber change kits as well as complete rifles, as are the upper receivers different-length barrels. The stock has been finalized, and it is a Magpul design which both slides and folds to the right, as well as having a recoil pad.

Operation and design of the Remington ACR is a curious amalgamation of modified forms of several other assault rifles. The gas system is derived from that of the AR-18, the upper receiver and charging system are reminiscent of the FN SCAR, and the trigger unit is derived from the G3 and the M16. Construction of the exterior is largely of high-strength polymer, while most of the metalwork is of high-grade steel or (in the case of the upper receiver) 7000-series aluminum. The barrels and bolts are designed to be easily removed and exchanged (as well as a magazine well adapter for the 7.62mm Kalashnikov version), but are not intended to be changed in caliber by the user. The Remington ACR has a gas regulator to allow it to cope with fouling and dirt with prolonged use (but does not change the ROF in game terms). The finish is designed for the Remington ACR, and designed both weatherproofing, resistance to wear, and to provide lubrication properties. A nitride substrate conversion process, tougher than chrome-lining, is further used in the rifle's bore to further reduce corrosion there. Current versions of the Remington ACR use a more-or-less standard type of assault rifle trigger as standard, but Remington offers a drop-in match trigger pack and a two-stage trigger pack. 5.56mm NATO versions are designed to use M16 magazines, and 7.62mm Kalashnikov versions to use Kalashnikov magazines, but the primary magazines are intended to be high-strength polymer magazines with follower springs designed to allow the magazines to be stored loaded for long periods of time (called "Polymags" by Remington). The stocks and the pistol grip have compartments to allow the stowage of various small items as well as a cleaning kit. The upper receiver is topped by a MIL-STD-1913 rail which runs to the end of the handguard, with a flip-up post front sight post adjustable for windage and elevation. Though intended for use with optics of various sorts, a conventional rear sight unit may also be attached to the Remington ACR's MIL-STD-1913 rail. Another, shorter MIL-STD-1913 rail is located under the handguards, and even shorter ones are on either side of the front of the handguards.

Twilight 2000 Notes: Neither the Masada nor the Remington ACR exist in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
Masada (10.5" Barrel, Fixed Stock)	5.56mm NATO	2.85 kg	20, 30	$582
Masada (10.5" Barrel, Folding Stock)	5.56mm NATO	2.85 kg	20, 30	$602
Masada (11.5" Barrel, Fixed Stock)	5.56mm NATO	2.89 kg	20, 30	$593
Masada (11.5" Barrel, Folding Stock)	5.56mm NATO	2.89 kg	20, 30	$613
Masada (14.5" Barrel, Fixed Stock)	5.56mm NATO	2.99 kg	20, 30	$624
Masada (14.5" Barrel, Folding Stock)	5.56mm NATO	2.99 kg	20, 30	$644
Masada (16" Barrel, Fixed Stock)	5.56mm NATO	3.04 kg	20, 30	$639
Masada (16" Barrel, Folding Stock)	5.56mm NATO	3.04 kg	20, 30	$659
Masada (18" Barrel, Fixed Stock)	5.56mm NATO	3.11 kg	20, 30	$659
Masada (18" Barrel, Folding Stock)	5.56mm NATO	3.11 kg	20, 30	$679
Masada (20" Barrel, Fixed Stock)	5.56mm NATO	3.2 kg	20, 30	$686
Masada (20" Barrel, Folding Stock)	5.56mm NATO	3.2 kg	20, 30	$706
Remington ACR (10.5" Barrel)	6.5mm Grendel	3.01 kg	20, 30	$681
Masada (10.5" Barrel, Fixed Stock)	6.8mm SPC	3.1 kg	18, 28	$740
Masada (10.5" Barrel, Folding Stock)	6.8mm SPC	3.1 kg	18, 28	$760
Masada (11.5" Barrel, Fixed Stock)	6.8mm SPC	3.14 kg	18, 28	$751
Masada (11.5" Barrel, Folding Stock)	6.8mm SPC	3.14 kg	18, 28	$771
Masada (14.5" Barrel, Fixed Stock)	6.8mm SPC	3.25 kg	18, 28	$782
Masada (14.5" Barrel, Folding Stock)	6.8mm SPC	3.25 kg	18, 28	$802
Masada (16" Barrel, Fixed Stock)	6.8mm SPC	3.3 kg	18, 28	$797
Masada (16" Barrel, Folding Stock)	6.8mm SPC	3.3 kg	18, 28	$817
Masada (18" Barrel, Fixed Stock)	6.8mm SPC	3.38 kg	18, 28	$819
Masada (18" Barrel, Folding Stock)	6.8mm SPC	3.38 kg	18, 28	$839
Masada (20" Barrel, Fixed Stock)	6.8mm SPC	3.48 kg	18, 28	$844
Masada (20" Barrel, Folding Stock)	6.8mm SPC	3.48 kg	18, 28	$864
Masada (10.5" Barrel, Fixed Stock)	7.62mm Kalashnikov	3.23 kg	30, 40	$830

Masada (10.5” Barrel, Folding Stock)	7.62mm Kalashnikov	3.23 kg	30, 40	$850
Masada (11.5” Barrel, Fixed Stock)	7.62mm Kalashnikov	3.27 kg	30, 40	$840
Masada (11.5” Barrel, Folding Stock)	7.62mm Kalashnikov	3.27 kg	30, 40	$860
Masada (14.5” Barrel, Fixed Stock)	7.62mm Kalashnikov	3.38 kg	30, 40	$871
Masada (14.5” Barrel, Folding Stock)	7.62mm Kalashnikov	3.38 kg	30, 40	$891
Masada (16” Barrel, Fixed Stock)	7.62mm Kalashnikov	3.43 kg	30, 40	$886
Masada (16” Barrel, Folding Stock)	7.62mm Kalashnikov	3.43 kg	30, 40	$906
Masada (18” Barrel, Fixed Stock)	7.62mm Kalashnikov	3.51 kg	30, 40	$908
Masada (18” Barrel, Folding Stock)	7.62mm Kalashnikov	3.51 kg	30, 40	$928
Masada (20” Barrel, Fixed Stock)	7.62mm Kalashnikov	3.61 kg	30, 40	$933
Masada (20” Barrel, Folding Stock)	7.62mm Kalashnikov	3.61 kg	30, 40	$953
Remington ACR (10.5” Barrel)	5.45mm Kalashnikov	2.73 kg	30, 40	$558
Remington ACR (14.5” Barrel)	5.45mm Kalashnikov	2.86 kg	30, 40	$600
Remington ACR (16.5” Barrel)	5.45mm Kalashnikov	2.92 kg	30, 40	$621
Remington ACR (18” Barrel)	5.45mm Kalashnikov	2.97 kg	30, 40	$636
Remington ACR (10.5” Barrel)	5.56mm NATO	2.96 kg	20, 30	$610
Remington ACR (14.5” Barrel)	5.56mm NATO	3.11 kg	20, 30	$651
Remington ACR (16.5” Barrel)	5.56mm NATO	3.17 kg	20, 30	$672
Remington ACR (18” Barrel)	5.56mm NATO	3.23 kg	20, 30	$687
Remington ACR (10.5” Barrel)	6.5mm Grendel	3.13 kg	20, 30	$681
Remington ACR (14.5” Barrel)	6.5mm Grendel	3.29 kg	20, 30	$732
Remington ACR (16.5” Barrel)	6.5mm Grendel	3.36 kg	20, 30	$744
Remington ACR (18” Barrel)	6.5mm Grendel	3.43 kg	20, 30	$759
Remington ACR (10.5” Barrel)	6.8mm SPC	3.22 kg	20, 30	$750
Remington ACR (14.5” Barrel)	6.8mm SPC	3.39 kg	20, 30	$791
Remington ACR (16.5” Barrel)	6.8mm SPC	3.46 kg	20, 30	$813
Remington ACR (18” Barrel)	6.8mm SPC	3.52 kg	20, 30	$829
Remington ACR (10.5” Barrel)	7.62mm Kalashnikov	3.34 kg	30, 40	$860
Remington ACR (14.5” Barrel)	7.62mm Kalashnikov	3.51 kg	30, 40	$902
Remington ACR (16.5” Barrel)	7.62mm Kalashnikov	3.58 kg	30, 40	$923
Remington ACR (18” Barrel)	7.62mm Kalashnikov	3.65 kg	30, 40	$939
Remington ACR Silencer	N/A	1.35 kg	N/A	$270

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Masada (10.5”, Fixed, 5.56mm)	5	2	1-Nil	4	2	6	20
Masada (10.5”, Folding, 5.56mm)	5	2	1-Nil	3/4	2	6	20
Masada (11.5”, Fixed, 5.56mm)	5	2	1-Nil	5	2	6	24
Masada (11.5”, Folding, 5.56mm)	5	2	1-Nil	3/5	2	6	24
Masada (14.5”, Fixed, 5.56mm)	5	3	1-Nil	5	2	6	34
Masada (14.5”, Folding, 5.56mm)	5	3	1-Nil	4/5	2	6	34
Masada (16”, Fixed, 5.56mm)	5	3	1-Nil	5	2	6	40
Masada (16”, Folding, 5.56mm)	5	3	1-Nil	4/5	2	6	40
Masada (18”, Fixed, 5.56mm)	5	3	1-Nil	6	2	5	47
Masada (18”, Folding, 5.56mm)	5	3	1-Nil	4/6	2	5	47
Masada (20”, Fixed, 5.56mm)	5	3	1-Nil	6	2	5	57
Masada (20”, Folding, 5.56mm)	5	3	1-Nil	5/6	2	5	57
Masada (10.5”, Fixed, 6.8mm)	5	3	1-2-Nil	4	2	5	28
Masada (10.5”, Folding, 6.8mm)	5	3	1-2-Nil	3/4	2	5	28
Masada (11.5”, Fixed, 6.8mm)	5	3	1-2-Nil	5	2	5	32
Masada (11.5”, Folding, 6.8mm)	5	3	1-2-Nil	3/5	2	5	32
Masada (14.5”, Fixed, 6.8mm)	5	3	1-2-Nil	5	2	6	46
Masada (14.5”, Folding, 6.8mm)	5	3	1-2-Nil	4/5	2	6	46
Masada (16”, Fixed, 6.8mm)	5	3	1-2-Nil	5	2	6	53
Masada (16”, Folding, 6.8mm)	5	3	1-2-Nil	4/5	2	6	53
Masada (18”, Fixed, 6.8mm)	5	3	1-2-Nil	6	2	6	64
Masada (18”, Folding, 6.8mm)	5	3	1-2-Nil	4/6	2	6	64
Masada (20”, Fixed, 6.8mm)	5	3	1-2-Nil	6	3	8	77
Masada (20”, Folding, 6.8mm)	5	3	1-2-Nil	5/6	3	8	77
Masada (10.5”, Fixed, 7.62mm)	5	3	2-Nil	4	2	6	23
Masada (10.5”, Folding, 7.62mm)	5	3	2-Nil	3/4	2	6	23

Masada (11.5", Fixed, 7.62mm)	5	3	2-Nil	5	2	6	27
Masada (11.5", Folding, 7.62mm)	5	3	2-Nil	3/5	2	6	27
Masada (14.5", Fixed, 7.62mm)	5	3	2-Nil	5	3	8	38
Masada (14.5", Folding, 7.62mm)	5	3	2-Nil	4/5	3	8	38
Masada (16", Fixed, 7.62mm)	5	4	2-Nil	5	3	8	44
Masada (16", Folding, 7.62mm)	5	4	2-Nil	4/5	3	8	44
Masada (18", Fixed, 7.62mm)	5	4	2-Nil	6	3	8	53
Masada (18", Folding, 7.62mm)	5	4	2-Nil	4/6	3	8	53
Masada (20", Fixed, 7.62mm)	5	4	2-3-Nil	6	3	8	62
Masada (20", Folding, 7.62mm)	5	4	2-3-Nil	5/6	3	8	62
Remington ACR (10.5", 5.45mm)	5	2	1-Nil	3/4	2	6	23
Remington ACR (10.5", 5.45mm, Silenced)	5	2	1-Nil	4/6	1	2	17
Remington ACR (14.5", 5.45mm)	5	2	1-Nil	4/5	2	6	38
Remington ACR (14.5", 5.45mm, Silenced)	5	2	1-Nil	5/7	1	2	24
Remington ACR (16.5", 5.45mm)	5	3	1-Nil	4/6	2	6	46
Remington ACR (16.5", 5.45mm, Silenced)	5	2	1-Nil	6/7	1	2	28
Remington ACR (18", 5.45mm)	5	3	1-Nil	4/6	2	6	52
Remington ACR (18", 5.45mm, Silenced)	5	2	1-Nil	6/8	1	2	31
Remington ACR (10.5", 5.56mm)	5	2	1-Nil	3/4	2	5	20
Remington ACR (10.5", 5.56mm, Silenced)	5	2	1-Nil	4/6	1	2	17
Remington ACR (14.5", 5.56mm)	5	3	1-Nil	4/5	2	6	34
Remington ACR (14.5", 5.56mm, Silenced)	5	2	1-Nil	5/7	1	2	24
Remington ACR (16.5", 5.56mm)	5	3	1-Nil	4/6	2	6	42
Remington ACR (16.5", 5.56mm, Silenced)	5	2	1-Nil	5/7	1	2	28
Remington ACR (18", 5.56mm)	5	3	1-Nil	4/6	2	6	47
Remington ACR (18", 5.56mm, Silenced)	5	2	1-Nil	6/8	2	4	31
Remington ACR (10.5", 6.5mm)	5	3	1-1-Nil	3/4	2	6	28
Remington ACR (10.5", 6.5mm, Silenced)	5	2	1-1-Nil	4/6	2	4	20
Remington ACR (14.5", 6.5mm)	5	3	1-1-Nil	4/5	2	6	50
Remington ACR (14.5", 6.5mm, Silenced)	5	2	1-1-Nil	5/7	2	4	29
Remington ACR (16.5", 6.5mm)	5	3	1-2-Nil	4/6	2	6	56
Remington ACR (16.5", 6.5mm, Silenced)	5	2	1-1-Nil	6/7	2	5	34
Remington ACR (18", 6.5mm)	5	3	1-2-Nil	4/6	2	6	64
Remington ACR (18", 6.5mm, Silenced)	5	2	1-1-Nil	6/8	2	5	37
Remington ACR (10.5", 6.8mm)	5	3	1-1-Nil	3/4	2	6	28
Remington ACR (10.5", 6.8mm, Silenced)	5	2	1-1-Nil	4/6	2	4	20
Remington ACR (14.5", 6.8mm)	5	3	1-2-Nil	4/5	2	6	46
Remington ACR (14.5", 6.8mm, Silenced)	5	2	1-1-Nil	5/7	2	4	29
Remington ACR (16.5", 6.8mm)	5	3	1-2-Nil	4/6	2	6	56
Remington ACR (16.5", 6.8mm, Silenced)	5	3	1-1-Nil	6/7	2	4	34
Remington ACR (18", 6.8mm)	5	3	1-2-Nil	4/6	2	6	64
Remington ACR (18", 6.8mm, Silenced)	5	3	1-1-Nil	6/8	2	5	37
Remington ACR (10.5", 7.62mm)	5	3	2-Nil	4/5	2	6	23
Remington ACR (10.5", 7.62mm, Silenced)	5	3	1-Nil	6/8	2	5	17
Remington ACR (14.5", 7.62mm)	5	3	2-Nil	5/6	3	8	38
Remington ACR (14.5", 7.62mm, Silenced)	5	3	1-Nil	8/9	2	5	24
Remington ACR (16.5", 7.62mm)	5	4	2-Nil	5/6	3	8	47
Remington ACR (16.5", 7.62mm, Silenced)	5	3	1-Nil	9/10	2	5	28
Remington ACR (18", 7.62mm)	5	4	2-Nil	5/7	3	8	53
Remington ACR (18", 7.62mm, Silenced)	4	3	1-Nil	9/10	2	5	31

Remington R-15 VTR

Notes: This AR-15-type rifle is designed primarily for hunting light game and varmints, though the later Hunter variants are designed for heavier game. Produced in partnership with Bushmaster, the R-15 VTR uses a bull-profile ChroMoly barrel with button rifling, free-floating, and fluting to decrease weight. Rifle versions, including the Hunter, use 22-inch a 22-inch barrel in .30 Remington AR and an 18-inch barrel in .450 Bushmaster, the Carbine versions use 18-inch barrels, and the SS Varmint version uses a 22-inch barrel. The finish is an Advantage Max-1 HD camouflage pattern, with the exception of the Hunter version, which has a Realtree AP HD pattern. The R-15 VTR can be had with several barrel lengths, stock options, and pistol grip options, and as the rifle is of modular construction these options can be mixed and matched to suit the buyer. The trigger module is a single-stage trigger with a very clean and crisp pull, conducive to tight shot groups. The receiver is topped with a Weaver rail, and the aluminum handguards are round and

ventilated. Collapsible stock versions come with an M4-type stock, but with six positions. The Byron South Edition is a very fancy version of the R-15 VTR Predator Carbine in 5.56mm; for game purposes, they are identical.

Twilight 2000 Notes: The R-15 VTR is not available in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
R-15 VTR Predator Rifle	.204 Ruger	3.52 kg	5	$589
R-15 VTR Predator Rifle	5.56mm NATO	3.52 kg	5, 10, 20, 30	$639
R-15 VTR Predator Carbine	.204 Ruger	3.06 kg	5	$546
R-15 VTR Predator Carbine	5.56mm NATO	3.06 kg	5, 10, 20, 30	$595
R-15 VTR Predator Carbine CS	.204 Ruger	3.06 kg	5	$566
R-15 VTR Predator Carbine CS	5.56mm NATO	3.06 kg	5, 10, 20, 30	$615
R-15 VTR SS Varmint	5.56mm NATO	3.52 kg	5, 10, 20, 30	$660
R-15 VTR Hunter	.30 Remington AR	3.52 kg	4	$876
R-15 VTR Hunter	.450 Bushmaster	4.4 kg	4	$2056

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
R-15 VTR Predator Rifle (.204)	SA	3	1-Nil	6	3	Nil	60
R-15 VTR Predator Rifle (5.56mm)	SA	3	1-Nil	6	3	Nil	67
R-15 VTR Predator Carbine (.204)	SA	3	1-Nil	6	3	Nil	44
R-15 VTR Predator Carbine (5.56mm)	SA	3	1-Nil	6	3	Nil	51
R-15 VTR Predator Carbine CS (.204)	SA	3	1-Nil	4/6	3	Nil	44
R-15 VTR Predator Carbine CS (5.56mm)	SA	3	1-Nil	4/6	3	Nil	51
R-15 VTR SS Varmint	SA	3	1-Nil	7	3	Nil	73
R-15 VTR Hunter (.30)	SA	5	1-2-3	7	4	Nil	84
R-15 VTR Hunter (.450)	SA	6	1-3-Nil	7	5	Nil	57

Rifle Dynamics RD

Notes: Essentially an American-made, updated AK, the Rifle Dynamics RD comes in two chamberings and four variants. They are sort of deluxe AKs, with accoutrements like folding stocks, deluxe polymer furniture, and muzzle brakes. The polymer furniture includes handguards with long two-way MIL-STD-1913 rails -- upper and a shorter lower), a rubberized MOE US PALM pistol grip with a compartment for batteries or other small gear, a polymer magazine supplied with the rifle, and a partially-polymer triangular folding stock similar to that of the AKS-74U. The sides of the handguards have a row of cooling holes, with KeyMag holes above them. The 16-inch barrel is tipped with a PWS FSC 47 muzzle brake; a Surefire SOCOM muzzle brake is an option (which is marginally better in muzzle blast and recoil, but does not affect game stats). Other muzzle options include SilencerCo and DeadAir suppressors. The action is tuned; specially tuned in the case of the rails, bolt, bolt carrier, and tuned G-2 trigger pack. The trigger pack has a light two-stage pull. Sights are more-or-less AK (but improved and more finely adjustable), and the left side has an UltiMAK optics rail (with an ALG AKT-EL mount as an option). The rear sight is a modified sight made by Fuller. The entire rifle is dehorned. Finish is a Moly Finish over Parkerization, in flat black, semigloss black, flat dark earth, OD green, gray, and Foliage Green. Custom blended finish colors are also available when ordered, as is a custom blended Moly Resin color.

The above commentary generally fits the RD-701. The RD-702 has an M4-type sliding stock adapter with a B5 System Bravo Stock or a Magpul CTR stock mounted. The standard muzzle brake for this rifle is a Surefire SOCOM brake, though the PWS FSC 47 brake is an option. For game purposes, the RD-702 is identical to the RD-701. The RD-703 is also generally the same as the other two rifles, but is equipped with a fixed AK-100-type stock.

The RD-710 SBR has a short 10-inch nitride barrel, tipped with a flash suppressor/muzzle brake hybrid with grooves for rebar severing (a Surefire Legacy or SOCOM muzzle brake is an option). It may be equipped with a triangular side-folding stock, a B5 System Bravo Stock, or a Magpul CTR. The handguards and MIL-STD-1913 rails are necessarily shorter, due to the shorter barrel.

The RD-501, 502, and 503 are essentially like their RD-700 counterparts, but are chambered for 5.45mm Kalashnikov. However, their barrels are tipped with birdcage-type flash suppressors instead of muzzle brakes. RD-500s are also known as RD-74s.

Real-life prices for an RD700/500 series rifle are on the high end, but shooters say that the price is worth it. The rifles to, however, suffer from a lack of “glamour,” being rather plain in appearance – the flash is on the inside. Rifle Dynamics will also apply their improvements to an existing AK clone, making them much better AKs, but this also has an expensive RL price tag.

Weapon	Ammunition	Weight	Magazines	Price
RD-701/702	7.62mm Kalashnikov	3.18 kg	5, 10, 20, 30, 40, 75D	$875
RD-703	7.62mm Kalashnikov	2.86 kg	5, 10, 20, 30, 40, 75D	$855
RD-710	7.62mm Kalashnikov	2.7 kg	5, 10, 20, 30, 40, 75D	$813
RD-501/502	5.45mm Kalashnikov	2.72 kg	5, 10, 20, 30, 45	$536
RD-503	5.45mm Kalashnikov	2.45 kg	5, 10, 20, 30, 45	$516

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
RD-701/702	SA	4	2-Nil	5/6	3	Nil	46
RD-703	SA	4	2-Nil	6	3	Nil	46
RD-710	SA	3	2-Nil	3/5	2	Nil	22
RD-501/502	SA	3	1-Nil	4/5	3	Nil	45
RD-503	SA	3	1-Nil	5	3	Nil	45

Robinson Arms M96

Notes: The M96 Expeditionary Rifle is a Stoner 63 assault rifle updated to virtually eliminate the sensitivity to dirt that the Stoner suffered from. Robinson Arms made some changes that improved upon the design; first and foremost of these was a multi-caliber modular magazine well. This allowed the weapon to be able to use either 5.56mm NATO (with M16 STANAG magazines) or 7.62mm Kalashnikov (with AK magazines). The quick-change barrel was another feature that was appreciated, and both these factors led to steady (though slow) sales for the weapon. The AK-47 and AKM has, in later years, has been produced with 10-round and 60-round box magazines and 100-round drums, and the M96 is able to use these as well. Civilian versions do not have the capability for automatic fire, and normally do not have a flash suppressor (and cost $6 less). Though based on the Stoner 63 series, the M96 has been so modified from the original Stoner weapon that the only part that can be interchanged between the Stoner 63 series and the M96 is the stock.

The standard M96 can be configured as a standard assault rifle with a 21.5-inch barrel, a carbine with a 16-inch barrel, or a heavy rifle/light SAW with a top-mounted magazine and a 24-inch heavy barrel. (The last configuration is often known as the “Bren Gun” configuration due to the top-mounted magazine.) When the M96 is configured as a heavy rifle, the receiver is essentially inverted, and the charging handle is on the right; otherwise, the charging handle is on the left. The front and the rear sights are well-protected and adjustable by dials. The gas operation is also adjustable, primarily to provide the proper gas levels in the various configurations of the weapon. The M96 trigger is two-stage; pulling the trigger about halfway back produced semiautomatic fire, while fully depressing the trigger allows automatic fire. MIL-STD-1913 rails are optional; these rails may be mounted above the receiver, running to a point halfway down the barrel shroud (except on the heavy rifle, which may only mount the section of rail above the barrel shroud), or on the handguards at the 3, 6, and 9-o’clock positions.

The M96 Recon Carbine was produced in response to the trend towards lighter, shorter assault rifles with more bells and whistles. The Recon Carbine has a quick-change barrel for sustained fire, a MIL-STD-1913 rail on top of the receiver for optics and accessories, two more such rails on the sides of the forearm, a full muzzle brake instead of a flash suppressor, and an M16-style fixed stock. This weapon also comes in a civilian version, but the muzzle brake complies with Brady Gun Ban specifications.

Twilight 2000 Notes: This weapon appeared on the scene too late to have widespread distribution; most that did appear were illegally sold to civilians in the US (illegal because they were sold with the automatic sear intact and usually with high-capacity magazines, laws that quickly became superfluous within a year of the first sales of the M96).

Merc 2000 Notes: This weapon became a favorite in the hands of numerous mercenary organizations.

Weapon	Ammunition	Weight	Magazines	Price
M96 Expeditionary Rifle	5.56mm NATO	2.99 kg	10, 20, 30, 40	$622
M96 Expeditionary Rifle	7.62mm Kalashnikov	2.99 kg	10, 30, 45, 60, 90	$871
M96 Expeditionary Carbine	5.56mm NATO	2.86 kg	10, 20, 30, 40	$565
M96 Expeditionary Carbine	7.62mm Kalashnikov	2.86 kg	10, 30, 45, 60, 90	$813
M96 Heavy Rifle	5.56mm NATO	3.08 kg	10, 20, 30, 40	$653
M96 Heavy Rifle	7.62mm Kalashnikov	3.08 kg	10, 30, 45, 60, 90	$903
M98 Recon Carbine	5.56mm NATO	3.55 kg	10, 20, 30, 40	$612
M96 Recon Carbine	7.62mm Kalashnikov	3.55 kg	10, 30, 45, 60, 90	$856
Conversion Kit	NA	1.2 kg	NA	$218

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
M96 Expeditionary Rifle (5.56mm)	5	3	1-Nil	6	3	6	61
M96 Expeditionary Rifle (7.62mm)	5	4	2-3-Nil	6	4	10	65
M96 Expeditionary Carbine (5.56mm)	5	3	1-Nil	5	3	6	40
M96 Expeditionary Carbine (7.62mm)	5	4	2-Nil	5	4	10	44
M96 Heavy Rifle (5.56mm)	5	3	1-Nil	7	3	6	71
M96 Heavy Rifle (7.62mm)	5	4	2-3-Nil	7	4	10	75
M96 Recon Carbine (5.56mm)	5	3	1-Nil	5	2	4	40
M96 Recon Carbine (7.62mm)	5	4	2-Nil	5	3	7	45

Robinson Arms XCR

Notes: The XCR is a modular assault rifle system designed specifically for the US Army’s Special Forces; its original purpose was to compete in the US SCAR competition; it was not chosen for that role in any official capacity, but is rumored to be in use in small number by US special operations troops. The XCR is also available in a semiautomatic version for civilian and police concerns. (Versions with barrels of less than 16 inches are not sold to civilians.) The “modular” part is in its caliber, which may be easily switched between its four available chamberings; in its barrels, which may also be easily switched between up to three different lengths for varying missions; and the MIL-STD-1913 rails in four positions on the handguard and on top of the receiver, which allow the mounting of a plethora of accessories and optics. The muzzle of the barrel may also be equipped with a flash suppressor and a muzzle brake. The XCR looks basically like what it is – a combination of the M16’s simplicity, the AK series’ durability, and the Stoner’s versatility, along with an advanced gas piston operating system. To change barrels, all one does is screw out one barrel and then screw in and lock the new barrel. To change caliber between 5.56mm NATO and 6.8mm SPC or 6.5mm Grendel, all one changes is the upper receiver. The stock is a folding type made from tubular metal, and folds to the right. The XCR is equipped with a flash suppressor for the barrel, though the design of the flash suppressor differs with the length of the barrel and the caliber being fired.

It should be noted that at the time of this writing (September 2010), the 6.5mm Grendel chambering has been dropped.
Twilight 2000 Notes: This weapon does not exist in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
XCR Micro (7” Barrel)	5.56mm NATO	3.15 kg	5, 10, 20, 30	$492
XCR Micro (7.5” Barrel)	5.56mm NATO	3.17 kg	5, 10, 20, 30	$497
XCR Mini (9” Barrel)	5.56mm NATO	3.22 kg	5, 10, 20, 30	$513
XCR Mini (10” Barrel)	5.56mm NATO	3.25 kg	5, 10, 20, 30	$523
XCR Standard (11” Barrel)	5.56mm NATO	3.29 kg	5, 10, 20, 30	$534
XCR Standard (12” Barrel)	5.56mm NATO	3.31 kg	5, 10, 20, 30	$544
XCR Standard (14.5” Barrel)	5.56mm NATO	3.39 kg	5, 10, 20, 30	$569
XCR Standard (16” Barrel)	5.56mm NATO	3.4 kg	5, 10, 20, 30	$585
XCR Standard (18.6” Barrel)	5.56mm NATO	3.66 kg	5, 10, 20, 30	$587
XCR Micro (7” Barrel, Muzzle Brake)	5.56mm NATO	3.29 kg	5, 10, 20, 30	$539
XCR Micro (7.5” Barrel, Muzzle Brake)	5.56mm NATO	3.31 kg	5, 10, 20, 30	$543
XCR Mini (9” Barrel, Muzzle Brake)	5.56mm NATO	3.36 kg	5, 10, 20, 30	$554
XCR Mini (10” Barrel, Muzzle Brake)	5.56mm NATO	3.42 kg	5, 10, 20, 30	$569
XCR Standard (11” Barrel, Muzzle Brake)	5.56mm NATO	3.45 kg	5, 10, 20, 30	$579
XCR Standard (12” Barrel, Muzzle Brake)	5.56mm NATO	3.33 kg	5, 10, 20, 30	$589
XCR Standard (14.5” Barrel, Muzzle Brake)	5.56mm NATO	3.47 kg	5, 10, 20, 30	$614
XCR Standard (16” Barrel, Muzzle Brake)	5.56mm NATO	3.55 kg	5, 10, 20, 30	$630
XCR Standard (18.6” Barrel, Muzzle Brake)	5.56mm NATO	3.82 kg	5, 10, 20, 30	$656
XCR Standard (16” Barrel)	6.5mm Grendel	3.73 kg	5, 10, 28	$656
XCR Standard (18.6” Barrel)	6.5mm Grendel	3.81 kg	5, 10, 28	$682
XCR Standard (16” Barrel, Muzzle Brake)	6.5mm Grendel	3.88 kg	5, 10, 28	$699
XCR Standard (18.6” Barrel, Muzzle Brake)	6.5mm Grendel	3.96 kg	5, 10, 28	$725
XCR Micro (7” Barrel)	6.8mm SPC	3.5 kg	5, 10, 28	$631
XCR Micro (7.5” Barrel)	6.8mm SPC	3.52 kg	5, 10, 28	$636
XCR Mini (9” Barrel)	6.8mm SPC	3.58 kg	5, 10, 28	$652
XCR Mini (10” Barrel)	6.8mm SPC	3.61 kg	5, 10, 28	$662
XCR Standard (11” Barrel)	6.8mm SPC	3.65 kg	5, 10, 28	$672
XCR Standard (12” Barrel)	6.8mm SPC	3.68 kg	5, 10, 28	$683
XCR Standard (14.5” Barrel)	6.8mm SPC	3.69 kg	5, 10, 28	$708
XCR Standard (16” Barrel)	6.8mm SPC	3.78 kg	5, 10, 28	$724
XCR Standard (18.6” Barrel)	6.8mm SPC	4.07 kg	5, 10, 28	$751
XCR Micro (7” Barrel, Muzzle Brake)	6.8mm SPC	3.66 kg	5, 10, 28	$692
XCR Micro (7.5” Barrel, Muzzle Brake)	6.8mm SPC	3.68 kg	5, 10, 28	$698
XCR Mini (9” Barrel, Muzzle Brake)	6.8mm SPC	3.74 kg	5, 10, 28	$716
XCR Mini (10” Barrel, Muzzle Brake)	6.8mm SPC	3.77 kg	5, 10, 28	$727
XCR Standard (11” Barrel, Muzzle Brake)	6.8mm SPC	3.81 kg	5, 10, 28	$738
XCR Standard (12” Barrel, Muzzle Brake)	6.8mm SPC	3.83 kg	5, 10, 28	$751
XCR Standard (14.5” Barrel, Muzzle Brake)	6.8mm SPC	3.84 kg	5, 10, 28	$779
XCR Standard (16” Barrel, Muzzle Brake)	6.8mm SPC	3.93 kg	5, 10, 28	$785
XCR Standard (18.6” Barrel, Muzzle Brake)	6.8mm SPC	4.23 kg	5, 10, 28	$815
XCR Micro (7” Barrel)	7.62mm Kalashnikov	3.64 kg	5, 10, 20, 30	$739
XCR Micro (7.5” Barrel)	7.62mm Kalashnikov	3.66 kg	5, 10, 20, 30	$745
XCR Mini (9” Barrel)	7.62mm Kalashnikov	3.72 kg	5, 10, 20, 30	$760
XCR Mini (10” Barrel)	7.62mm Kalashnikov	3.75 kg	5, 10, 20, 30	$771
XCR Standard (11” Barrel)	7.62mm Kalashnikov	3.79 kg	5, 10, 20, 30	$781
XCR Standard (12” Barrel)	7.62mm Kalashnikov	3.82 kg	5, 10, 20, 30	$791
XCR Standard (14.5” Barrel)	7.62mm Kalashnikov	3.83 kg	5, 10, 20, 30	$818
XCR Standard (16” Barrel)	7.62mm Kalashnikov	3.92 kg	5, 10, 20, 30	$833
XCR Standard (18.6” Barrel)	7.62mm Kalashnikov	3.97 kg	5, 10, 20, 30	$860
XCR Micro (7” Barrel, Muzzle Brake)	7.62mm Kalashnikov	3.81 kg	5, 10, 20, 30	$782
XCR Micro (7.5” Barrel, Muzzle Brake)	7.62mm Kalashnikov	3.83 kg	5, 10, 20, 30	$788
XCR Mini (9” Barrel, Muzzle Brake)	7.62mm Kalashnikov	3.89 kg	5, 10, 20, 30	$803
XCR Mini (10” Barrel, Muzzle Brake)	7.62mm Kalashnikov	3.92 kg	5, 10, 20, 30	$813
XCR Standard (11” Barrel, Muzzle Brake)	7.62mm Kalashnikov	3.96 kg	5, 10, 20, 30	$823
XCR Standard (12” Barrel, Muzzle Brake)	7.62mm Kalashnikov	4 kg	5, 10, 20, 30	$833
XCR Standard (14.5” Barrel, Muzzle Brake)	7.62mm Kalashnikov	4.01 kg	5, 10, 20, 30	$859
XCR Standard (16” Barrel, Muzzle Brake)	7.62mm Kalashnikov	4.17 kg	5, 10, 20, 30	$874

XCR Standard (18.6” Barrel, Muzzle Brake)	7.62mm Kalashnikov	4.22 kg	5, 10, 20, 30	$900
Caliber/Barrel Kit (5.56mm)	N/A	1.75 kg	N/A	$373
Caliber/Barrel Kit (6.5mm)	N/A	1.9 kg	N/A	$407
Caliber/Barrel Kit (6.8mm)	N/A	2.05 kg	N/A	$441
Caliber/Barrel Kit (7.62mm)	N/A	2.28 kg	N/A	$495

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
XCR (7”, 5.56mm)	5	2	1-Nil	3/4	2	6	9
XCR (7.5”, 5.56mm)	5	2	1-Nil	3/4	2	6	11
XCR (9”, 5.56mm)	5	2	1-Nil	3/4	2	6	16
XCR (10”, 5.56mm)	5	2	1-Nil	3/4	2	6	19
XCR (11”, 5.56mm)	5	2	1-Nil	3/5	2	6	22
XCR (12”, 5.56mm)	5	2	1-Nil	3/5	2	6	25
XCR (14.5”, 5.56mm)	5	3	1-Nil	4/5	2	6	34
XCR (16”, 5.56mm)	5	3	1-Nil	4/5	2	6	40
XCR (18.6”, 5.56mm)	5	3	1-Nil	5/6	2	6	50
XCR (7”, 5.56mm, Brake)	5	2	1-Nil	3/4	2	4	9
XCR (7.5”, 5.56mm, Brake)	5	2	1-Nil	3/4	2	4	11
XCR (9”, 5.56mm, Brake)	5	2	1-Nil	3/4	2	4	16
XCR (10”, 5.56mm, Brake)	5	2	1-Nil	3/4	2	4	19
XCR (11”, 5.56mm, Brake)	5	2	1-Nil	3/5	2	4	22
XCR (12”, 5.56mm, Brake)	5	2	1-Nil	3/5	2	4	25
XCR (14.5”, 5.56mm, Brake)	5	3	1-Nil	4/5	2	4	34
XCR (16”, 5.56mm, Brake)	5	3	1-Nil	4/5	2	4	40
XCR (18.6”, 5.56mm, Brake)	5	3	1-Nil	5/6	2	4	50
XCR (16”, 6.5mm)	5	3	1-1-Nil	4/5	2	6	53
XCR (18.6”, 6.5mm)	5	3	1-2-Nil	5/6	2	6	67
XCR (16”, 6.5mm, Brake)	5	3	1-1-Nil	4/5	2	4	53
XCR (18.6”, 6.5mm, Brake)	5	3	1-2-Nil	5/6	2	4	67
XCR (7”, 6.8mm)	5	3	1-1-Nil	3/4	2	6	13
XCR (7.5”, 6.8mm)	5	3	1-1-Nil	3/4	2	6	15
XCR (9”, 6.8mm)	5	3	1-1-Nil	3/5	2	6	21
XCR (10”, 6.8mm)	5	3	1-1-Nil	3/5	2	6	25
XCR (11”, 6.8mm)	5	3	1-1-Nil	4/5	2	6	30
XCR (12”, 6.8mm)	5	3	1-1-Nil	4/5	2	6	34
XCR (14.5”, 6.8mm)	5	3	1-2-Nil	4/6	2	6	46
XCR (16”, 6.8mm)	5	3	1-2-Nil	4/6	2	6	54
XCR (18.6”, 6.8mm)	5	3	1-2-Nil	5/6	2	6	67
XCR (7”, 6.8mm, Brake)	5	3	1-1-Nil	3/4	2	4	13
XCR (7.5”, 6.8mm, Brake)	5	3	1-1-Nil	3/4	2	4	15
XCR (9”, 6.8mm, Brake)	5	3	1-1-Nil	3/5	2	4	21
XCR (10”, 6.8mm, Brake)	5	3	1-1-Nil	3/5	2	4	25
XCR (11”, 6.8mm, Brake)	5	3	1-1-Nil	4/5	2	4	30
XCR (12”, 6.8mm, Brake)	5	3	1-1-Nil	4/5	2	4	34
XCR (14.5”, 6.8mm, Brake)	5	3	1-2-Nil	4/6	2	4	46
XCR (16”, 6.8mm, Brake)	5	3	1-2-Nil	4/6	2	4	54
XCR (18.6”, 6.8mm, Brake)	5	3	1-2-Nil	5/6	2	4	67
XCR (7”, 7.62mm)	5	3	2-Nil	3/4	2	6	11
XCR (7.5”, 7.62mm)	5	3	2-Nil	3/5	2	6	13
XCR (9”, 7.62mm)	5	3	2-Nil	3/5	2	6	18
XCR (10”, 7.62mm)	5	3	2-Nil	4/5	2	6	22
XCR (11”, 7.62mm)	5	3	2-Nil	4/5	2	6	25
XCR (12”, 7.62mm)	5	3	2-Nil	4/5	2	6	29
XCR (14.5”, 7.62mm)	5	3	2-Nil	5/6	3	9	38
XCR (16”, 7.62mm)	5	4	2-Nil	5/6	3	9	44
XCR (18.6”, 7.62mm)	5	4	2-Nil	5/6	3	9	55
XCR (7”, 7.62mm, Brake)	5	3	2-Nil	3/4	2	4	11
XCR (7.5”, 7.62mm, Brake)	5	3	2-Nil	3/5	2	4	13
XCR (9”, 7.62mm, Brake)	5	3	2-Nil	3/5	2	4	18
XCR (10”, 7.62mm, Brake)	5	3	2-Nil	4/5	2	4	22
XCR (11”, 7.62mm, Brake)	5	3	2-Nil	4/5	2	4	25
XCR (12”, 7.62mm, Brake)	5	3	2-Nil	4/5	2	4	29
XCR (14.5”, 7.62mm, Brake)	5	3	2-Nil	5/6	3	6	38
XCR (16”, 7.62mm, Brake)	5	4	2-Nil	5/6	3	6	44
XCR (18.6”, 7.62mm, Brake)	5	4	2-Nil	5/6	3	6	55

Rock River Arms A4-Varmint

Notes: This is an AR-15 variant designed for, as the name suggests, varmint hunting. Highly accurate for a semiautomatic varminter, the A4-Varmint is equipped with heavy match-grade barrels of 16-24 inches. The A4-Varmint is not equipped with iron sights, but does have a MIL-STD-1913 rail for the mounting of virtually any sort of sight or optic. The A4-Varmint also comes with an EOP (Elevated Optical Platform) to attach to the rail in order to mount large scopes properly. It has the standard AR-15-style fixed

synthetic stock and a solid hard rubber grip. The weapon is chambered, and the twist of the rifling is designed, so that the A4-Varmint can fire .223 Remington civilian rounds and military 5.56mm NATO rounds with equal accuracy and reliability. (There is no distinction between the two rounds in game terms, but in real life, there is a difference between the two.) The handguard is an aluminum tube which is fluted to decrease weight and knurled to give a better gripping surface. The trigger is of a National Match two-stage pattern.

The A4 Predator Pursuit is an accurized version of the A4 Varmint. It uses a 20-inch heavy match-quality Wilson barrel which is free-floating, made from stainless steel, and air-gauged to help ensure that there are no imperfections; it uses a target crown at the muzzle. The chamber is a Wylde Chamber; this is a chamber designed to accommodate both civilian and military ammunition of several different loads and bullet weights, and also reduces the chance of misfeeds. The receiver is topped with a Weaver rail, and the gas block also has a very short length of Weaver rail. The trigger group is a two-stage match-quality group. The pistol grip is a Hogue Rubber grip instead of a standard AR-15-type grip. The standard stock is an AR-15A2-type stock, but options include a skeletonized stock and a Magpul PRS stock. Other options include ambidextrous controls, an enlarged charging handle latch, and an EOP upper receiver.

Twilight 2000 Notes: This rifle does not exist in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
A4-Varmint (16" Barrel)	5.56mm NATO	3.63 kg	5, 9, 10, 20, 30	$568
A4-Varmint (18" Barrel)	5.56mm NATO	4.08 kg	5, 9, 10, 20, 30	$589
A4-Varmint (20" Barrel)	5.56mm NATO	4.31 kg	5, 9, 10, 20, 30	$610
A4-Varmint (24" Barrel)	5.56mm NATO	4.54 kg	5, 9, 10, 20, 30	$655
A4 Predator Pursuit	5.56mm NATO	3.67 kg	5, 9, 10, 20, 30	$618

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
A4-Varmint (16")	SA	3	1-Nil	5	2	Nil	43
A4-Varmint (18")	SA	3	1-Nil	5	2	Nil	51
A4-Varmint (20")	SA	3	1-Nil	6	2	Nil	59
A4-Varmint (24")	SA	3	1-Nil	7	2	Nil	73
A4 Predator Pursuit	SA	3	1-Nil	6	2	Nil	60

Rock River Arms Tactical Rifles

Notes: These are a series of M4 clones made by Rock River Arms. The Tactical Entry Carbine has the flat top receiver of the M4A1 with a MIL-STD-1913 rail, and comes with a standard rear sight attached. There is also a battery storage compartment on the right side of the rail. The flash suppressor looks military, but complies with the Brady Gun Bill and the Tactical Entry Carbine could be sold to civilians in its semiautomatic form, if a fixed stock is used (use the 5 for Bulk, and subtract $20). The collapsible stock is copied from a CAR-15; the fixed stock is an AR-15A2 stock. With the sunset of the Brady Gun Ban, the requirement for a fixed stock went away, except in certain jurisdictions. The trigger pull is crisp and light. The barrel is a 16-inch chrome-moly steel barrel tipped with a flash suppressor.

The Elite Operator2 is a version of the M4A1 with an RRA Operator CAR skeletonized sliding stock, an ERGO Sure Grip ergonomic pistol grip. The trigger group is two-stage inside an enlarged trigger guard for gloves. The top of the receiver has a MIL-STD-1913 rail; this is almost continuous with the rail atop the handguard. Three shorter rails, one third the length of the handguards from the front, are found at the 3, 6, and 9-o'clock positions. The other two-thirds of the handguards are smooth and circular, except for the top of the handguard. The front sight is a fold-down sight, and an iron rear sight may be attached to the receiver rail. The 16-inch barrel is tipped with a muzzle brake. The bolt carrier group is chromed for smooth operation and cleanliness.

The Entry Operator2 is virtually identical except for the shape of its handguards, and is identical to the Elite Operator2 for game purposes. The Tactical Operator2 is also virtually identical to the EliteOperator2, except for the perforated handguards (which still have MIL-STD-1913 rails that are slightly modified and span the full length of the handguards). For game purposes, it is otherwise identical to the Elite Operator2. The new Tactical Operator-L introduced late last year (in 2012) is essentially the same rifle as the Tactical Operator2, except that it is designed for left-handed shooters.

The PDS Carbine (Piston Driven System) is a radical remake of the basic RRA Tactical Rifle, with a piston-driven gas system, a specially designed bolt carrier, an over-the-barrel recoil spring instead of one in the stock, and a guide rod. The top of the receiver has a long MIL-STD-1913 rail which extends from the rear of the receiver to the front gas block, and the handguard is round and ribbed. The rear and front have folding iron sights. The charging handles are on the sides instead of at the rear of the receiver, and fold. The stock is an M4-type sliding stock which also folds to the right. It is otherwise similar to a standard M4, except that its barrel length is 16 inches. Currently, the RRA PDS series cannot use a sound suppressor, though one is in the works.

The newest up (as I write this in June 2016) is the IRS Battleplan. (IRS stands for Integrated Rifle Sights); the sights are fixed and stand with the front sight post on the gas block, and the rear sight directly behind the receiver's Picatinny rail. The sights are of steel and aluminum; the sights are adjustable for windage and elevation and have a dual-aperture design; they are adjustable by dials. The front sight is also dial-adjustable and consists of a post on a riser protected by ears. The sights are high enough to easily use, but aren't noticeable when using optical sights. The handguards are short, medium, and long; with short and medium handguards, the barrel and gas tube are still not exposed, as they are shrouded. The handguards have a Picatinny rail down the top (on top, it connects with the receiver rail) and one on the bottom. The standard Battleplan has an aircraft-quality aluminum lower and an even stronger upper. The 16-inch barrel is of chrome-Moly steel and is floating; an 18-inch barrel version is available but only with a full-sized handguard. The barrel is fluted in a spiral-section and tipped with an RRA Helical Brake. Controls are as on a standard M16. The stock is an adjustable Operator CAR assembly. The Hogue grip is not fancy or special, except that is rubberized for a sure grip.

The trigger guard is a winter version, enlarged for even bulky gloves; the trigger pull weight is 4.5 pounds. The charging handle is a BCM Gunfighter handle with a medium latch, making it easier to pull and lock.

The PDS pistol is similar to the PDS Carbine, but has no stock (though one can be attached), an 8-inch barrel, and a shorter handguard and MIL-STD-1913 rail. Strictly speaking, it is not a rifle, though it is included here for completeness.

Twilight 2000 Notes: This weapon does not exist in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
Tactical Entry Carbine	5.56mm NATO	3.18 kg	9, 10, 20, 30	$585
Elite Operator2	5.56mm NATO	3.63 kg	9, 10, 20, 30	$637
PDS Carbine	5.56mm NATO	3.36 kg	9, 10, 20, 30	$591
PDS Pistol	5.56mm NATO	2.27 kg	9, 10, 20, 30	$452
IRS Battleplan (16" Barrel)	5.56mm NATO	3.45 kg	9, 10, 20, 30	$640
IRS Battleplan (18" Barrel)	5.56mm NATO	3.51 kg	9, 10, 20, 30	$662

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Tactical Entry Carbine	5	3	1-Nil	3/5	2	6	40
Elite Operator2	5	3	1-Nil	4/5	2	5	40
PDS Carbine	5	3	1-Nil	4/5	2	6	40
PDS Carbine	5	2	1-Nil	2	3	8	12
IRS Battleplan (16" Barrel)	5	3	1-Nil	4/5	2	4	41
IRS Battleplan (18" Barrel)	5	3	1-Nil	5/6	2	4	49

Rock River Arms LAR-15

Notes: This is essentially the civilian law-enforcement version of the M4 SOPMOD; it is an M4 clone with modifications similar to those of military M4's. The LAR-15 was designed to meet the needs of US law enforcement of the 21st century, where organized crime, heavily-armed gangs, and even terrorists might be encountered. The LAR-15 was specifically designed for the DEA and ATF, but is also available to the likes of police SRT units. The LAR-15 has a sliding stock like the M4, a MIL-STD-1913 rail for optics and sighting gear, handguards with four-way attachment rails for more accessories, an ergonomic rubber pistol grip, a tactical weapon light (a mini-flashlight), and a forward grip for close-quarters fighting. The handguards are longer than standard M4 handguards, and have foam fillers for the Picatinny-style attachment rails for added comfort.

A civilian model of the LAR-15 is available; this does not have the fancy handguards or the sliding buttstock, and has a longer barrel with a muzzle brake instead of a flash suppressor.

Variants of the LAR-15 include LAR-6.8, the LAR-9, the LAR-40, the LAR-9, and LAR-458. These primarily differ in the chamberings and in that these are semiautomatic-only weapons. They can be had with carrying handles or with MIL-STD-1913 rails atop the receiver (the CAR-A4 versions) and with sliding stock and fixed-stock versions. Sliding stock versions with carrying handles are shown below; with a sliding stock, add $20, and change folded bulk to one less, and with a MIL-STD-1913 rail, add 1% to the cost and 0.01 kg. Handguards can be short or mid-length. Sliding stock and MIL-STD-1913 rails can also be had on the LAR-15, in which case the weapon should be treated as a LAR-15 except for as noted above for the sliding stock and MIL-STD-1913 rails.

The RRA LAR-6.8 Coyote carbine was designed for easy carry on long hunting trips, as well as by police and military concerns. It is for the most part quite similar to a standard LAR-6.8; most changes are cosmetic or ergonomic in nature. The stock is replaced by an RRA Operator fixed, skeletonized stock. This stock has room for batteries and cleaning supplies in compartments in the stock. As with the LAR-6.8, the Coyote Carbine has a MIL-STD-1913 rail above the receiver, and also has a low-profile topped with a very short length of rail (normally used to add a folding iron sight). The barrel is of heavy profile; it may be tipped with a flash suppressor, a muzzle brake, or no muzzle device and a target crown. Barrels are normally 16 inches long, but a version with a 12-inch barrel is available to police, military, and civilian concerns. The 12-inch-barrel version is normally equipped with an RRA-designed muzzle brake. Civilian versions in this short barrel length are almost always semiautomatic, police versions may go either way, and if military versions exist, they will have automatic fire capability. The aluminum handguards allow the barrel to free-float. The same is true for the 16-inch-barrel version.

As the name would indicate, the Fred Eichler LAR-15 is a very tricked out version of the LAR-15. The base is, of course, a LAR-15, but many enhancements and features are added. These include a tan RRA Operator A2 stock, a tan Hogue Rubber Pistol Grip, an RRA Chrome two-stage trigger pack, an aluminum RRA Fred Eichler handguard which provides a free float tube for the barrel, a mid-length gas system with a low-profile gas block, and a winter trigger guard. At the buyer's request, the stock may be an RRA Operator CAR stock, which is a sliding stock. In both cases, the butt has a textured rubber surface to help provide a secure grip. The 16-inch barrel is cryogenically treated and made from stainless steel, and tipped by a pepperpot-style muzzle brake (which RRA will delete if local laws require it and provide a target-crowned muzzle instead). Atop the receiver is a MIL-STD-1913 rail, which joins with the full-length upper handguard rail and the gas block rail; in the other three directions are short, 6.35-centimeter rails at the front of the handguard. Controls are oversized for easy manipulation with even heavy gloves. The front sling swivel can also have the swivel itself removed and the swivel mount used to attach many brands and models of bipod. Metalwork finish is dark gray, except for the barrel and bolt.

The LAR-15 Mountain Rifle is designed to be a light carry rifle usable on small-medium game. As such, it is a very light rifle, with slender handguards; these handguards have three rows (sides, bottom) of cooling holes in them. Atop the handguard is a Picatinny rail, and this attaches to the rail above the receiver. The pistol grip is by Hogue, and the trigger guard is oversized to allow the use of

hands wearing heavy gloves. The stock is an RRA Tactical CAR Stock (like an M4's stock, but six positions). The upper and lower receiver are forged rather than being machined. The barrel is a 16-inch floating Chrome/Moly steel barrel tipped by an A2 flash suppressor, and the rifle uses a low-profile gas block. It is designed for hunting and therefore optics, but BUIS come with the rifle.

Twilight 2000 Notes: These weapons do not exist in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
LAR-15	5.56mm NATO	3.4 kg	10, 20, 30	$767
LAR-15 Civilian	5.56mm NATO	3.64 kg	10	$610
LAR-6.8	6.8mm SPC	3.4 kg	10, 20, 30	$704
LAR-9	9mm Parabellum	3.4 kg	10, 20, 32	$281
LAR-40	.40 Smith & Wesson	3.4 kg	10, 20, 30	$320
LAR-458	.458 SOCOM	3.45 kg	10, 20	$2071
LAR-6.8 Coyote Carbine (16" Barrel)	6.8mm SPC	3.18 kg	10, 20, 30	$744
LAR-6.8 Coyote Carbine (12" Barrel)	6.8mm SPC	3.12 kg	10, 20, 30	$744
Fred Eichler LAR-15 (Fixed Stock)	5.56mm NATO	3.45 kg	10, 20, 30	$616
Fred Eichler LAR-15 (Sliding Stock)	5.56mm NATO	3.45 kg	10, 20, 30	$636
LAR-15 Mountain Rifle	5.56mm NATO	2.81 kg	10, 20, 30	$596

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
LAR-15	5	3	1-Nil	4/5	2	6	43
LAR-15 Civilian	SA	3	1-Nil	6	2	Nil	40
LAR-6.8	SA	3	1-2-Nil	6	3	Nil	54
LAR-9	SA	2	1-Nil	6	1	Nil	35
LAR-40	SA	2	1-Nil	6	2	Nil	44
LAR-458	SA	5	1-3-Nil	6	5	Nil	53
LAR-6.8 Coyote Carbine (16")	5	3	1-2-Nil	6	3	7	57
LAR-6.8 Coyote Carbine (12")	5	3	1-2-Nil	5	2	5	37
Fred Eichler LAR-15 (Fixed Stock)	SA	3	1-Nil	6	2	Nil	42
Fred Eichler LAR-15 (Sliding Stock)	SA	3	1-Nil	4/6	2	Nil	42
LAR-15 Mountain Rifle	SA	3	1-Nil	4/6	3	Nil	42

Rock River Arms LAR-47

Notes: To some, an amalgamation of the AR-15s and it's inherent flexibility and the AK-47, with its heavier bullet and simpler operation, has been a goal of many gunsmiths. RRA begins with an AR-15 upper and lower, and then does an internal redesign and complete magazine well redesign to produce the LAR-47. The result looks mostly like an AR, with an AK magazine well, and internally, an AR-10 bolt. It appears to be a successful melding.

One of the first design hurdles was the large amounts of sometimes incompatible AK magazines worldwide. RRA feels that they are a rifle company and not a magazine company, and did not want to get into making proprietary magazines for the LAR-47. They therefore opted to make a magazine well that will accept most Western, Eastern, and Chinese magazines. (That said, the LAR-47 will not reliably feed from a Magpul PMag, for whatever reason.) The barrel is essentially a 16-inch AR-15-type barrel, but has a heavy profile, and is tipped with a pepperpot-type muzzle brake with a stand-off device to put breaks in rebar or to blow a lock (a standard A2-type flash suppressor is also an option). Internally, the differences in the bolt carrier and the barrel extension are obvious, as is the chromed bore. The bolt carrier is also chromed; RRA assumed that the LAR-47's shooters might get less-than-sterling-quality ammunition (such as Russian or Chinese, for example). RRA used direct gas impingement operation, as RRA tried the AKs gas piston and could not make it work in an AR-type rifle. The receiver looks mostly like that of an AR-15, except for the front of the lower receiver, where it is modified to take an AK magazine. The upper receiver is topped by a MIL-STD-1913 rail; the front sight is also an AR-15-type assembly. Noticeable by its absence is bolt catch; using one would make the receiver too wide and again, possibly lead to proprietary magazines. Though the example shown at the 2012 SHOT Show had an upper and lower receiver made of aluminum billets, actual production receiver halves are forged. The standard stock is an M4-type sliding stick, though a Delta CAR stock is an option.

The LAR-47 configured with an A2 flash suppressor, M4-type stock, and a receiver-length rail is designated by RRA as the CAR A4; with a pepperpot muzzle device, Delta CAR stock, and full-length upper rail with side and lower rail on the handguards is designated the Delta Carbine. There are significant weight differences, but internally, they are virtually identical for game purposes.

At the 2015 SHOT Show, RRA introduced several new versions of the LAR-47. The LAR-47 Tactical Comp has a forward quad MIL-STD-1913 rail section instead of the standard handguard; the base of these rails is a square polymer section. The top of the receiver also has a MIL-STD-1913 rail. The stock is an RRA Operator CAR stock, more adjustable and easier to adjust than an M4-type stock. The pistol grip is overmolded in rubber. The barrel is tipped with an RRA Operator Brake, more efficient than the

pepperpot brake mentioned above (but the same effect in game terms). The trigger is a two-stage match-quality trigger, and the front sight is mounted on the gas block and flips up or down. The rear sight is not permanently attached to the top of the receiver; it is an RPK-based BUIS, fully adjustable. The magazine release is ambidextrous.

The LAR-47 Coyote Carbine is designed for small to medium-game; it has extra-long handguards around its 16-inch barrel. The gas block is a low-profile type and under the end of the handguards. The barrel is of heavy profile and tipped with a Vortex flash suppressor. The top of the receiver and handguard have MIL-STD-1913 rails, and a very short section of rail, as might be used to attach a bipod, is found under the end of the handguard. The Hogue pistol grip has finger indentations and is overmolded in soft rubber. The two-stage trigger is retained. The stock used is an RRA NSP adjustable stock with six positions.

The LAR-47 X-1 has an 18-inch heavy-profile fluted stainless steel barrel, bead blasted and cryogenically treated. The muzzle brake may be an RRA Beast or Hunter (again no difference in game terms, though the Beast has projections allowing it to shoot rebar). The stock may be a skeletonized fixed RRA Operator A2 stock or an RRA Operator CAR stock. The stock, pistol grip and handguards may be tan or black. Atop the receiver and handguards are MIL-STD-1913 rails, and there are no fixed iron sights; BUIS are provided.

RRA hints that there may be a 5.45mm Kalashnikov version in 2013.

Weapon	Ammunition	Weight	Magazines	Price
LAR-47 CAR A4	7.62mm Kalashnikov	2.9 kg	10, 20, 30, 40, 75D	$860
LAR-47 Delta Carbine	7.62mm Kalashnikov	3.52 kg	10, 20, 30, 40, 75D	$862
LAR-47 Tactical Comp	7.62mm Kalashnikov	3.54 kg	10, 20, 30, 40, 75D	$901
LAR-47 Coyote Carbine	7.62mm Kalashnikov	3.54 kg	10, 20, 30, 40, 75D	$860
LAR-47 X-1	7.62mm Kalashnikov	3.72 kg	10, 20, 30, 40, 75D	

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
LAR-47 CAR A4	SA	4	2-Nil	5/6	4	Nil	46
LAR-47 Delta Carbine	SA	4	2-Nil	5/6	3	Nil	46
LAR-47 Tactical Comp	SA	4	2-Nil	5/6	3	Nil	46
LAR-47 Coyote Carbine	SA	4	2-Nil	5/6	4	Nil	46
LAR-47 X-1	SA	4	2-3-Nil	5/6	3	Nil	55

Rock River Arms LAR-458

Notes: Essentially a heavy modification of the RRA CAR A4, the LAR-458 is modified to instead fire the .458 SOCOM cartridge. It is intended primarily for short-range combat and entry teams.

Other than the changes necessary to fire the .458 SOCOM cartridge (which were large and many in of themselves), the LAR-458 has a large number of sub-versions available, differing primarily in the stocks, handguards, pistol grips, and MIL-STD-1913 rails available. For game purposes, the stocks may be primarily into fixed and 6-position sliding stocks; however, possible fixed stocks include a standard AR-15A2 stock, a shorter “entry stock,” the CAA Tactical Stock (which has compartments for accessories such as cleaning kits, batteries, etc.), and the ACE Skeleton stock. The handguards may be “generic” ribbed aluminum handguards or better Hogue versions. (Both of these also contain free-float tubes for the barrel.) The pistol grips may be standard AR-15A2, Hogue rubber, an ERGO grip, or an ERGO Target grip. The receiver is topped by a MIL-STD-1913 rail, but the buyer may elect to also buy a detachable carrying handle with an AR-15A2-type rear sight in it; the gas block also has a very short MIL-STD-1913 rail, and the buyer may also elect to buy a front sight to fit this rail if desired. The trigger guard may be of standard size or a wider winter trigger guard. The barrel is a 16-inch chrome-moly steel bull barrel, which may be tipped with a standard AR-15A2-type flash suppressor or a Vortex flash suppressor/muzzle brake. Feed is from modified AR-15A2 magazines.

There are some rumors floating around that the US Military (primarily special operations and the Coast Guard) have requested that Rock River Arms build some versions of the LAR-458 capable of automatic fire, though I have been unable as of yet to confirm this beyond mere rumors. However, I have included automatic stats below, as a point of interest.

Twilight 2000 Notes: The LAR-458 does not exist in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
LAR-458 (Fixed Stock, Flash Suppressor)	.458 SOCOM	3.45 kg	4, 7, 10, 15	$2096
LAR-458 (Fixed Stock, Muzzle Brake)	.458 SOCOM	3.44 kg	4, 7, 10, 15	$2124
LAR-458 (Folding Stock, Flash Suppressor)	.458 SOCOM	3.45 kg	4, 7, 10, 15	$2112
LAR-458 (Folding Stock, Muzzle Brake)	.458 SOCOM	3.44 kg	4, 7, 10, 15	$2141

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
LAR-458 (Fixed, Flash)	5	6	1-3-Nil	6	4	11	58
LAR-458 (Fixed, Brake)	5	6	1-3-Nil	7	3	8	58

LAR-458 (Folding, Flash)	5	6	1-3-Nil	5/6	4	11	58
LAR-458 (Folding, Brake)	5	6	1-3-Nil	5/7	3	8	58

Rock River Arms Varmint EOP

Notes: The Varmint EOP is an extra-heavy-barreled AR-15 clone designed for both conventional hunting and as a police or military tactical sharpshooting weapon. Essentially an AR-15A2 with a new upper and some other modifications to the lower, the Varmint EOP features that barrel, made from stainless steel, and is match-quality, free-floating and fluted. The Varmint EOP has round aluminum handguards (the end of which has short four-way MIL-STD-1913 rails) and raised rail above the receiver with a MIL-STD-1913 rail for the attachment of optics. No iron sights are provided. The Varmint EOP is also built to very tight tolerances to further enhance operation and accuracy. The pistol grip is a Hogue soft rubber type with finger grooves. The front sling swivel doubles as an attachment point for a bipod.

Twilight 2000 Notes: The Varmint EOP does not exist in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
Varmint EOP (16" Barrel)	5.56mm NATO	3.72 kg	9, 10, 20, 30	$569
Varmint EOP (18" Barrel)	5.56mm NATO	3.79 kg	9, 10, 20, 30	$591
Varmint EOP (20" Barrel)	5.56mm NATO	3.86 kg	9, 10, 20, 30	$612
Varmint EOP (22" Barrel)	5.56mm NATO	3.93 kg	9, 10, 20, 30	$634
Varmint EOP (24" Barrel)	5.56mm NATO	4 kg	9, 10, 20, 30	$656

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Varmint EOP (16")	SA	3	1-Nil	5	2	Nil	43
Varmint EOP (18")	SA	3	1-Nil	6	2	Nil	52
Varmint EOP (20")	SA	3	1-Nil	6	2	Nil	60
Varmint EOP (22")	SA	3	1-Nil	6	2	Nil	67
Varmint EOP (24")	SA	3	1-Nil	7	2	Nil	74

Ruger Mini-14

Notes: A weapon based on the M-14 action, but in 5.56N, the semiautomatic Mini-14 is a very popular civilian hunting weapon. There are literally mountains of Mini-14s in the US and Central America. Note that the basic Mini-14 cannot use a bayonet or rifle grenades. The basic Mini-14 uses an 18.5-inch barrel. The AC-556 series are a number of militarized versions. The Mini-14/20GB adds a bayonet lug, a new fiberglass handguard, a flash suppresser, and a provision for rifle grenades. The AC-556 is a fully militarized selective-fire weapon. The AC-556SF is identical, but has a burst-control selector. The AC-556F is a short-barreled carbine version of the AC-556, and cannot mount a bayonet. The AC-556F and AC-556K are even shorter-barreled versions, with the AC-556K replacing wood with plastic. Militarized versions are less common, but have seen a lot of use by police forces in the US, and the occasional military use in various countries. More common is the use of the AC-556 series by mercenaries, and on TV shows in the US. Similar to the M16 series, there is a thriving industry all over the world in modification kits for the Mini-14 and AC-556.

Operation is by fixed piston and moving cylinder gas system, inspired by the M-1 Garand. It's rotating bolt and safety are also borrowed from the M-1, with the safety just ahead of the trigger guard. It has a bolt lock device for when the rifle is empty or the shooter desires to lock open the bolt. The Mini-14 is sold with proprietary magazines, but can also use certain AR-15/M16 magazines. Sights consist of a fixed blade front and a rear peep sight adjustable for windage and elevation. Adjustment is by easy-to-use knobs. The knobs are then locked in place by plungers. Furniture for the standard Mini-14 (and its derivations) are of American Hardwood, though the militarized versions generally have furniture of polymer or aluminum and use folding stocks in some cases.

In 1987, Ruger began producing a version of their Mini-14 rifle in 7.62mm Kalashnikov, a round which has become increasingly popular in the US and Mexico since the fall of the Iron Curtain. Ruger calls this rifle the Mini-30 (also commonly known as the Mini-Thirty). Most have been sold in the US, and to a lesser extent in Canada and Mexico, but some have also been sold in Eastern Europe and China. The Mini-30 is not available in militarized versions.

A couple of hundred Mini-14s were chambered in .222 Remington instead of .223 Remington (5.56mm NATO). These were produced for sales in overseas markets like Italy where civilian ownership of firearms in "military" chamberings was prohibited. The Mini-14 chambered in .222 was not popular, however, and they were sold and resold overseas; tracking one down these days can be difficult. They were never offered by Ruger in the US, and they are even more rare than they are overseas. The .222 Remington cannot be fired from a 5.56mm Mini-14 or vice versa, as the lengths of the cartridges are too different.

In 2005, the Mini-14 was taken off the market – sort of. In its place is the Ruger Ranch Rifle, which is basically an updated version of the basic Mini-14. The metalwork can be blued or stainless steel, and the stock is either black polymer or hardwood with a recoil pad on the butt. (The pad is not really meant for recoil; it's to prevent the butt from sliding on the shoulder.) Limited edition models are also available which have black laminate wood stocks or a striking red/black laminate finish. Unlike the curved butt of the Mini-14, the Ranch Rifle's butt is straight. The stock is also somewhat longer, at the request of many Mini-14 owners over the years. It will accept most of the aftermarket accessories which have been devised for the Mini-14 over the years. The front sight of the Mini-14 has been replaced by a blued blade (even on stainless steel versions) with protective wings on either side of the sight; this new front sight is firmly attached to the barrel and is unlikely to be jarred out of alignment or be damaged. The new rear sight is a fully adjustable ghost ring type, also within protective wings, and also much stronger than the Mini-14 sight. The two together make quick sight acquisition

easy.

After the end of the Assault Weapons Ban, high-capacity versions of the Mini-14 were re-introduced. For game purposes, these are the same as the Ranch Rifle, but can take AR-15-type magazines. (Versions of the Mini-14 sold during the Assault Weapons Ban years use proprietary magazines and cannot use AR-15-type magazines.). These versions are not generally found with recoil pads, but they are available on request.

A Tactical Series was also introduced after the end of the Assault Weapons Ban. These versions are primarily meant for police use, but are also available to civilians. These versions are for the most part versions wood or synthetic stocks, high-capacity capability, and with bases for MIL-STD-1913 rails and folding iron sights designed for quick target acquisition. The Mini-14/20CF version is a more "tactical" version; it comes standard with MIL-STD-1913 rails atop the receiver and extending down to the end of the handguard, as well as the folding sights mentioned above. Short lengths of MIL-STD-1913 rail are also found at the front of the handguards on each side and the bottom. Furniture is black synthetic, and it uses an ergonomic pistol grip instead of the pistol-grip-wrists of other most Mini-14s. The stock is a modification of the M4's stock; it not only slides back and forth, but it also folds to the right side. This not only allows it to be made into a small package, but allows the shooter to make length-of-pull adjustments. The barrels of the Tactical models are shorter at 16.125 inches and typically have flash suppressors.

One of the latest versions of the Mini-14 is also called the Mini-14, but it is chambered for the 6.8mm SPC round, and first appeared on the market in 2008. This version is a variant of the All-Weather Ranch Rifle, with a polymer stock and stainless-steel metalwork. The action is essentially the same as that of a standard Mini-14 Ranch Rifle, with the appropriate parts suitably scaled up for the larger round, and it has the same barrel length – 18.5 inches. Only 5-round magazines are available for this version

Several companies have produced conversion kits for the Mini-14, allowing it to fire .22 Long Rifle. These allow the use of inexpensive ammo for practice. The weapon retains most of the Mini-14's features except for some of the internal works and the barrel for .22 Long Rifle. To simplify things, we will use only the base Mini-14 for this entry.

The abortive XGI was introduced to the public in 1985 to much fanfare and advance orders. However, though approximately six prototypes were built, progress on the XGI revealed numerous shortcomings, from accuracy at range to heavy recoil. In addition, there were some rumors that the modified Mini-14 action (itself a modification of the M1 Garand's action, strangely enough) did not play well with the modified Mini-14 chassis, leading to slews of misfires and damage to the action itself when it was fired. (Recently, an XGI came up for sale, but the seller gave a warning that the XGI was for display purposes only and should never be fired, even though it was complete.) The result was that the XGI never made into series production, and none were sold to the shooters that were hot for them. The XGI was to be sold with a 5-round magazine, but AR-10 and M1A magazines will also fit into the XGI (or so the rumors state). The barrel is longer than the Mini-14 at 20 inches, but this was not enough to satisfy long-range shooters.

Twilight 2000 Notes: The Ranch Rifle and Tactical Series are not available in the Twilight 2000 timeline.

Merc 2000 Notes: As stated above, this was an extremely popular weapon among mercenary organizations.

Weapon	Ammunition	Weight	Magazines	Price
Mini-14/Mini-14GB	5.56mm NATO	2.9 kg	5, 10, 20, 30, 40	$575
Mini-14	.222 Remington	2.9 kg	5	$560
Mini-14/20GBF	5.56mm NATO	2.7 kg	5, 10, 20, 30, 40	$605
AC-556	5.56mm NATO	2.89 kg	5, 10, 20, 30, 40	$581
AC-556GF	5.56mm NATO	2.69 kg	5, 10, 20, 30, 40	$611
AC-556GF Carbine	5.56mm NATO	3.15 kg	5, 10, 20, 30, 40	$554
AC-556SF	5.56mm NATO	3.15 kg	5, 10, 20, 30, 40	$554
AC-556F	5.56mm NATO	3.3 kg	5, 10, 20, 30, 40	$720
AC-556K	5.56mm NATO	3.3 kg	5, 10, 20, 30, 40	$719
Ranch Rifle (Polymer Stock)	5.56mm NATO	2.95 kg	5, 10, (20, 30)	$660
Ranch Rifle (Wood Stock)	5.56mm NATO	3.08 kg	5, 10, (20, 30)	$650
Mini-30	7.62mm Kalashnikov	3.1 kg	5	$819
Mini-14 Tactical (Wood Stock)	5.56mm NATO	3.63 kg	5, 10, 20, 30, 40	$559
Mini-14 Tactical (Polymer Stock)	5.56mm NATO	3.48 kg	5, 10, 20, 30, 40	$571
Mini-14/20CF	5.56mm NATO	3.29 kg	5, 10, 20, 30, 40	$591
Ranch Rifle	6.8mm SPC	3.06 kg	5	$796
Mini-14/22	.22 Long Rifle	2.6 kg	5, 10, 15, 20, 25, 28, 30	$235
XGI	7.62mm NATO	3.6 kg	5, 10, 20, 25	$1014
XGI	.243 Winchester	3.38 kg	5	$726

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Mini-14/Mini-14/20GB	SA	3	1-Nil	6	3	Nil	49
Mini-14 (.222)	SA	3	1-Nil	6	3	Nil	51
Mini-14/20GBF	SA	3	1-Nil	4/6	3	Nil	49
AC-556	5	3	1-Nil	6	3	7	49
AC-556GF	5	3	1-Nil	5/6	3	7	49
AC-556GF Carbine	5	3	1-Nil	4/5	2	6	29
AC-556SF	3	3	1-Nil	4/5	2	4	29

AC-556F/AC-556K	3/5	2	1-Nil	4/5	2	4/6	23
Ranch Rifle (5.56mm, Both)	SA	3	1-Nil	6	2	Nil	49
Mini-30	SA	4	2-Nil	6	4	Nil	55
Mini-14 Tactical (Both)	SA	3	1-Nil	6	2	Nil	40
Mini-14/20CF	SA	3	1-Nil	4/6	2	Nil	40
Ranch Rifle (6.8mm)	SA	3	1-2-Nil	6	3	Nil	66
Mini-14/22	SA	1	Nil	6	1	Nil	38
XGI (7.62mm)	SA	4	2-3-Nil	6	4	Nil	62
XGI (.243)	SA	3	2-Nil	6	3	Nil	62

Ruger SR556

Notes: Introduced in late 2009, the SR556 is basically an AR done better – more refined and more reliable. Chief among the improvements is the rifle's operation; the SR556 uses a short-tappet gas piston system rather than the Stoner direct gas impingement system, which greatly reduces fouling and the stoppages fouling causes. The SR556 is designed for use by police and civilians, and is now sold as a semiautomatic rifle, with no plans for any sort of future automatic version; Ruger has in fact made sure that conversion to automatic fire is difficult if not impossible. The barrel is a strong Chrome-Moly Vanadium steel alloy barrel, and has a tight twist rate of 1:9. The 16.12-inch barrel is tipped with a birdcage-type flash suppressor which is Ruger-designed, derived from the Mini-14, and differs greatly in appearance from the standard A2 flash suppressor. The handguards are made by Troy and are pinned to the upper receiver; the barrel is essentially free-floating. The handguards have 4-point MIL-STD-1913 rails, and the upper receiver also has a monolithic (the rail is integral with the upper receiver) MIL-STD-1913 rail. The SR556 comes with flip up iron sights that attach to the MIL-STD-1913 rails, with the front sight being a post inside of "rabbit ears" like those of an AK. The rear sight, also made by Troy, is on an elevating post and is adjustable in a manner similar to that of an AR-15A2.

The gas piston system has a gas regulator with four positions, and thus operation can be adjusted depending upon the ammunition being used and the cleanliness of the rifle at the time. The operating rod and its piston are not designed to be disassembled by the user, and Ruger says that no such maintenance is necessary. The bolt carrier group is made in one piece and is chrome-plated for reliability. The bolt carrier group also has a number of features to further increase reliability, such as a flared rear, a turned-down gas key area, and a rubber O-ring around the extractor spring (something I would love, since the number one problem I have experienced with the AR is extraction failure). Trigger action is regarded as unusually smooth and crisp, though it is a standard AR-type trigger group; this is probably due to factory tuning. Several versions of the SR556 are currently available, including one with a fixed stock, and several versions with a collapsible stock; all have the same barrel, but weight varies by the type of stock and the features used on a particular model of SR556. The SR556CLA is the standard version and is also the lightest version; the SR556 is the heaviest model. The SR556SC is the fixed-stock model. The SR556E uses an M4-type stock, and is equipped with a MIL-STD-1913 rail that extends from the rear of the receiver to the gas block.

Ruger has also introduced a rimfire version of the SR556; while it largely uses the same parts and part of the action of the SR556 (suitably modified for the new cartridge), the action is in fact an adaptation of the action of the Ruger 10/22. This means that while Ruger sells standard magazines for the SR22, any magazine, even aftermarket ones, that fit into a Ruger 10/22 will fit into an SR22. The outer part of the receivers (upper and lower) appears a bit more blocky than the SR556, and the MIL-STD-1913 rail above the receiver is a little longer as it extends to the rear a bit more (made possible by the lack of a need for the AR-type charging handle at the rear of the receiver. The charging lever is on the right side with the ejection port. The SR22 comes with either an M4-type sliding stock or a fixed stock; there is no recoil buffer in either stock. The collapsible-stock version is the SR22R; the fixed-stock version is the SR22SC. The pistol grip is a Hogue rubber ergonomic grip. The handguards are round, aluminum, and ventilated with rows of holes at the 2 o'clock, 4-o'clock, 8 o'clock, and 10 o'clock positions. The 16.123-inch barrel is tipped with a standard AR-type flash suppressor, the same as used on the SR556 and Mini-14.

The newest version of the SR556 is the SR556/6.8; this is essentially the same as the other versions of the SR556, but comes only with an M4-type collapsible stock and is chambered for 6.8mm SPC.

Though the SR762 is a battle rifle, it is included here for completeness. It is, in many ways, an enlarged SR556, but it is not *just* a larger SR556. It uses a piston system that is a little different from its smaller brother, and this acts as a recoil-mitigation system. To fine-tune that, the gas regulator is adjustable to one of four positions. The gas regulator looks like it is rather flimsily held in place by a spring steel slip, but it properly locks the regulator in place at the desired setting, solidly. The piston system and bolt carrier are carefully designed to eliminate bolt carrier tilt, a canting of the bolt during travel that increases felt recoil and damages accuracy. Like the SR556, the SR762 has a 16.12-inch barrel tipped with a Mini-14-type flash suppressor. It is, however, a heavy-profile, fluted barrel. The muzzle device can be removed and replaced by the user. The barrel is a strong Chrome-Moly Vanadium steel alloy barrel, with a chromed bore. The handguard is Ruger-designed, and has a Picatinny rail on the receiver continuous with that of the upper handguard. Under the handguard at the end is a short length of rail for mounting of a bipod or other accessory. Several blanks and finger-grooved covers are included with the SR762 to cover unused rails or make some section more grippy. The handguard has several lightning cuts and scallops that not only make the handguard lighter, but make it more grippable and even more attractive. The stock is a 6-position M4-type stock. BUIS-type folding iron sights are provided with the rifle, with the rear adjusting windage and the front adjusting elevation.

Another thing to take note of is that the controls and trigger are basically standard AR-15/AR-10, and thus many modifications can be made by the shooter to suit him. The SR762 was also designed to work best with Magpul PMAG magazines. Many testers complain about the gritty, scratchy, long, heavy pull of the SR762's trigger. The selector lever likes to stop before becoming fully engaged. Some say the stock is front-heavy and unbalanced. Chalk it up to growing pains.

Weapon	Ammunition	Weight	Magazines	Price
SR556SC	5.56mm NATO	3.6 kg	10, 20, 30	$576
SR556FB	5.56mm NATO	3.6 kg	10, 20, 30	$596
SR556C	5.56mm NATO	3.36 kg	10, 20, 30	$596
SR556CLA	5.56mm NATO	3.25 kg	10, 20, 30	$596
SR556E	5.56mm NATO	3.34 kg	10, 20, 30	$596
SR556/6.8	6.8mm SPC	3.52 kg	10, 25	$737
SR22R	.22 Long Rifle	2.95 kg	10	$245
SR22SC	.22 Long Rifle	2.95 kg	10	$225
SR762	7.62mm NATO	3.91 kg	5, 10, 20	$1031

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
SR556SC	SA	3	1-Nil	6	2	Nil	42
SR556FB/C/CLA/E	SA	3	1-Nil	4/6	2	Nil	42
SR556/6.8	SA	3	1-2-Nil	4/6	3	Nil	56
SR22R	SA	1	Nil	4/6	1	Nil	33
SR22SC	SA	1	Nil	6	1	Nil	33
SR762	SA	4	2-3-Nil	5/7	4	Nil	46

Sabre Defence A3

Notes: Sabre Defence is known primarily for their M16/M4 clones and modifications; one of these is the Sabre A3 line. There are several members of the Sabre A3 line, but features in common include CNC machined upper and lower receivers made from 7075-T6 forgings, barrels of better than Mil-Spec quality in workmanship and materials, improved reliability in the gas system and bolt, and a modified recoil buffer.

The M4 Flat Top is one of the "basic" versions. It uses oval-type handguards, a MIL-STD-1913 rail atop the receiver, an ergonomic pistol grip, folding front and rear sights, and a 6-position sliding stock. The barrel is a special contour barrel of vanadium steel, tipped with either an M16A2-type flash suppressor or an extended birdcage-type flash suppressor. The M-5 Flat Top is essentially similar, but uses government-contour barrels of 16 inches only, and does not have a 7.62mm Kalashnikov option. For game purposes, the M-5 Flat Top is otherwise identical to the M4 Flat Top. The M4 Carbine is essentially identical to the standard Colt M4A1E2 Carbine (Sabre Defence does make many M16s and M4s for the US military) – full auto and with a MIL-STD-1913 rail atop the receiver, and with a fixed M16/M4 type front sight -- but also comes in versions with longer barrels and different chamberings. The M-5 Carbine is essentially the same as the M4 Carbine for game purposes, other than an additional barrel length for the 7.62mm Kalashnikov chambering. (Except for this additional barrel length, use the same entries as the M4 Carbine for the M-5 Carbine.) The M4 Tactical has handguards with four-point MIL-STD-1913 rails, folding sights, and a Gill muzzle brake instead of a flash suppressor. The stock is a more-adjustable Vltor sliding stock. The M-5 Tactical is quite similar to the M4 Tactical in concept, with the same MIL-STD-1913 rail setup, same sight setup, and the same Vltor sliding stock; however, barrel length is limited to 14.5 inches, and the barrel uses a special contour and is tipped with a longer version of the M16A2's flash suppressor. The M-5 Tactical also is sold with an EOTech 552 reflex sight (included in the cost below). The A3 Flat Top Carbine is identical to the M4 Carbine in 5.56mm NATO with a 16" barrel for game purposes.

The A4 Rifle is a Sabre Defence-built version of the M16A3; stats are reproduced for convenience below. The A2 National Match is a match-quality AR-15A2, with a carrying handle above the receiver, a two-stage match trigger group, a match-quality rear sight, and a heavy-contour match-quality 20-inch barrel. The Heavy Bench Target rifle is equipped with a 24-inch fluted match-grade bull barrel that is free-floating and has a target crown (and does not have a chrome-lined bore), special tubular aluminum handguards, an M16A2-type stock, a MIL-STD-1913 rail atop the receiver, a trigger adjustable for pull weight and travel, folding sights, and a detachable bipod.

The Varmint is, as might be guessed, designed for small-game hunting and pest control; it features a stainless steel mid-weight free-floating and fluted 20-inch barrel, tipped with a widened muzzle that has a target crown. The stock is an M16A2 stock, the trigger group is match-quality, there is a MIL-STD-1913 rail atop the receiver, and it has an ergonomic pistol grip. The Competition Extreme sort of builds on the Varmint; it has the same sort of barrel (though in three barrel lengths), but tipped with a Gill muzzle brake. The stock is a CTR sliding stock, and the rifle includes flip-up front and rear sights, with the rear sight being in front of the receiver on the handguards instead of at the rear of the receiver (this is less accurate, but allows for quicker target acquisition). The Competition Special is similar, but is also chambered for 6.5mm Grendel, has no iron sights (that are sold with the rifle), and uses a standard M16A2 stock instead of a sliding stock. The Competition Extreme is also similar, but has a Vltor sliding stock, handguards with 4-point MIL-STD-1913 rails (plus one atop the receiver), flip-up match-quality sights, and a Gill Competition muzzle brake. For game purposes, however, the Competition Deluxe is identical to the Competition Special, except as mentioned before.

The SPR is meant to be sort of a designated marksman's rifle as well as a general purpose assault rifle. The Vltor sliding stock has five positions and is skeletonized; the handguards have four sets of MIL-STD-1913 rails, as well as a MIL-STD-1913 rail atop the receiver. The pistol grip is an Ergo ergonomic grip. The trigger is match-quality, and SPR is equipped with a folding bipod adjustable for height and cant. The sights are folding. Barrels are made from stainless steel of vanadium steel, and are fluted to save some weight and improve cooling.

The Precision Marksman Rifle, also called the XR-15, is essentially a sniper rifle version of the A3, but I have included it here for completeness. The PMR uses a shorter gas system than would be considered normal for this size of rifle, but this improves reliability. The handguards have four-point MIL-STD-1913 rails, and the upper receiver is also topped with such a rail. Iron sights are not normally fitted, but are available; the standard scope sold with the PMR is a Leupold 6.5x20x50 Mk 4 LR/T M1. The pistol grip is an Ergo grip with a palm rest. The trigger is match-quality. The stock is a Magpul TRS stock adjustable in the cheekpiece and for length and angle of the buttplate. The barrel is 20 inches, of 410 stainless steel and fluted, and tipped with a flash suppressor; like many such rifles, the bore is not chrome-lined. A detachable light bipod, adjustable for height and cant, is fitted at the end of the handguard.

Twilight 2000 Notes: The Sabre A3 M4 versions and the A4 Rifle are available in the Twilight 2000 timeline; the rest are not.

Weapon	Ammunition	Weight	Magazines	Price
Sabre A3 M4 Flat Top (14.5" Barrel)	5.56mm NATO	2.7 kg	10, 20, 30	$578
Sabre A3 M4 Flat Top (16" Barrel)	5.56mm NATO	2.74 kg	10, 20, 30	$593
Sabre A3 M4 Flat Top (14.5" Barrel)	6.5mm Grendel	2.85 kg	8, 16, 25	$652
Sabre A3 M4 Flat Top (16" Barrel)	6.5mm Grendel	2.89 kg	8, 16, 25	$665
Sabre A3 M4 Flat Top (16" Barrel)	7.62mm Kalashnikov	3.23 kg	10, 20, 30	$844
Sabre A3 M4 Carbine (14.5" Barrel)	5.56mm NATO	2.52 kg	10, 20, 30	$570
Sabre A3 M4 Carbine (16" Barrel)	5.56mm NATO	2.56 kg	10, 20, 30	$591
Sabre A3 M4 Carbine (14.5" Barrel)	6.5mm Grendel	2.66 kg	8, 16, 25	$642
Sabre A3 M4 Carbine (16" Barrel)	6.5mm Grendel	2.7 kg	8, 16, 25	$663

Sabre A3 M4 Carbine (16” Barrel)	7.62mm Kalashnikov	3.02 kg	10, 20, 30	$841
Sabre A3 M-5 Carbine (14.5” Barrel)	7.62mm Kalashnikov	2.94 kg	10, 20, 30	$826
Sabre A3 M4 Tactical (14.5” Barrel)	5.56mm NATO	2.72 kg	10, 20, 30	$620
Sabre A3 M4 Tactical (16” Barrel)	5.56mm NATO	2.76 kg	10, 20, 30	$641
Sabre A3 M4 Tactical (14.5” Barrel)	6.5mm Grendel	2.86 kg	8, 16, 25	$692
Sabre A3 M4 Tactical (16” Barrel)	6.5mm Grendel	2.9 kg	8, 16, 25	$713
Sabre A3 M4 Tactical (16” Barrel)	7.62mm Kalashnikov	3.22 kg	10, 20, 30	$891
Sabre A3 M-5 Tactical	5.56mm NATO	2.73 kg	10, 20, 30	$730
Sabre A3 M-5 Tactical	6.5mm Grendel	2.85 kg	8, 16, 25	$800
Sabre A3 M-5 Tactical	7.62mm Kalashnikov	3.19 kg	10, 20, 30	$980
Sabre A4 Rifle	5.56mm NATO	3.43 kg	10, 20, 30	$626
Sabre A2 National Match Rifle	5.56mm NATO	3.47 kg	10, 20, 30	$620
Sabre Heavy Bench Target Rifle	.204 Ruger	4.47 kg	10, 20, 30	$1197
Sabre Heavy Bench Target Rifle	5.56mm NATO	4.57 kg	10, 20, 30	$1247
Sabre Heavy Bench Target Rifle	6.5mm Grendel	4.82 kg	8, 16, 25	$1321
Sabre Varmint	5.56mm NATO	3.41 kg	10, 20, 30	$615
Sabre Competition Extreme (16” Barrel)	5.56mm NATO	3.27 kg	10, 20, 30	$643
Sabre Competition Extreme (18” Barrel)	5.56mm NATO	3.38 kg	10, 20, 30	$664
Sabre Competition Extreme (20” Barrel)	5.56mm NATO	3.44 kg	10, 20, 30	$685
Sabre Competition Special (16” Barrel)	5.56mm NATO	3.23 kg	10, 20, 30	$623
Sabre Competition Special (18” Barrel)	5.56mm NATO	3.34 kg	10, 20, 30	$644
Sabre Competition Special (20” Barrel)	5.56mm NATO	3.4 kg	10, 20, 30	$665
Sabre Competition Special (18” Barrel)	6.5mm Grendel	3.52 kg	8, 16, 25	$715
Sabre Competition Special (20” Barrel)	6.5mm Grendel	3.59 kg	8, 16, 25	$736
Sabre SPR (16” Barrel)	5.56mm NATO	3.34 kg	10, 20, 30	$945
Sabre SPR (18” Barrel)	5.56mm NATO	3.45 kg	10, 20, 30	$1053
Sabre SPR (20” Barrel)	5.56mm NATO	3.51 kg	10, 20, 30	$1118
Sabre SPR (18” Barrel)	6.5mm Grendel	3.64 kg	8, 16, 25	$1125
Sabre SPR (20” Barrel)	6.5mm Grendel	3.7 kg	8, 16, 25	$1190
Sabre PMR	5.56mm NATO	3.43 kg	10, 20, 30	$1291
Sabre PMR	6.5mm Grendel	3.62 kg	8, 16, 25	$1381

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Sabre A3 M4 Flat Top (14.5”, 5.56mm)	5	3	1-Nil	4/5	3	7	35
Sabre A3 M4 Flat Top (16”, 5.56mm)	5	3	1-Nil	4/6	3	7	41
Sabre A3 M4 Flat Top (14.5”, 6.5mm)	5	3	1-1-Nil	4/5	3	7	47
Sabre A3 M4 Flat Top (16”, 6.5mm)	5	3	1-2-Nil	4/6	3	7	55
Sabre A3 M4 Flat Top (7.62mm)	5	4	2-Nil	5/6	4	9	46
Sabre A3 M4 Carbine (14.5”, 5.56mm)	5	3	1-Nil	4/5	3	7	34
Sabre A3 M4 Carbine (16”, 5.56mm)	5	3	1-Nil	4/6	3	7	40
Sabre A3 M4 Carbine (14.5”, 6.5mm)	5	3	1-1-Nil	4/5	3	7	44
Sabre A3 M4 Carbine (16”, 6.5mm)	5	3	1-1-Nil	4/6	3	7	53
Sabre A3 M4 Carbine (7.62mm)	5	4	2-Nil	5/6	4	10	45
Sabre A3 M-5 Carbine (14.5”, 7.62mm)	5	3	2-Nil	5/6	4	10	39
Sabre A3 M4 Tactical (14.5”, 5.56mm)	5	3	1-Nil	4/5	2	5	34
Sabre A3 M4 Tactical (16”, 5.56mm)	5	3	1-Nil	4/6	2	5	40
Sabre A3 M4 Tactical (14.5”, 6.5mm)	5	3	1-1-Nil	4/5	2	5	44
Sabre A3 M4 Tactical (16”, 6.5mm)	5	3	1-1-Nil	4/6	2	5	53
Sabre A3 M4 Tactical (7.62mm)	5	4	2-Nil	5/6	3	7	45
Sabre A3 M-5 Tactical (5.56mm)	5	3	1-Nil	4/5	3	7	35
Sabre A3 M-5 Tactical (6.5mm)	5	3	1-1-Nil	4/5	3	7	47
Sabre A3 M-5 Tactical (7.62mm)	5	3	2-Nil	5/6	4	9	39
Sabre A4 Rifle	5	3	1-Nil	6	2	6	55
Sabre A2 National Match Rifle	SA	3	1-Nil	6	2	Nil	58
Sabre Heavy Bench Target Rifle (.204) With Bipod	SA	3	1-Nil	7	2	Nil	66
	SA	3	1-Nil	7	1	Nil	85
Sabre Heavy Bench Target Rifle (5.56mm) With Bipod	SA	3	1-Nil	7	2	Nil	74
	SA	3	1-Nil	7	1	Nil	96
Sabre Heavy Bench Target Rifle (6.5mm) With Bipod	SA	3	1-2-Nil	7	3	Nil	93
	SA	3	1-2-Nil	7	2	Nil	121
Sabre Varmint	SA	3	1-Nil	6	2	Nil	59
Sabre Competition Extreme (16”)	SA	3	1-Nil	4/6	2	Nil	42
Sabre Competition Extreme (18”)	SA	3	1-Nil	5/6	2	Nil	50
Sabre Competition Extreme (20”)	SA	3	1-Nil	5/6	2	Nil	59
Sabre Competition Special (5.56mm, 16”)	SA	3	1-Nil	6	2	Nil	42
Sabre Competition Special (5.56mm, 18”)	SA	3	1-Nil	6	2	Nil	50
Sabre Competition Special (5.56mm, 20”)	SA	3	1-Nil	6	2	Nil	59

Sabre Competition Special (6.5mm, 18")	SA	3	1-2-Nil	6	2	Nil	67
Sabre Competition Special (6.5mm, 20")	SA	3	1-2-Nil	6	2	Nil	75
Sabre SPR (16", 5.56mm)	5	3	1-Nil	4/5	2	6	35
With Bipod	5	3	1-Nil	4/6	1	3	46
Sabre SPR (18", 5.56mm)	5	3	1-Nil	5/6	2	6	48
With Bipod	5	3	1-Nil	5/6	1	3	63
Sabre SPR (20", 5.56mm)	5	3	1-Nil	5/6	2	6	57
With Bipod	5	3	1-Nil	5/6	1	3	74
Sabre SPR (18", 6.5mm)	5	3	1-2-Nil	5/6	2	6	65
With Bipod	5	3	1-2-Nil	5/6	1	3	84
Sabre SPR (20", 6.5mm)	5	3	1-2-Nil	5/6	2	6	74
With Bipod	5	3	1-2-Nil	5/6	1	3	96
Sabre PMR (5.56mm)	SA	3	1-Nil	6	2	Nil	58
With Bipod	SA	3	1-Nil	6	1	Nil	75
Sabre PMR (6.5mm)	SA	3	1-2-Nil	7	3	Nil	76
With Bipod	SA	3	1-2-Nil	7	1	Nil	99

Sabre Defence XR-15

Notes: The XR-15 was Sabre's first entry into the M16 clone market. Like the A3, the XR-15 features a chrome-moly-vanadium-steel barrel of higher than mil-spec quality, 7076 receivers, and semi-hand fitting parts. XR-15s are known for being able to digest nearly all ammunition fed them.

The XR-15 Micro is the shorty; it has a 7.5" heavy barrel and can be had in 5.56mm, .222, or 9mm chamberings. The barrel is tipped by an A2-type flash suppressor, and stocked with an M4-type stock. The handguards are round and made from aluminum, and have a free-float tube. The outer finish is phosphate. The sights are M16A2-type, but designed for the short sight radius of the Micro, and chambering. The carrying handle is mounted on a MIL-STD-1913 rail, which is easily removed for the mounting of alternate optics or accessories. An option is a low-profile gas block with a short section of rail atop it. The XR-15 M4A1 is similar in construction, but comes with a 11.5-inch or 14.5-inch barrel. The XR-16 Mid-Length and Government are also of similar construction, but with a 16.75-inch and 20" barrel, respectively.

As the name would indicate, the XR-15 Benchrest is designed for benchrest target shooting. Construction is in many ways like the rest of the XR-15 series, with a free-floating tube and quality materials, but the barrel is a bull match barrel which may be made from the chrome-vanadium-moly-steel alloy of the others or a stainless steel barrel. The top of the receiver has a MIL-STD-1913 rail, and the low profile gas block has another rail section. The stock is similar to an A2 stock, but more ergonomic; the pistol grip is anatomical. There is no flash suppressor, but the rifle has a target crown. It is equipped with a two-stage match trigger. Barrels may be 12, 16, 20,or 24 inches.

Taking a different turn, the XR-15 M4 Stealth is based on the 7.5-inch version of the XR-15 Micro, but equipped with an integral silencer. It is also equipped with a plethora of MIL-STD-1913 rails, such as atop the receiver, atop the handguards, as 2 o'clock and 10 o'clock, and one underneath the handguards, A typical layout is for the Stealth to have a foregrip under the handguards along with a flashlight, IR flashlight, or laser pointer, with a reflex scope on top. Company literature states that a 5.56mm round is silenced down to the report of a .22 Long Rifle. The barrel and silencer are desighed for the Stealth and not designed to be removed.

Weapon	Ammunition	Weight	Magazines	Price
XR-15 Micro	5.56mm NATO	2.72 kg	5,10, 20, 30	$554
XR-15 Micro	.222 Remington	2.72 kg	5,10, 20, 30	$541
XR-15 Micro	9mm Parabellum	2.72 kg	20, 25, 32, 40	$271
XR-15 M4A1 Commando	5.56mm NATO	2.82 kg	5,10, 20, 30	$597
XR-15 M4A1 Commando	.222 Remington	2.82 kg	5,10, 20, 30	$584
XR-15 M4A1 Commando	9mm Parabellum	2.82 kg	20, 25, 32, 40	$315
XR-15 M4A1	5.56mm NATO	2.96 kg	5,10, 20, 30	$630
XR-15 M4A1	.222 Remington	2.96 kg	5,10, 20, 30	$618
XR-15 M4A1	9mm Parabellum	2.96 kg	20, 25, 32, 40	$347
XR-15 Mid-Length	5.56mm NATO	3.08 kg	5,10, 20, 30	$654
XR-15 Mid-Length	.222 Remington	3.08 kg	5,10, 20, 30	$642
XR-15 Mid-Length	9mm Parabellum	3.08 kg	20, 25, 32, 40	$373
XR-15 Government	5.56mm NATO	3.16 kg	5,10, 20, 30	$689
XR-15 Government	.222 Remington	3.16 kg	5,10, 20, 30	$677
XR-15 Benchrest (12" Barrel)	5.56mm NATO	2.96 kg	5,10, 20, 30	$535
XR-15 Benchrest (16" Barrel)	5.56mm NATO	3.08 kg	5,10, 20, 30	$579
XR-15 Benchrest (20" Barrel)	5.56mm NATO	3.19 kg	5,10, 20, 30	$624

XR-15 Benchrest (24" Barrel)	5.56mm NATO	3.3 kg	5,10, 20, 30	$667
XR-15 Benchrest (12" Barrel)	.222 Remington	2.96 kg	5,10, 20, 30	$522
XR-15 Benchrest (16" Barrel)	.222 Remington	3.08 kg	5,10, 20, 30	$566
XR-15 Benchrest (20" Barrel)	.222 Remington	3.19 kg	5,10, 20, 30	$611
XR-15 Benchrest (24" Barrel)	.222 Remington	3.3 kg	5,10, 20, 30	$655
XR-15 M4 Stealth	5.56mm NATO/.222 Remington	3.2 kg	5,10, 20, 30	$757

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
XR-15 Micro (5.56mm)	5	2	1-Nil	3/4	2	5	12
XR-15 Micro (.222)	5	2	1-Nil	3/4	2	5	13
XR-15 Micro (9mm)	5	2	Nil	3/4	1	2	16
XR-15 M4A1 Commando (5.56mm)	5	3	1-Nil	3/5	2	5	26
XR-15 M4A1 Commando (.222)	5	2	1-Nil	3/5	2	5	27
XR-15 M4A1 Commando (9mm)	5	2	Nil	3/5	1	2	26
XR-15 M4A1 (5.56mm)	5	3	1-Nil	4/5	2	5	37
XR-15 M4A1 (.222)	5	3	1-Nil	4/5	2	5	39
XR-15 M4A1 (9mm)	5	2	1-Nil	4/5	1	2	34
XR-15 Mid-Length (5.56mm)	5	3	1-Nil	4/6	2	5	46
XR-15 Mid-Length (.222)	5	3	1-Nil	4/6	2	5	48
XR-15 Mid-Length (9mm)	5	2	1-Nil	4/6	1	2	40
XR-15 Government (5.56mm)	5	3	1-Nil	5/6	2	5	60
XR-15 Government (.222)	5	3	1-Nil	5/6	2	5	62
XR-15 Benchrest (5.56mm, 12")	SA	3	1-Nil	5	3	Nil	29
XR-15 Benchrest (5.56mm, 16")	SA	3	1-Nil	5	3	Nil	45
XR-15 Benchrest (5.56mm, 20")	SA	3	1-Nil	6	3	Nil	62
XR-15 Benchrest (5.56mm, 24")	SA	3	1-Nil	7	3	Nil	75
XR-15 Benchrest (.222, 12")	SA	3	1-Nil	5	2	Nil	30
XR-15 Benchrest (.222, 16")	SA	3	1-Nil	5	3	Nil	46
XR-15 Benchrest (.222, 20")	SA	3	1-Nil	6	3	Nil	64
XR-15 Benchrest (.222, 24")	SA	3	1-Nil	7	3	Nil	77
XR-15 M4 Stealth (5.56mm/.222)	SA	2	1-Nil	4/5	2	5	13

Seekins Precision NOXs Combat Billet Rifle

Notes: The NOXs (No Excess Rail) begins with a core of 7076-T6 aluminum receiver halves – machined out of solid billet, not pressed. Unlike what most recruits are told about the M16 or M4 – "Don't grip the rifle by the magazine well, you'll unseat the magazine" – The NOXs has a specially shaped, extended, and ribbed forward magazine well that is designed to be gripped. (This extension is formed into a sweeping S-curve towards the rear, just to add style to the NOXs.) The receiver halves are Class 2 Hardcoat anodized and finished in black, as is the magazine well. Other parts of the rifle finishes are almost entirely in black Melonite.

The trigger guard is widened for gloves and the bottom is skeletonized. The controls are ambidextrous, and they are checkered for a positive engagement. Though they are aluminum, they actually look like finished carbon fiber. The trigger is a QMS trigger by ALG Defense, which is like a Mil-Spec trigger with all the grittiness and creepiness removed. Essentially, it is tuned to match specifications. The pull weight is a hefty 6.5 pounds; most users prefer about 4 pounds out of an AR. The pistol grip is a MagPul MOE+. Above the receiver, and continuing down the handguard, is a MIL-STD-1913 rail. M-LOK spots are found at 3, 6, and 9 o'clock, and these can accommodate any length of rail as well as some accessories directly. Any excess metal has been removed. The handguards are almost as long as the barrel, with only a bit of the barrel and flash suppressor protrudes out of. The handguards provide plenty of ventilation for the barrel; in fact, you can look right through them and see the barrel and gas tube. The handguards are 6061-T6 aluminum and finished in Melonite. The charging handle is a BCM Gunfighter handle, with an oversized grip and unlocker. The bolt carrier group is finished in Melonite, and is designed to be more like an M16 bolt carrier group instead of the lighter M4-type bolt carrier.

The barrel is 16 inches long and is made of a stainless steel blank, bored out using button rifling and is of match-grade quality. Each barrel is then inspected four times by four different people and machines. The barrel is tipped with a proprietary spiral three-pronged flash suppressor finished with Melonite. (The shape of the flash suppressor is an esthetic measure and not an operational shape.) The barrel itself is finished in Armor Black Cerekote. The gas block is low-profile and underneath the handguard; both it and the gas tube are finished in Melonite.

The stock is a MagPul STR stock, which is skeletonized to save weight and has a comfortable cheekpiece, yet is 6-point adjustable. It features QD mounting, so it can be easily replaced. It has a protected adjustment lever. It mounts on a carbine-length buffer tube, containing a heavy buffer and strengthened spring. It is ergonomic, as the top of the stock has a cheek rest designed to be a comfortable angle for most shooters.

The entire carbine's construction is hand-fitted and corrected if necessary, with parts not up to Seekins' par being completely replaced. The NOXs is not Mil-Spec; it exceeds them. (This is probably why, if you order a NOXs, you will find it is back-ordered.) All parts move easily and almost silently for most of them. Seekins sells the NOXs with MagPul 20-round magazines (which are synthetic), but the NOXs can mount and seat virtually any AR magazine.

Weapon	Ammunition	Weight	Magazines	Price
NOXs	5.56mm NATO	3.29 kg	10, 20, 30	$597

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
NOXs	SA	3	1-Nil	4/6	3	Nil	42

SIG USA XM5

Notes: The XM5 is the winner of the US Army's NGSW (Next Generation Squad Weapon) competition to supplement the M4 Carbine and the M249 SAW. The Army intends to equip Combat Arms troops and MPs with the XM5 system, and aims to also replace Designated Marksman weapons, Cav Scout weapons and some sniper team weapons with a variant of the XM5. The XM5 may also see use by Special Operations troops. The NGSW program is meant to address the problems with an inability of the 5.56mm NATO and even the 7.62mm NATO's inability to penetrate modern body armor at anything beyond short range. It is centered around a new, heavier round, the 6.8mm SIG Fury. The XM5 is based on the SIG MCX SPEAR rifle, which itself was designed for military and law enforcement concerns. Deliveries to Army troops are to begin in 2023 with small numbers to be issued for extensive field testing. LRIP production is to begin in 2024, though the Army insists that the XM5 system may still not see widespread issue. The US Marines are reportedly also interested in the XM5 system.

The XM5 is designed to be used with a specially designed Lo-Tox NLX suppressor which can have standard supersonic rounds fired through it at semiautomatic or automatic rates of fire repeatedly. However, the standard XM5 is meant to be fired without the suppressor, with the suppressor to be used by Special Ops and snipers, and the suppressor otherwise attached when troops are patrolling in enemy-held areas. The XM5 is also designed to use current US Army optics, and has a Picatinny Rail atop the receiver and upper handguards as well as M-LOK slots on the handguards for use with other accessories. (The standard XM5 optic is the new Vortex XM157.) Designated Marksman rifles may be fitted with a variety of scopes or optics, while sniper versions will definitely be scoped. The standard chrome/moly steel barrel is 13 inches long, and is a floating barrel. Standard magazines are of translucent polymer and have a 20-round capacity. The XM5 is built largely of anodized aluminum, with current models being finished in Coyote Tan. Original prototypes use a side-folding stock, but current prototypes use an M4-type sliding stock, as the Army has a certain length requirement in mind for the XM5. Maximum effective range has yet to see a final determination, as the XM5 may yet see barrel length change before the design is finalized. (I have included some alternate barrel lengths that have been discussed so far.)

So far, Designated Marksman variants may use a 16.5-inch, 18-inch, or 20-inch barrel, while sniper team versions may use a 16.5-inch, 18-inch, 20-inch, or 22-inch heavy barrel. There is currently no requirement for a new SASS to come with a bipod, though it is

probable that one will be mounted in the future. Or, the Army may forego DMRs and sniper versions based on the XM5, and hold a new competition to replace those rifles. SIG demonstrated DMRs and sniper versions based on the XM5 with several barrel lengths and different scopes and optics, and the Army seems to be keeping SIG and the rest of us in suspense, keeping their options open.

Other than the barrel, optics, and suppressor, changes from the XM5's MCX SPEAR forefather include a short-stroke gas piston with a manually switched two-position gas regulator. The trigger is a two-stage XM157 match-quality trigger. Other changes include switches and buttons positioned to allow for troops' muscle memory with the M16 series to be exploited, along with a rotary bolt and general internal parts and charging handle more akin to the M16 series.

The versions below are with an optic sight (for assault rifle versions) or scope (for DMR/sniper versions).

Weapon	Ammunition	Weight	Magazines	Price
XM5 (13" Barrel)	6.8mm Fury	3.8 kg	20	$1798
XM5 (13.5" Barrel)	6.8mm Fury	3.81 kg	20	$1803
XM5 (14.5" Barrel)	6.8mm Fury	3.84 kg	20	$1813
XM5 (16" Barrel)	6.8mm Fury	3.89 kg	20	$1830
XM5 DMR (16.5" Barrel)	6.8mm Fury	3.92 kg	20	$1892
XM5 DMR (18" Barrel)	6.8mm Fury	3.96 kg	20	$1908
XM5 DMR (20" Barrel)	6.8mm Fury	4.02 kg	20	$1931
XM5 Sniper (16.5" Barrel)	6.8mm Fury	3.92 kg	20	$1896
XM5 Sniper (18" Barrel)	6.8mm Fury	3.96 kg	20	$1912
XM5 Sniper (20" Barrel)	6.8mm Fury	4.02 kg	20	$1935
XM5 Sniper (22" Barrel)	6.8mm Fury	4.08 kg	20	$1958

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
XM5 (13" Barrel)	5	3	1-2-Nil	4/6	2	6	47
XM5 (13.5" Barrel)	5	3	1-2-Nil	4/6	2	6	49
XM5 (14.5" Barrel)	5	3	1-2-Nil	4/6	2	6	55
XM5 (16" Barrel)	5	3	1-2-Nil	5/6	3	8	64
XM5 DMR (16.5" Barrel)	SA	3	1-2-Nil	5/6	3	Nil	59
XM5 DMR (18" Barrel)	SA	4	1-2-Nil	5/7	3	Nil	67
XM5 DMR (20" Barrel)	SA	4	1-2-Nil	6/7	3	Nil	78
XM5 Sniper (16.5" Barrel)	SA	3	1-2-Nil	5/6	3	Nil	60
XM5 Sniper (18" Barrel)	SA	4	1-2-Nil	5/7	3	Nil	69
XM5 Sniper (20" Barrel)	SA	4	1-2-Nil	6/7	3	Nil	80
XM5 Sniper (22" Barrel)	SA	4	1-2-3	6/8	3	Nil	92

Smith & Wesson M1940 Light Rifle

Notes: Most of these rifles were built for the British SOE, who dropped them to French resistance forces for the most part; unfortunately, after World War 2, all but 130 were destroyed out of the 1010 built. Many of these ended up in the US on the civilian market; at first they were subject to rigid laws, but in the 1970s it was removed from the NFA list (where it was due to the short barrel) and reclassified as a Curio & Relic firearm. Though metalwork was of light alloy, the majority of the exterior, including the magazine well and furniture, were of plastic. The stock could be removed; though this is primarily for transport purposes, the Light Rifle could also be fired in this configuration. The magazine is unusual; the magazine is wide, and fired rounds are moved to the front of the magazine where they are stored until unloaded. This kept the French resistance fighters from wasting spent rounds which could be kept for reloading. Due to the chambering, it is more a carbine than a rifle. The front sight is a fixed blade, while the rear is a micrometer-adjustable type.

The Mark II (The above is the Mark I, but most details apply to the Mark II) has a barrel sleeve, and the butt has a compartment carrying a barrel wrench, sling, and manual (in French and English). 200 were built; 80 remain, mostly in the US, and they too are classified as C&R. For game purposes they are identical, except for weight and price.

Weapon	Ammunition	Weight	Magazines	Price
Light Rifle Mark I	9mm Parabellum	3.74 kg	20	$241
Light Rifle Mark II	9mm Parabellum	3.93 kg	20	$244

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range

Light Rifle	SA	2	Nil	2/4	1	Nil	21

Smith & Wesson M&P15

Notes: The M&P15 is basically Smith & Wesson's take on the M4 and M4 SOPMOD. The basic design is pure M16/M4, with a 16-inch barrel. However, the bolt carrier and gas key are chrome-plated as well as the bore, and chamber, which decreases fouling and increased reliability. Upper and lower receivers are of 7071 T6 aluminum, which is stronger than the metal of the standard M16/M4 receivers, and the machining, assembly and fitting of all parts are done by hand. There is an additional sling swivel at the front on the side, which may be moved to the left or right side. The flat black finish uses a much finer and durable texture than the standard M16/M4. Most have a removable carrying handle, revealing a short MIL-STD-1913 rail for optics. The M&P15 comes in several versions – the M&P15 Standard, the M&P15A (a slight variant of the M&P15 Standard) M&P15T Tactical model, and the M&P15C, a full-sized model.

The M&P15 Standard is sort of the counterpart to the basic M4. The sliding stock has six positions, and the flat top has a MIL-STD-1913 rail with a removable carrying handle that has the M&P15's rear sights. The front sight is mounted somewhat further back than that of a standard M4, and therefore does not interfere with optics which may be mounted on the MIL-STD-1913 rail. The M&P15A is almost the same as the M&P15 Standard; Smith & Wesson does not sell it with the removable carrying handle (though it can still mount the handle), but instead the M&P15A is equipped with a detachable Troy Folding Battle Sight as a rear sight. This sight is more finely-adjustable than a standard M4-type rear sight (though not micrometer-adjustable), and it can be folded down flush with the rear of the MIL-STD-1913 rail, not interfering with anything mounted on the rail. Recently, Smith & Wesson has been offering the M&P15R, which is basically the M&P15 Standard in 5.45mm Kalashnikov. The magazines are modified AR-15/M16/M4 magazines, and a few other modifications for the new cartridge.

The M&P15C is equipped in roughly the same manner as the M&P15A, but uses a 20-inch free-floating match-grade barrel with a slightly different twist than the 16-inch barrels of the other M&P15 rifles. Trigger units are two-stage and adjustable.

The M&P15T is roughly the counterpart to the M4 SOPMOD. It has three-position MIL-STD-1913 rails on the handguards, as well as a full-length rail on the flat top for optics. The three-position rails may be removed entirely and replaced by standard handguards, but this makes removing the forward portion of the top rail necessary. The forward portion of the MIL-STD-1913 rail otherwise forms a continuous length of rail with the MIL-STD-1913 rail mounted atop the receiver. The M&P15T also comes with removable covers for the forward MIL-STD-1913 rails. The sights are flip-up front and rear, and both are adjustable. The M&P15T can accept all SOPMOD accessories – including the M-203 grenade launcher, though it has no bayonet lug. The M&P15T is also not sold with a carrying handle, though one may still be mounted. Both the front and rear sights are Troy Folding Battle Sight system sights. The front sight, though this is not advertised, are in the perfect position for interfacing with most modern laser or holographic sights. Interestingly, the front sight is also in a perfect position for interfacing with a Leupold Mk 4 CQ/T scope; though this is not advertised either, the resulting sight picture is regarded as being too perfect to be a coincidence by most shooters. The M&P15T is also equipped with a free-floating barrel.

The M&P15-22 is designed for casual shooters and low-cost marksmanship. Versions with no flash suppressor and with 10-round-capacity magazines exist to comply with California regulations, but are otherwise identical to a standard M&P15-22. As with the M&P15. They have a MIL-STD-1013 rail atop the receiver, another four on the handguards, a six-position sliding stock, and the magazines are identical except for an insert inside the magazines for the smaller rounds (the insert is not removable). Barrel length is 16 inches. Operation is not at all like the M&P15; the M&P15-22 operates by direct blowback. Handguards are MBUS handguards equipped with M-LOK slots on four sides, with cooling slots in between. Though none have yet been sold for this purpose, The M&P15-22 has a known preference for hotloads, and operates more reliably and accurately when firing them. Smith & Wesson has recently added a new sales target for the M&P-22 -- countries who use the AR-15 series and want to save money on training costs.

Newer members of the M&P15 family are the M&P15 Sport and M&P15FT Sport. The Sport sorts of treads the line between a fully-equipped military rifle and sporting purpose rifle. The Sport has an A2-type fixed stock, a forged integral (and slightly enlarged) trigger guard, a front sight triangle with a rear Magpul BUIS folding sight, round, ribbed, M4-type handguards, and a Wilson Combat derivation of an A2 flash suppressor. Atop the receiver is a MIL-STD-1913 rail. The 16-inch barrel is of medium weight and floated. The bore, gas key, and bolt carrier are chromed. The barrel is finished in Melonite, while virtually all the rest (except polymer parts) is finished Hard Coat Black Anodized. The M&P15FT Sport is the same rifle, but with a collapsible stock and heavily-ventilated handguards that have four-point MIL-STD-1913 rails. In some ways, the M&P15FT Sport may be thought of as a subtype of the M&P15T.

New for 2016, the M&P15 Sport II is very similar to the Sport, but adds features asked for by shooters and for general improvement. The forward assist and dust cover, omitted from the Sport, have been put back in. The entire rifle has been coated in a durable Armornite finish in black. The bolt carrier liner, gas key, and firing pin have been chromed. It is otherwise the same for game purposes like the Sport.

Another recent version, new for 2013, is the M&P10. This version is not strictly an assault rifle, but is included here for completeness, for it is chambered for 7.62mm NATO. The base version is California-compliant and has an 18-inch barrel tipped with a long birdcage-type flash suppressor, and is otherwise made to the same specifications of the M&P15 Standard. It is basically an AR-15/AR-10 equivalent with a receiver-top monolithic MIL-STD-1913 rail and standard M4 handguards (leaving a long length of exposed barrel. There are no iron sights on this rifle, though it can mount BUIS, and the low-profile gas block can easily mount a front sight BUIS. Finish is Black Type III Hard Anodized. The receiver is 7075 T6 Aluminum, while everything else is 9130 or 4140 Steel. The stock is an M4 stock.

Another version of the M&P10 is basically the same, but may only take a 5 or 10-round magazine. All other versions are essentially the same except that one of them has a camo finish and a target crown instead of a flash suppressor, as well as a fixed stock. This is the M&P10 Sport.

All of these are currently advertised as being semiautomatic, with automatic versions rumored to be available to certain police, military, and government concerns. They are currently sold in virtually all-black finish, though again other colors are rumored to be available to select buyers. The tables below allow for automatic versions. In some jurisdictions (both here and in the US), a magazine-fed weapon is illegal, to varying degrees. These weapons have a "Bullet Button," in which what is normally the magazine release button simply drops open at the bottom of what appears to be a ten-round magazine. The magazine can then be fed from stripper clips or one at a time into the internal magazine. The M&P15 Sport, M&P15T, M&P15ORC and M&P15PS come in Bullet Button (most found in the next section) versions.

Notes: None of these rifles are available in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
M&P15	5.56mm NATO	3.22 kg	5, 10, 20, 30	$585
M&P15A	5.56mm NATO	3.22 kg	5, 10, 20, 30	$591
M&P15T	5.56mm NATO	3.29 kg	5, 10, 20, 30	$598
M&P15C	5.56mm NATO	3.34 kg	5, 10, 20, 30	$640
M&P15R	5.45mm Kalashnikov	2.95 kg	5, 10, 20, 30	$538
M&P15-22	.22 Long Rifle	2.49 kg	10, 25	$248
M&P15 Sport	5.56mm NATO	2.95 kg	5, 10, 20, 30	$577
M&P15FT Sport	5.56mm NATO	3.11 kg	5, 10, 20, 30	$597
M&P10	7.62mm NATO	3.5 kg	5, 10, 20	$1046
M&P10	7.62mm NATO	3.5 kg	5, 10, 20	$1049
M&P10 Sport	7.62mm NATO	3.5 kg	5, 10, 20	$1018

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
M&P15/M&P15A	5	3	1-Nil	4/5	2	6	40
M&P15T	5	3	1-Nil	4/5	2	6	41
M&P15C	5	3	1-Nil	5/6	2	6	58
M&P15R	5	3	1-Nil	4/5	3	6	46
M&P15-22	SA	1	Nil	4/5	1	Nil	34
M&P15 Sport	SA	3	1-Nil	6	3	Nil	42
M&P15FT Sport	SA	3	1-Nil	4/6	3	Nil	42
M&P10	SA	4	2-3-Nil	6/7	3	Nil	54
M&P10	5	4	2-3-Nil	6/7	3	8	54
M&P10 Sport	SA	4	2-3-Nil	6	4	Nil	54

Smith & Wesson M&P15 Enhanced Rifles

Notes: Your basic M&P15 Rifle is rather plain and ordinary in appearance. However, Smith & Wesson has an entire line of M&P15s with a variety of enhancements, from handguards with four-way MIL-STD-1913 rails to target/sniper versions with barrels to match. As with the versions above, I have included a possible automatic version in most cases, though Smith & Wesson currently sells only to civilian and law enforcement concerns.

The M&P15 VTAC II (Viking Tactics) uses VTAC/Troy TRX Handguards designed for rough use (though they are polymer). These handguards have two-way MIL-STD-1913 rails (top and bottom of the handguard), as well as one atop the receiver that connects to the top handguard rail. There are additional very short rails above and below the gas block; the bottom one is particularly suitable for a bipod (though there is none included in the price below. The stock is collapsible and is a VLTOR IMod stock with a compartment for batteries and a small cleaning kit. In addition to the bore, the bolt carrier and gas key are chromed. Most of the rest is finished in Hard Coat Black Anodized. The VTAC II is finished overall in a very dark gray – almost black. The 16-inch barrel is of medium profile, but fluted; it is also free-floating. It is tipped by a Smith & Wesson Enhanced Flash Hider which is a flash suppressor that reduces flash significantly and directs gas and sound away from the shooter. The trigger pack is a Geissele Super V two-stage Trigger, with a light pull weight. The VTAC II comes with a 2-point tactical sling.

The M&P15 MOE Mid Magpul also has a MIL-STD-1913 rail atop the receiver, but not atop the handguard. It does have one below the handguard, and the rifle is sold with a handgrip to attach to the rail. The name is derived from the Magpul MOE stock, which is a lightweight collapsible stock that is largely skeletonized. The front sight is a standard A2 sight, but the rear sight is a folding Magpul MBUS. The finish is the same as that on the VTAC II, but it is available in dark gray as well as desert sand. The gas system is interesting; the gas is tapped at a point halfway down the handguards through a small hole in the barrel. Smith & Wesson claims that this produces less recoil (not quantifiable in game terms) and better follow-up shot ability. The magazine well is flared, and the front of the magazine well is serrated to give the shooter a place to put his non-firing hand. The trigger guard is enlarged for use with heavy gloves. The 16-inch barrel is of standard size, but is free floating, and tipped by the S&W Enhanced Flash Hider.

The M&P15-300 (since renamed to the M&P15 Whisper) is chambered in an unusual caliber -- .300 Whisper. In addition, this model can fire .300 AAC Blackout as well. The primary design application is for short-range target shooting, but either round will also take down small and medium game at short ranges. The M&P15-300 is equipped with a conventional flash suppressor, but this can have a silencer fit over it, and the subsonic velocities of the two rounds lend themselves well to silenced applications, though of course

.300 Whisper also has a supersonic loading, and the M&P-300 can be used with a wide variety of propellant loadings and bullet weights. Finish is basically the same as that of other Enhanced Rifles, but a Realtree Camo pattern is also available, and the barrel is finished in Black Melonite, as is the gas block. There are MIL-STD-1913 rails atop the receiver and the gas block, and the front sling swivel can be used to mount a bipod (not included in the price). Feed is from modified AR-15 magazines. The stock, handguards, and pistol grip are standard M4-type items, though the trigger guard is enlarged to accept a gloved finger. The barrel is 16 inches and medium weight, though it is fluted and free-floated; as stated above, it is tipped with an A2-type flash suppressor.

The M&P15OR is sort of "a friend with benefits." The M&P15OR uses standard carbine handguards, but the 16-inch barrel is of medium weight, match quality, and tipped with an A2 flash suppressor. No iron sights of BUIS are sold with the M&P15OR; instead, there are above the upper receiver MIL-STD-1913 rails are present as well as a very short rail above the gas block. The stock is a standard A4 stock, but the finish is in Hard Coat Black. The gas block of the M&P15OR has a gas key, allowing the firing of older grenade launchers which require ballistite, as well as newer riot control rounds which require a cup and fire weapons like tear gas grenades, rubber balls, solid rubber projectiles, beanbags, and suchlike. The M&P15ORC is the same rifle with a fixed A2-type stock.

The M&P15X is unusual-looking rifle; to begin with the handguards of the M&P15X are much shorter than most AR-15/M16-type rifles – they are much shorter than those of the M4, even though the M&P15X has a 16-inch barrel. The stock is an M4-type collapsible stock, and the pistol grip is a standard A2 pistol grip. Finish is Hard Coat Black Anodized, with a chromed bore, gas key, bolt carrier, and chamber. The barrel is medium profile, and made of cold-forged 4140 steel. The top of the receiver is a MIL-STD-1913 rail, and the handguards have four-way rails. The front triangular sight support with a post is present at the front above the gas block, but the rear iron sight is a Troy Folding Battlesight. The short handguards are interesting; the front sight is mounted in front of the short handguards, as is the gas block. What you get is a rifle with a 16-inch barrel but a direct impingement gas system of a rifle with about a 10-inch barrel. You also get a dramatically shorter sight radius. It will be interesting to see as time goes by how this system goes.

The M&P15TS is the M&P15T…well, taken a bit more tactical. The M&P15TS 7076 T6 aluminum for most of its light alloy parts, including the upper and lower receiver, which is light yet strong. The M&P15TS has a MIL-STD-1913 rail atop its receiver. And this integrates with the rail atop the handguard. The handguards themselves are very long – at 13 inches, they are so long that little more than the flash suppressor and a very small amount of the barrel extend outside the handguard. The handguards also have three more rails on the handguards, giving the handguards four-point rails. The handguards are remarkably open, having large vent holes. Though the M&P15TS is designed for optics, but it does have folding BUIS made by Magpul. The stock is designed to be light, and therefore Magpul MOE stock. The M&P15TS has a chromed bore, gas key, chamber, and bolt carrier. The barrel is 14.5 inches, is medium profile, and free-floating; it is also equipped with the compact Troy Muzzle Brake.

Like most of the M&P15 series, the M&P15PS has a 16-inch medium-weight free-floating barrel -- in this case, of 4140 steel. The bore, gas key, bolt carrier, and chamber are chromed. The receiver has a MIL-STD-1913, and there is another short rail above the gas block. The biggest difference between the M&P15PS is its piston-operated gas system. The barrel is tipped by a Smith & Wesson adaptation of the A2 flash suppressor. The M&P15PS is not normally sold with iron sights or BUISs included. It does have an M4-type collapsible stock. Finish is Hard Coat Black Anodized. The M&P15PSX is the same rifle with Troy Modular four-point MIL-STD-1913 rails on its handguards.

The M&P15PC has the same base as the M&P15PS, but it is meant more for target and longer-range shooting. The M&P15PC has a MIL-STD-1913 rail above the receiver, as well as a very short one above the gas block. No BUIS are supplied with the M&P15PC, though they may be added by the shooter if desired. The barrel is a heavy-profile 20-inch match floating barrel which is tipped by a target crown. The handguards are Yankee Hill aluminum alloy handguards and have vent holds only in the top and bottom. The gas key, chamber, and bolt carrier are chromed. The stock is an A2 stock, and the pistol grip is of olive-drab ergonomic material designed to enhance grip. The trigger group is a Wilson Combat-designed 2-stage match-quality trigger. The M&P is made in Hard Coat Anodized, or over that finish may have Mossy Green Oak camouflage pattern.

Twilight 2000 Notes: These rifles are not available in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
M&P15 VTAC II	5.56mm NATO	2.85 kg	5, 10, 20, 30	$598
M&P15 MOE Mid Magpul	5.56mm NATO	2.97 kg	5, 10, 20, 30	$595
M&P15-300	.300 Whisper and .300 Blackout	2.89 kg	5, 10, 20, 30	$775
M&P15OR	5.56mm NATO	2.95 kg	5, 10, 20, 30	$595
M&P15ORC	5.56mm NATO	2.83 kg	5, 10, 20, 30	$575
M&P15X	5.56mm NATO	2.97 kg	5, 10, 20, 30	$595
M&P15TS	5.56mm NATO	2.72 kg	5, 10, 20, 30	$623
M&P15PS	5.56mm NATO	2.95 kg	5, 10, 20, 30	$598
M&P15PSX	5.56mm NATO	2.97 kg	5, 10, 20, 30	$604
M&P15PC	5.56mm NATO	3.69 kg	5, 10, 20, 30	$622

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
M&P15 VTAC II	5	3	1-Nil	4/6	3	7	42
M&P15 MOE Mid Magpul	5	3	1-Nil	4/6	3	6	41
M&P15-300 (.300 Whisper)	5	3	1-2-Nil	5/6	4	10	56
M&P15-300 (.300 Whisper,	5	3	1-2-Nil	8/10	3	8	47

Silencer)							
M&P15-300 (.300 Blackout)	5	3	2-Nil	5/6	4	10	47
M&P15-300 (.300 Blackout, Silencer)	5	3	2-Nil	8/10	3	8	39
M&P15-300 (.300 Blackout, Silencer, Subsonic)	5	3	1-Nil	8/10	2	6	27
M&P15OR	5	3	1-Nil	4/6	3	6	41
M&P15ORC	5	3	1-Nil	6	3	7	41
M&P15X	5	3	1-Nil	4/6	3	6	38
M&P15TS	5	3	1-Nil	4/5	2	5	35
M&P15PS	5	3	1-Nil	4/6	3	6	42
M&P15PC	SA	3	1-Nil	6	2	6	61

Stag Arms Model 1=8 Rifles

Notes: Stag Arms was founded in 2003, and quickly made their name in the manufacture of left-handed AR-15 rifles, essentially a mirror-image of a conventional AR-15A2, including the ejection port, an entire mirror-image upper receiver, and controls on the opposite sides. (Stag is also noted in that it was missed on the California DOJ's Kasler list, which means that their rifles are fully legal in California as long as other relevant parts of the law are complied with.)

Stag Arms have never seriously been considered for general military usage, though Stag has had great success with police forces and with civilians. Some of the features' necessities don't seem to be applicable to use by a civilian hunter, though they are available to civilians. For that matter, early versions, which are largely still for sale, look little different than an AR-15 or semiautomatic-only M4. However, they have a number or refinements, such as forged instead of stamped upper and lower receivers (though they are still of aluminum alloy. Most barrels are what would be normal for an AR-15, M16, or M4, being standard-weight Mil-Spec barrels with chromed bores. Sights, however, may vary by rifle, but are generally the same as or based on standard AR-15A2-type sights. (It would be interesting for a GM to have the player find a mint-condition AR – but he's right-handed and the Stag rifle is left-handed.)

The Model 1 and Model 1L (the left-handed version) can be mistaken at first glance to be an M4, but the longer 16-inch barrel quickly gives this away if you look closer. The length of thickened barrel is also longer than that of the M4, extending to just in front of gas block, with less than half an inch break, then thickened again. (For game purposes, this may be considered a medium-weight barrel). The barrel is tipped by a standard A2 flash suppressor. Another change is the upper receiver's design – the receiver is topped by a removable carrying handle/rear sight assembly. The front sight, on its triangular post, remains, and is not detachable. The top of the receiver has several lock-down points of the claw-type to attach optics, but is not a MIL-STD-1913 or Weaver Rail. The stock is identical to that of the M4. Being a close copy of the AR, it can take all AR magazines, including most increased-capacity, exotic and rare magazines. The Model 1 and 1L are identical in game terms, except for their orientation.

The Model 2 and 2L are almost identical to the Model 1 and 1L, but the Models 2 and 2L dispense with the removable carrying handle of the previous model (though, conceivably, a carrying handle could still be added). The Models 2/2L are designed for use with add-on optics or aiming modules and the receiver top has a MIL-STD-1913 rail. The Models 2/2L come with a BUIS for the rear sight; it is a large BUIS (made by ARMS) and does not simply flip up and down and with most optics the BUIS must be removed before add-on optics will fit the Models 2/2L. The ARMS rear BUIS used here, however, is mounted far enough back that its larger size is not an issue, and has the bonus of being more stable than the standard removable sight. More advanced design is also use, allowing for somewhat thinner but stronger metal in its design. The 16-inch barrel is medium-weight and match-quality. The Models 2T and 2TL give the Models 2 and 2L a more tactical configuration with the upper receiver and upper handguard having a MIL-STD-1913 rail; the two rails fit together as to form a continuous upper rail. The bottom and sides of the handguard also sport shorter MIL-STD-1913 rails. (These rails are Samson's STAR-C TARS system.) The barrel is the same as that of the Models 2 and 2L, but is free-floated. The lower rail can accept any grenade launcher that has the proper interface, including several 37mm and 38mm designs commonly used by police forces, as well as the standard NATO 40mm launchers. The front sight remains on its triangular post, and the rear BUIS is the same as on the Models 2/2L.

The Models 3 and 3L are sort of incremental upgrades of the Models 2T/2TL platforms. The Samson STAR-C TARS rail system is replaced by the Diamondhead Versa-Rail System. The previous rail system required that the rails on the handguard be thermo-molded, including the rails. The Versa-Rail system has removable rails; the rails can be removed and replaced with shorter rails or even rail covers. The rails may be mounted at 12, 3, 6, and 9-o'clock positions around the handguard, the upper handguard rail forms a long rail atop the rifle. The Models 3 and 3L are equipped with folding BUISs front and rear. The handguard itself is aluminum, and are actually lighter than the previous handguards with their molded rails.

The Model 3G and GL were designed specifically for use in 3-Gun Competitions though it is equally useful by target shooters, rifle competition shooters, long-range small-game hunters, and even police snipers. The Model 3G/GL differs in many ways from the Model 3/3L, including longer Samson 15-Inch Evolution aluminum handguards with four MIL-STD-1913 rails around them, and with the top handguard rail connecting seamlessly with rail above the receiver. The trigger is a Geissele Super-3 trigger group, which was designed specifically for the needs of 3-Gun Competitors, but is a fine two-stage trigger for anyone else, having a light pull weight and short pull length. The stock is a Magpul ACS stock, which is collapsible and provides battery storage and cleaning kit storage. The primary reason it is used on the 3G/GL, however, is the increased area atop the stock which makes for better cheek welds when firing. The pistol grip is an MOE ergonomic grip, which also provides storage through a hinged bottom of the grip. The BUIS provided are Dueck Defense Rapid Transition Sights, and the Model 3G/3GL are normally equipped with optical low-power or unity sights to further increase accuracy. This is included in the price of the rifle below, though other optics can also be mounted. The barrel is top-

notch, 18 inches long and tipped with a compact muzzle brake. The barrel is match grade, heavy profile, fluted, and free-floating.

The Model 3T-M/3TL-M is a new version of the Model 3,designed for 3-Gun competitors; it is also useful for those hunting small-to-medium game.. It is a combination of a Stag-designed flattop upper (with MIL-STD-1913 rail) and a Mil-Spec lower (with an A2-type Magpul MOE pistol grip with a compartment within, but textured for a better grip, and a flared magazine port). The stock is a Magpul ACS telescoping stock, with three compartments for a cleaning kit, batteries, and other things that may be needed at a moment's notice. (Some 3-Gun shooters use some or all of the compartments for balancing weights.) The interior working parts are mostly Mil-Spec, but easily replaced and/or adjusted to the shooter's preferences; in particular, the stock Mil-Spec trigger pack is easily removed and replaced with most aftermarket trigger packs. The handguard, on the other hand, is not Mil-Spec; it is a 13.5-inch Diamondhead VRS-T with a free-float tube. This handguard is triangular in shape; The bottom and sides of the handguard provide and are shaped with a good gripping surface, while the top of the handguard has a MIL-STD-1913 rail that locks into the receiver-top rail. The handguard is designed to attach to the rifle and be rock-solid and non-moving, despite the grip of the shooter. One can attach rails to the other three surfaces using KeyMod slots, but this will of course spoil the gripping surface features. The handguard goes out to just short of the flash suppressor. The Model 3T-M ships with Diamondhead low-profile folding BUIS. The rifle is Mil-Spec finished; in addition, the bolt carrier and bolt are Parkerized. The 16-inch barrel is made of 4140 steel and is throated to fire either 5.56mm or .223 ammunition. The barrel is coated with manganese phosphate under it's Mil-Spec finish. The barrel is tipped with an A2-type flash suppressor, which is on a threaded barrel-tip, and it can be exchanged for any number of muzzle devices. The barrel is shorter than most 3-Gun shooters use, but the carbine is also more manageable than an 18-20-inch barrel. Stag will even customize your Model 3T-M with any of a large number of accessories, such a 4150-steel barrel, ambidextrous controls, chromed bolts, a muzzle brake, several types of trigger packs, etc. (They will even laser etch the Second Amendment on the side of the magazine well upon request.)

The Models 4/4L are sort of "back to basics" rifles. Though a rail system for the handguards can be fitted, they are not normally shipped by Stag Arms with those kind of handguards fitted. The Model 4/4L have a removable carrying handle with a rear sight; this is easily removable, revealing a MIL-STD-1913 rail. The standard stock for the Model 4/4L is a fixed A2 stock, though a sliding stock can be fitted at the buyer's expense. The barrel is match-quality and medium profile, but is otherwise 20 inches long and tipped by a standard A2 flash suppressor. The Models 4/4L are sort of "no frills" rifles.

The Models 5/5L are basically the same as Models 2 and 2L, but they are chambered for the 6.8mm SPC cartridge. Stag's version of 6.8mm bullet-launchers use a barrel extension specifically designed for the 6.8mm SPC round, instead of using a barrel extension adapted from another chambering. These rifles also use a reinforced extractor. In the Models 5 and 5L can use other than the ARMS BUIS, including flip-up models. The barrel is 16 inches and medium-profile; other enhancements remain the same as those on the Models 2/2L.

The Models 6/6L Super Varminter are designed for long-range applications, whether by police snipers or light to medium-game hunters or civilians in long-range matches. The Models 6/6L are equipped with a 24-inch stainless steel heavy-profile match-quality floating barrel with a target crown. The top of the receiver has a MIL-STD-1913 rail, though the handguards are not; however, the handguards are designed for a good grip. The forward sling swivel doubles as a bipod mount (included in the price), and a telescopic sight is also included in the price below. The stock is an ordinary A2 stock, but the trigger pack is a two-stage match trigger.

The Models 7/7L Hunter is sort of a 6.8mm SPC version of the Models 6/6L, though there are several differences. The basic design is the same, including the rail above the receiver, the round, textured aluminum handguards, the small MIL-STD-1913 rail above the gas block to allow a front BUIS to be mounted, and other features found on the Models 6/6L. The barrel is of the same quality and profile as on the Models 6/6L but the Models 7/7L use a shorter barrel of 20.77 inches. The biggest difference, of course is the use of a 6.8mm SPC chambering instead of 5.56mm NATO. Another difference is in the finish; though the Models 7/7L have the same construction as the Models 6/6L, the Models 7/7L have a completely non-reflective gray finish called S7. This finish weatherproofs and fights corrosion.

The Models 8/8L are basically the same as the Models 2/2L, but the operating system is by gas piston instead of the Stoner direct gas impingement system. In addition, the Models 8/8L is a bit heavier than the Models 2/2L, a nod to shooters who felt that the Models 2/2L was too light to properly minimize barrel climb and line the rifle up for a follow-up shot.

Stag Arms recommend Magpul PMAGs, but any sort of compatible magazines can be used. This includes the versions below.

Twilight 2000 Notes: Only the Stag 1/1L are available in the *Twilight 2000 v2.2* timeline, and only in very small numbers. Most of these were actually sent directly to militia forces in the US, and few other civilians will have one. Some left-handed versions ended up in the hands of right-handed users, and vice versa, according to available supply. No other Stag Arms rifle exists in the Twilight 2000 timeline, including the ones below. (In addition. Magpul PMAGs will not exist in the *Twilight 2000 v2.2* timeline.)

Weapon	Ammunition	Weight	Magazines	Price
Stag 1/1L	5.56mm NATO	3.22 kg	5, 10, 20, 30, 40	$590
Stag 2/2L	5.56mm NATO	2.9 kg	5, 10, 20, 30, 40	$593
Stag 2T/2TL	5.56mm NATO	2.99 kg	5, 10, 20, 30, 40	$597
Stag 3/3L	5.56mm NATO	2.77 kg	5, 10, 20, 30, 40	$640
Stag 3G/3GL	5.56mm NATO	3.23 kg	5, 10, 20, 30, 40	$821
Stag 3T-M/3TL-M	5.56mm NATO	3.4 kg	5, 10, 20, 30, 40	$596
Stag 4/4L	5.56mm NATO	3.4 kg	5, 10, 20, 30, 40	$623
Stag 5/5L	6.8mm SPC	3.22 kg	5, 10, 20, 30	$739
Stag 6/6L Super	5.56mm NATO	4.54 kg	5, 10, 20, 30, 40	$1467

Varminter				
Stag 7/7L Hunter	6.8mm SPC	4.54 kg	5, 10, 20, 30	$1501
Stag 8/8L	5.56mm NATO	3.13 kg	5, 10, 20, 30, 40	$597

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Stag 1/1L	SA	3	1-Nil	4/6	2	Nil	41
Stag 2/2L	SA	3	1-Nil	4/6	3	Nil	41
Stag 2T/2TL	SA	3	1-Nil	4/6	2	Nil	42
Stag 3/3L	SA	3	1-Nil	4/6	3	Nil	42
Stag 3G/3GL	SA	3	1-Nil	5/6	2	Nil	52
Stag 3T-M/3TL-M	SA	3	1-Nil	4/6	2	Nil	42
Stag 4/4L	SA	3	1-Nil	6	2	Nil	59
Stag 5/5L	SA	3	1-2-Nil	5/6	3	Nil	57
Stag 6/6L Super Varminter	SA	3	1-Nil	7	2	Nil	76
With Bipod	SA	3	1-Nil	7	1	Nil	98
Stag 7/7L Hunter	SA	3	1-2-Nil	6	3	Nil	86
With Bipod	SA	3	1-2-Nil	6	2	Nil	112
Stag 8/8L	SA	3	1-Nil	4/6	2	Nil	42

Stag Arms Model 9

Notes: The Models 9/9L are similar to other Stag rifles, but fire 9mm ammunition instead of 5.56mm or 6.8mm ammunition. The Models 9/9L have 16-inch barrels of heavy profile tipped with an A2-type flash suppressor. It normally uses Colt-style stick magazines, but also can use 9mm Tavor magazines. The barrel is made from 4140 steel and manganese phosphate coated (as is most of the metalwork). The receiver halves have Type 3 hard coat anodizing. The upper receiver is topped with a MIL-STD-1913 rail, and a short section of rail is atop the gas block. The stock is an M4-type telescoping stock, and the pistol grip is also an A2-type. The trigger is Mil-Spec. Operation is by direct gas impingement.

The Models 9T/TL are also known as the Model 9 Tactical; differences include a slightly longer 16.1-inch 4140 steel heavy-profile barrel, 13.5" M-LOK SL Handguard with a MIL-STD-1913 rail on top and M-LOK slots on the sides and bottom, and a set of Magpul MOE accessories, including a CTR stock, MOE pistol grip, and MOE trigger guard. The non-aluminum metal parts are manganese phosphate, with the aluminum parts (including the receivers) having a Type 3 Hard Coat Anodizing. The 9T/9TL uses blowback operation rather than the 9/9L's direct gas impingement.

The Model 9/9L Free-Float uses a 15" M-LOK SL Handguard with a free-float tube, and blowback operation; it is otherwise similar to the Model 9/9L.

The Model 9/9L PCF SL has been increased in weight to aid controllability (not simulatable in Twilight v2.2 rules) and uses a 15" Paper City Slimline M-LOK Handguard, with M-LOK slots on all four sides. On top of the low-profile gas block is a short length of MIL-STD-1913 rail – just enough to mount a BUIS. Atop the upper receiver is another rail.

Weapon	Ammunition	Weight	Magazines	Price
Stag 9/9L	9mm Parabellum	3.08 kg	10, 12, 25, 32	$307
Stag 9T/TL	9mm Parabellum	3.04 kg	10, 12, 25, 32	$309
Stag 9/9L Free-Float	9mm Parabellum	2.81 kg	10, 12, 25, 32	$312
Stag 9/9L PCF SL	9mm Parabellum	3.22 kg	10, 12, 25, 32	$309

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Stag 9/9L	SA	2	1-Nil	3/5	1	Nil	36
Stag 9T/TL	SA	2	1-Nil	3/5	1	Nil	36
Stag 9/9L Free-Float	SA	2	1-Nil	3/5	1	Nil	37
Stag 9/9L PCF SL	SA	2	1-Nil	3/5	1	Nil	35

Stag Model 10

The Stag 10/10L are Stag's version of the AR-10; it is different in many ways from the standard AR-10, but in the receiver and internally, the Stag 10 is almost identical to the AR-10. Most Stag 10s fire the 7.62mm cartridge, but some fire the more powerful (though smaller) 6.5mm Creedmoor cartridge. Major parts are assembled using a Stag Slant Cut, which allows a tighter and more precision fit. The barrel of a standard Stag 10 is 18 inches long, of heavy profile, made of 4140 steel, and tipped with a VG6 Gamma Compensator muzzle brake. The handguard is a Diamondhead VRS-T 308, with a MIL-STD-1913 rail running the length of the top, which locks into the rail above the receiver. Most non-aluminum metal parts are finished in QPQ Nitride BCG; aluminum parts are Type 3 Hard Anodized. The rifle, including the polymer parts, is black-finished or molded. It uses a Magpul ACS fixed stock and a Magpul MOE pistol grip, along with an MOE trigger guard. The magazine well is flared for easier and quicker reloads.

The Stag 10/10L Keymod is built on a DPMS Panther .308 base, which is lighter and stronger than an AR-10 base. It has most of the features of the Stag 10, but uses a Stag KeyMod 16.5-inch handguard. The stock is the telescoping version of the Magpul ACS. This handguard has a MIL-STD-1913 rail atop (which locks into the rail above the receiver), and a row of KeyMod slots down the sides and underside of the handguard. The barrel uses lighter but stronger 4150 steel, but is otherwise the same as on the Stag 10. The pistol grip is a Hogue ergonomic grip with a rubber overmold. The Stag 10/10L M-LOK is essentially the same, but has M-LOK slots

instead of KeyMod slots. It is for the most part identical to the KeyMod for game purposes.

The Model 10S/10SL uses a shorter 16-inch barrel, though it is otherwise to the same specs as the Stag 10's barrel. The handguard is a shorter 13.5-inch version of the Stag 10's handguard. The 10S/SL is also based on a DPMS receiver. The stock is a version of the Keymod's Magpul ACS stock; this version has a trap accessible though the hinged butt, which is big enough for a cleaning kit and a couple of batteries. There are also KeyMod and M-LOK versions of this rifle; these are identical to the 10S in game terms for most purposes.

Another variant of the 10S/10SL is the 10S/10SL 22-Inch 6.5 Creedmoor. It is, as the name would indicate, chambered for 6.5mm Creedmoor and has a heavy-profile 416 stainless steel 22-inch barrel; the barrel is tipped with a Lantac 762 Dragon Compensator muzzle brake. The handguard is a 16.5-Inch Stag M-LOK handguard, with a MIL-STD-1913 rail on top and M-LOK slots on the sides and underside. The trigger is a Stag-designed two-stage trigger inside a Magpul Enhanced Trigger Guard. 10S/SL 24-Inch 6.5 Creedmoor is very similar, but uses a 24-inch barrel of the same specifications as on the 22-inch version. It uses a Magpul PRS fixed stock with a buttrap compartment accessible through the hinged butt and an adjustable cheekpiece. It uses the same handguards and pistol grip as the 22-inch version.

Weapon	Ammunition	Weight	Magazines	Price
Stag 10/10L	7.62mm NATO	4.26 kg	5, 10, 20, 25	$1078
Stag 10/10L Keymod	7.62mm NATO	3.9 kg	5, 10, 20, 25	$1094
Stag 10S/10SL	7.62mm NATO	3.76 kg	5, 10, 20, 25	$1067
Stag 10S/SL 22" 6.5 Creedmoor	6.5mm Creedmoor	5.31 kg	5, 10, 20	$877
Stag 10S/SL 24" 6.5 Creedmoor	6.5mm Creedmoor	5.41 kg	5, 10, 20	$897

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Stag 10/10L	SA	4	2-3-Nil	6	3	Nil	54
Stag 10/10L Keymod	SA	4	2-3-Nil	5/6	3	Nil	54
Stag 10S/10SL	SA	4	2-3-Nil	5/6	3	Nil	45
Stag 10S/SL 22" 6.5 Creedmoor	SA	3	1-2-Nil	7	2	Nil	86
Stag 10S/SL 24" 6.5 Creedmoor	SA	4	1-2-Nil	7	2	Nil	97

The Stag 15/15L is sometimes very much like the other Stag rifles – it is basically Stag's interpretation of the AR-15 and it's variations, and is sometimes called a "Stag AR-15 Rifle." The base version of the Stag 15 is the Retro, which almost identical to the AR-15. It uses an A2-type stock, upper and lower receiver (with carrying handle and A2 sights), and handguards and front sight. It has a 20-inch 4140 chrome/moly heavy profile barrel and an A2-type flash suppressor; this is one of its few nods to improved specifications. An option available is ambidextrous controls, and of course there is the left-handed version. The stock is almost totally A2, but has a door on the butt to access a trap for a cleaning kit and an earplug case. The trigger is Mil-Spec, as is the charging handle, and the steel is Mil-Spec matte black manganese phosphate-coated BCG. The aluminum is matte black Type 3 hard anodized. It uses direct gas impingement operation, with a Mil-Spec gas system. The M4 version is essentially a copy of the standard civilian version of the M4, with a 16-inch heavy-profile barrel tipped with an A2-type flash suppressor. The Minimalist is sort of an upgrade of the M4; it uses a Tekko Polymer AR-15 M-LOK Rail handguard, a Battlelink telescoping Minimalist stock, an A3 upper receiver, a set of BUIS, and an Engage AR15/M16 pistol grip. The barrel is 16 inches with specifications the same as those of the TFD. The ORC (Optics Ready Carbine) is basically an M4 with an A3 top receiver and a short section of MIL-STD-1913 rail, just big enough for a BUIS, forward of the handguard on top of the gas block.

Variants include the TFD, which is a collaboration between Stag Arms and FAB-Defense; it is mostly a Stag Arms rifle with FAB-Defense furniture. It uses a GL-CORE telescoping stock, Stag 15 M-LOK handguard with a MIL-STD-1913 rail running the length of the top of the handguard and M-LOK slots down the sides and undersides of the handguard, an A3-type upper receiver, a rubberized AGR-43 pistol grip, and comes with an Ultimag 30R magazine, though virtually any type of AR-15/M16/M4 magazine will fit into the TFD. The barrel is 16 inches and tipped with a VG6 Epsilon muzzle brake. It is made of 4150 steel, has a government profile, and is manganese phosphate-coated. The Tactical features the Stag 15 M-LOK SL 13.5-inch handguard. This has a MIL-STD-1913 rail on top, running from the A3-type upper receiver, and a row of M-LOK slots on the sides and underside. It uses a 16-inch barrel tipped with an A2-type flash suppressor. The barrel is to the same specifications as those of the TFD. The stock is a Magpul CTR telescoping stock, and has an MOE pistol grip, MOE Enhanced trigger guard, and a chromed bolt. The stock and underside of the front of the handguard have QD sling mounts; the front can also be used to mount a bipod.

The Stag 15/15L 3Gun Elite was, as the name suggests, designed specifically for 3-Gun Competition shooters. As such, it is designed for fast and accurate shooting, and has an A3 upper receiver extended into the MIL-STD-1913 rail above the handguard. Down the sides and bottom of the Stag 15 M-LOK SL 16.5-inch Handguard are M-LOK slots, and at the end of the underside of the handguard is about an 80-millimeter length of MIL-STD-1913 rail, normally used by a 3-Gun shooter for a laser pointer, flashlight, or (as the rail section may be moved along the M-LOK slots), a foregrip. The handguard is also liberally given cooling slots. The handguard includes a free-float tube, inside of which is an 18.125-inch 416 stainless steel fluted heavy-profile barrel, tipped by a Stag 3G muzzle brake. The trigger pack is a Geissele Super 3-Gun, which has a robust feel, light pull weight, and a quick reset. The 3Gun

Elite is equipped with a Magpul ACS telescoping stock with butt trap, an MOE Ergonomic pistol grip, and an aluminum Enhanced Trigger Guard. Most non-aluminum metal parts are manganese phosphate; in addition, the bolt carrier group is chrome-lined, along with the feed ramps, and barrel extension. The bolt carrier group is an M16 group rather than an AR-15 group, which is slightly more reliable and more rapid in recovery. The magazine well is beveled, and the receivers are forged rather than stamped.

The Stag 15/15L Varminter is not only useful for hunting small, medium, and game on the small size of large; it is also useful as a Designated Marksman rifle, as it is the most accurate of the Stag 5.56mm rifles. The rifle uses a 410 stainless steel, bull profile, 24-inch barrel tipped with a target crown. It does not have threads for the mounting of any muzzle devices. The upper receiver is an A3-type, with a monolithic MIL-STD-1913 rail. The handguard is a Hogue tubular aluminum handguard with most of the tube textured for a better grip, and a sling swivel mount which doubles as a bipod mount. The bolt carrier group, like most non-aluminum parts, is manganese phosphate, and is an M16 bolt carrier group rather than an AR-15 bolt carrier group. The receivers are forged rather than stamped. The stock is a fixed Magpul Paddle-Type stock. The trigger is two-stage; the first stage takes only 2 pounds of pressure, while the second stage takes 3.5 pounds. The pistol grip is a Hogue Ergonomic Overmolded grip. A variant, the Fluted Varminter, uses a 19.125-inch bull profile fluted barrel made of 416R stainless steel, and tipped with a target crown. Another variant, the Super Varminter, is a Varminter firing 6.8mm SPC ammo, and is for most purposes built like the Varminter; it does have a 20.77-inch barrel

The Stag 15/15L LEO is essentially the same sort of carbine that is called the Tactical version in other Stag rifles. It is based on an M4A1 receiver and internals, with a 16.14-inch 4150 steel barrel with a military profile and manganese phosphated, running down a Samson Star-C free-float quad MIL-STD-1913 rail handguard. The barrel has an A2-type flash suppressor. The stock is a Mil-Spec telescoping M4-type stock, and the pistol grip is an A2-type grip. The bolt carrier group is an M16 group. Unlike most Stag rifles, the LEO has a bayonet mount. A limited-edition variant of the LEO is the LEV2 M-LOK, which replaces the handguard with a free-float 15-inch M-LOK Handguard, which has eight sides and M-LOK slots down the length of each side. The upper receiver is A3, and the rail extends about 80mm onto the handguard. The end of the top of the handguard also has an 80-millimeter rail for mounting a front sight amongst other accessories. The handguard has a slim profile.

The Stag 15/15L Valkyrie is a Stag 15 series chambered for the new .224 Valkyrie round. It is built around an 18-inch 416R stainless steel heavy-profile fluted barrel tipped with a VG6 Epsilon muzzle brake. The rifle is otherwise essentially a 3Gun in a different caliber and slightly different accessories, such as the fixed Magpul PRS stock with adjustable length and cheekpiece.

Weapon	Ammunition	Weight	Magazines	Price
Stag 15/15L Retro	5.56mm NATO	3.54 kg	5, 10, 20, 30, 40	$610
Stag 15/15L M4	5.56mm NATO	3.06 kg	5, 10, 20, 30, 40	$588
Stag 15/15L Minimalist	5.56mm NATO	2.74 kg	5, 10, 20, 30, 40	$594
Stag 15/15L ORC	5.56mm NATO	2.95 kg	5, 10, 20, 30, 40	$594
Stag 15/15L TFD	5.56mm NATO	2.98 kg	5, 10, 20, 30, 40	$638
Stag 15/15L Tactical	5.56mm NATO	2.86 kg	5, 10, 20, 30, 40	$595
Stag 15/15L 3Gun Elite	5.56mm NATO	3.45 kg	5, 10, 20, 30, 40	$671
Stag 15/15L Varminter	5.56mm NATO	4.54 kg	5, 10, 20, 30, 40	$656
Stag 15/15L Fluted Varminter	5.56mm NATO	3.4 kg	5, 10, 20, 30, 40	$604
Stag 15/15L Super Varminter	6.8mm SPC	3.53 kg	5, 10, 20, 30	$785
Stag 15/15L LEO	5.56mm NATO	3.08 kg	5, 10, 20, 30, 40	$597
Stag 15/15L LEV2 M-LOK	5.56mm NATO	2.81 kg	5, 10, 20, 30, 40	$600
Stag 15/15L Valkyrie	.224 Valkyrie	3.67 kg	5, 10, 25	$613

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Stag 15/15L Retro	SA	3	1-Nil	6	2	Nil	57
Stag 15/15L M4	SA	3	1-Nil	4/6	3	Nil	41
Stag 15/15L Minimalist	SA	3	1-Nil	4/6	3	Nil	41
Stag 15/15L ORC	SA	3	1-Nil	4/6	3	Nil	41
Stag 15/15L TFD	SA	3	1-Nil	4/6	2	Nil	40
Stag 15/15L Tactical	SA	3	1-Nil	4/6	3	Nil	40
Stag 15/15L 3Gun Elite	SA	3	1-Nil	5/6	2	Nil	51
Stag 15/15L Varminter	SA	3	1-Nil	7	2	Nil	72
Stag 15/15L Fluted Varminter	SA	3	1-Nil	6	2	Nil	54
Stag 15/15L Super Varminter	SA	3	1-2-Nil	6	4	Nil	82
Stag 15/15L LEO	SA	3	1-Nil	4/6	3	Nil	42
Stag 15/15L LEV2 M-LOK	SA	3	1-Nil	4/6	3	Nil	42
Stag 15/15L Valkyrie	SA	3	1-1-Nil	6	2	Nil	61

The Stag 16/16L M8 and M4 are Stag's versions of the M16A3 and M4A1. They are sold only to certain Law Enforcement

concerns and to the military, and are NOT sold to civilians for any reason. They have 20-inch (M8) and 14.5-inch (M4) 4150 Cr/Mo/V barrels with a heavy profile, and are tipped with an A2-type flash suppressor. The have an A3-type upper receiver and a Magpul MOE telescoping stock, along with an MOE pistol grip and Stag 15-inch (M8) or 13.5-inch (M4) handguards with quad MIL-STD-1913 rails. They do have bayonet mounts.

Weapon	Ammunition	Weight	Magazines	Price
Stag 16/16L M8	5.56mm NATO	3.84 kg	5, 10, 20, 30, 40	$820
Stag 16/16L M4	5.56mm NATO	3.36 kg	5, 10, 20, 30, 40	$762

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Stag 16/16L M8	3/5	3	1-Nil	5/6	2	3/6	57
Stag 16/16L M4	3/5	3	1-Nil	4/6	2	4/6	35

The Stag 22/22L is a rumored version of the Stag 15/15L chambered in .22 Long Rifle. While there are conversion kits for the Stag 15/15L by several companies, I have not been able to find any solid information on a .22 Stag rifle, and it is not included below. It's just a note of interest, and something to look for the future.

New Stag for 2013 is the SBR series. There are versions, left and right-handed, with short medium-profile 11.5-inch barrels or standard-profile 14.5-inch barrels. They come with plain round handguards and upper receivers with MIL-STD-1913 rails (the SBRs) or with four rails on the handguards (the SBR-Ts). Other than the barrel length, the SBRs otherwise have the quality of Model 2s and Model 3s.

Weapon	Ammunition	Weight	Magazines	Price
Stag SBR/SBR-L (11.5" Barrel)	5.56mm NATO	2.79 kg	5, 10, 20, 30, 40	$546
Stag SBR/SBR-L (14.5" Barrel)	5.56mm NATO	2.86 kg	5, 10, 20, 30, 40	$575
Stag SBR-T/SBR-TL (11.5" Barrel)	5.56mm NATO	2.83 kg	5, 10, 20, 30, 40	$546
Stag SBR-T/SBR-TL (11.5" Barrel)	5.56mm NATO	2.9 kg	5, 10, 20, 30, 40	$575

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Stag SBR/SBR-L & SBR-T/SBR-TL (11.5")	SA	2	1-Nil	3/5	3	Nil	24
Stag SBR/SBR-L & SBR-T/SBR-TL (14.5")	SA	3	1-Nil	4/5	3	Nil	34

Stoner 63A Assault Rifle (XM22/XM23)

Notes: After Eugene Stoner left Armalite, he started his own company and invented the Stoner 63 Universal Weapon System. This is a weapons system consisting of a common receiver and stock, and different bolt, feed mechanisms, and barrels to produce a carbine, assault rifle, squad automatic weapon, fixed machinegun, and standard machinegun. The two assault rifle configurations were given the military designations of XM22 (assault rifle) and XM23 (carbine). The Stoner System was tested by the US Marines, and they might have chosen it with some more development if Robert McNamara, the Secretary of Defense at the time had allowed it; instead, he was already in bed with the M16. The Army tested it, but had already invested a great deal of money in the M16. The US Navy SEALs gave it extensive combat testing in Vietnam, and also liked it. The major problem with the Stoner was the same as the M16: sensitivity to dirt. The Stoner has been described as a "do-it-yourselfer's" weapon; aside from the barrel lengths and bolt combinations, the Stoner 63A could be modified to fire from an open or closed bolt, or feed from the bottom, top, or side.

Twilight 2000 Notes: For some strange weapon, some of these weapons (or perhaps improved newer models) turned up in the hands of US Navy SEALs and Marine Recon Teams during the Twilight War. They often sported mods not dreamed of in Vietnam, such as MIL-STD-1913 rails, laser aiming modules, ACOG-type and red-dot sights, compact night vision scopes, etc.

Weapon	Ammunition	Weight	Magazines	Price
XM22	5.56mm NATO	3.54 kg	20, 30, 40, 50	$607
XM23	5.56mm NATO	3.41 kg	20, 30, 40, 50	$562

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
XM22	5	3	1-Nil	6	2	6	56
XM23	5	3	1-Nil	5	2	6	39

Tactical Weapons AR-47

Notes: The AR-47 is the descendant of long experimentation and design; in about 2000, USSOCOM asked Colt to make an M16 that fired 7.62mm Kalashnikov instead of 5.56mm NATO rounds. This weapon was intended for use behind enemy lines in Afghanistan, but only 12 were made. The Colt weapon was fed by modified 20-round M16 magazines which reliably held only 10 rounds of 7.62mm Kalashnikov ammunition. They were called the SPR-V, and were none too successful, but were promising enough that USSOCOM looked for something better. In addition, US police forces and the government were interested in the idea.

Years went by, and a new design was introduced by Tactical Weapons. This is one of the first such successful designs. The upper receiver is a modified AR-15 receiver, and the lower receiver is a *heavily* modified AR-15 lower receiver. The receivers are modified to take the larger 7.62mm Kalashnikov round, primarily by relieving both sides of the receiver while modifying the magazine well and the bolt carrier to accept the higher-riding magazines. The bolt face also has to be widened, and the extractor has to be strengthened to reliably eject the heavier 7.62mm casings. Of course, the barrel and chamber have to be modified to accept the round. The handguards are standard M16/AR-15, as is the front sight post. The top of the receiver has a MIL-STD-1913 rail, and can accept a modified M16-style sight of other optics or a detachable carrying handle with sight. The stock is the collapsible one of an M4. Military/government models have a flash suppressor, and can fire on automatic, while police and civilian models have no flash suppressor and are semiautomatic only.

Twilight 2000 Notes: Though this particular weapon was not available in the Twilight 2000 timeline, similar weapons were deployed to the Middle East, South Asia and Southeast Asia during the Twilight War. These ones were made by Colt.

Weapon	Ammunition	Weight	Magazines	Price
AR-47	7.62mm Kalashnikov	3.4 kg	10, 20, 75D	$833

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AR-47	5	4	2-Nil	5/6	4	9	44

Two Rivers Arms Tabuk

Notes: Their home page says it all: “Building What Soldiers Could Not Bring Home.” Two Rivers builds several weapons that US servicemen encountered during the various wars of the late 20th and early 21st centuries, including the Tabuk, PM-63, RPD, PSL, and MPi-KM (with more planned). Two Rivers also does custom work and supplies AK parts.

Two Rivers’ Tabuks are built to look like the Iraqi version of the AKM, with cheap-(looking) European Birch furniture, the Tabuk-shaped stock, different from that of a standard AK. (Not generally known is that the Tabuk is based on the Yugoslavian M70B1 and M70AB2 versions of the AKM, rather than standard Russian AKMs.) The handguards are flat-sided and have three cooling slots, and the pistol grip is polymer with the distinctive rake angle and ribbed surface. Two Rivers’ interpretation is faithful enough that most shooters will not have to further modify their Tabuks to make them look like Iraqi Tabuks. Markings are generally in the Iraqi dialect of Arabic, except where required by US law. The rifles even have markings representing Iraqi arms rooms’ stock numbers. They have bayonet lugs, which will fit the Bulgarian Type II bayonet, the standard for Iraqi forces. The selector lever has three markings for settings (Arabic for safe, auto, and semi), though of course the Two Rivers Tabuk can only be set on Safe and semiautomatic.

A difference between the original and it’s Two Rivers version is that the barrel bore is chromed, though upon request Two Rivers will substitute a former Yugoslavian-made barrel that is not chromed. (Most “real” AKs do not have chromed bores.) The barrel itself is 16.2 inches, and tipped with an AKM-type muzzle device. Their finish is “hot blued” – a sort of baked-on bluing, true to the original. The rifle even comes with reproductions of the TB and manual issued to the troops with their actual Tabuks. (And *they* are in the Iraqi dialect of Arabic, too.)

The Iraqis grew their Tabuk assault rifle into a sort of “sniper rifle lite,” and this is reproduced in the Two Rivers Tabuk Sniper. Tabuk Snipers were never meant to be actual sniper rifles; they were more Designated Marksman’s Rifles, and one of the most common uses was to team them with RPK teams to take out enemy machinegunners and other stubborn targets. They were meant to take out targets beyond the range of the Tabuk assault rifle. The receiver is based on the RPK, with an Al Quds RPK’s sights, and are often seen using 5, 10, and 20-round magazines, though they can also use standard AK/RPK magazines. The Two Rivers Tabuk Sniper has a side-mounted optics rail, and is available with the Iraqi standard Zrak Contract Scope, the 4x ON-M99, or the Romanian or Russian versions of the 4x PSO. Like the standard Tabuk Sniper, finish is hot-blued. Furniture is European Beech; there are no folding stock Tabuk Snipers. The stock has a lightening hole in the stock, making it almost skeletonized. The stocks have a raised, padded cheekpiece. The barrel is an elongated 23.6 inches, tipped with a long flash suppressor. Unlike the Two Rivers Tabuk, the Tabuk Sniper is for game purposes a sniper rifle, and are equipped with better barrels and a telkescopic sight as standard, though they do not have a bipod.

Weapon	Ammunition	Weight	Magazines	Price
Two Rivers Tabuk WS	7.62mm Kalashnikov	3.72 kg	5, 10, 20, 30, 40, 75D	$789
Two Rivers Tabuk FS	7.62mm Kalashnikov	3.4 kg	5, 10, 20, 30, 40, 75D	$819
Two Rivers Tabuk Sniper	7.62mm Kalashnikov	4.49 kg	5, 10, 20, 30, 40, 75D	$1088

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Two Rivers Tabuk WS	SA	4	2-Nil	6	4	Nil	45
Two Rivers Tabuk FS	SA	4	2-Nil	4/6	4	Nil	45
Two Rivers Tabuk Sniper	SA	4	2-3-Nil	8	4	Nil	76

Ultimate Arms M4-AR Black Widow

Notes: Though also made of Ultimate Arms' proprietary lightweight alloy, the alloy used on the Black Widow is…less intense than the ZK Magna used on the Warmonger. The metal alloy used on the Black Widow is called Magna T5, and it is a primarily stainless steel and magnesium alloy with a few other metals known only to Ultimate Arms. The result is a rifle that looks like many other M4-based carbines with a 16-inch barrel, but you pick it up and…it's really light. The sliding stock looks like a Magpul construction and has six positions. It's also uniformly flat black in color, hence the name. (All it needs is a spider under its barrel!) The top has a Picatinny Rail extending from the rear of the receiver to the end of the handguard, and there are three other rails on the other sides of the handguard.

The 16-inch barrel has a medium profile, but like other Ultimate Arms barrels, is made from ZK Magna and is match-quality and has a treatment equivalent to being cold-forged. At the tip is a slightly longer version of the A2 flash suppressor.

On the top of the handguard, the Black Widow comes with adjustable front and rear sights which can be removed to move them to the optimal position for the shooter or to mount another optic. Two magazines are included which are the same color as the rifle (though they are polymer). Also included in the package is a foregrip, which may be attached to the lower rail.

Some agencies in the US Government and Military as well as police departments are reputedly looking at this weapon, so I have included automatic fire figures s below, just in case.

Weapon	Ammunition	Weight	Magazines	Price
M4-AR Black Widow	5.56mm NATO	2.27 kg	5, 10, 20, 30	$629

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
M4-AR Black Widow	5	3	1-Nil	4/6	3	8	43

Universal Model 1256 Ferret

Notes: This is an M-1 Carbine modified to fire the .256 Winchester Magnum round, in an attempt to increase the stopping power of the M-1 Carbine. Introduced in the late 1970s, it was popular for only a few years before being phased out in the mid-1980s, and few were actually sold.

Weapon	Ammunition	Weight	Magazines	Price
Universal 1256 Ferret	.256 Winchester Magnum	3 kg	15, 30	$560

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Universal 1256 Ferret	SA	3	1-Nil	6	3	Nil	50

Vector Arms V53

Notes: This is basically an HK93 rifle with a chopped barrel – essentially an HK93 dropped down to MP5 size. The barrel has been cut down to 8.3 inches, and equipped with a flash suppressor. Though it is primarily sold as a semiautomatic short-barreled rifle, Vector Arms will also supply it in a full-automatic version to law-enforcement, military, and Class III dealers. Like most Vector Arms weapons, the fit and finish are excellent, and unlike many such clones, it is not a "slapped together" conglomeration of odd parts. As might be suspected from such a short-barreled weapon, the muzzle blast and noise are great, but the recoil and muzzle climb are not what is normally expected from such a short-barreled rifle. The V53 can be had with a fixed or sliding stock, and with the barrel /flash suppressor combination or a faux silencer to bring the barrel length to 16 inches for legal purposes (although designed before the sunset of the Brady Gun Bans, it was not sold until afterwards).

Twilight 2000 Notes: This weapon does not exist.

Weapon	Ammunition	Weight	Magazines	Price
V53 (Fixed Stock)	5.56mm NATO	3.05 kg	10, 20, 30	$481
V53 (Folding Stock)	5.56mm NATO	3.05 kg	10, 20, 30	$501

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
V53 (Fixed Stock)	5	2	1-Nil	4	1	5	13
V53 (Folding Stock)	5	2	1-Nil	3/4	1	5	13

Vltor TS-3

Notes: This carbine was featured on the 13 Sep 11 episode of *Top Shot*, where it was complimented by the shooters as the best combination of features and components they had seen in an AR platform. The TS-3 is intended to be an evolutionary development of the M4, designed partly by asking M4 users what improvements they would like to see on their M4s. The improvements Vltor made included the TS-3 Lower Receiver, which has a beveled magazine well, an oversized magazine release button, and a three-position quick detach single-point sling mount. The VIS-2A-AK upper receiver is called by Vltor "polylithic," which combines the advantages of

a monolithic receiver/MIL-STD-1913 rail and free floating barrel attachment point. The trigger pack is by Geissele and is a National Match DMR trigger and hammer. The stock is a Vltor EMod (Enhanced Modstock) with a recoil pad, multiple sling attachment points, and storage for up to eight AA batteries of three 9-volt batteries; the stock has seven extension points instead of the usual six. The Noveske cold-hammer-forged 15-inch barrel (the Vltor VC-A1 flash suppressor brings the rifle to the required 16.25 legal inches) has a mid-length gas system; the flash suppressor is permanently mounted. The charging handle is a Bravo Gunfighter Charging Handle, with oversized ears and latch. From TangoDown comes SCAR-type MIL-STD-1913 rails and covering panels; the rails are four-point for the handguard, and the top rail interlocks with the receiver rail. BUIS sights which attach to the upper rails are by Diamondhead. As some countries' police and military forces have shown some interest, I have included auto fire stats; not however that Vltor has not announced such a selector group.

Weapon	Ammunition	Weight	Magazines	Price
TS-3	5.56mm NATO	3.44 kg	5, 10, 20, 30	$657

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
TS-3	5	3	1-Nil	4/5	2	5	36

Wilson Combat Tactical Rifles (1st Iteration)

Notes: Wilson Combat produced a number of tactical rifles based on the AR-15/M16/M4 in the mid-to-late 1990s and early 2000s. These were primarily designed for military and SWAT/SRT-type police use, the SM-15 being a notable exception. Nonetheless (especially in the world before the Brady Gun bans), semiautomatic versions were available to civilians.

The UT-15 is an AR-15 derivative that was designed by Bill Wilson to be an inexpensive combat carbine for law enforcement and civilian use; reputedly, versions also exist for military use (I have provided for this below). Despite the lesser (real-world) price, The Tactical Rifle series is well known for precision the precision forgings and machining used in their construction, as well as the hand-fitted parts. Initially, the Tactical Rifle series were available only in 5.56mm NATO, but other chamberings have been added over time.

The UT (Urban Tactical)-15 has many of the refinements of military M16s and M4s – an ergonomic rubber pistol grip, a MIL-STD-1913 rail on the top of the receiver in lieu of a carrying handle, short M4-style handguards with four-way Picatinny-style rails for equipment additions, and a muzzle brake instead of a standard flash suppressor. In addition, the match-grade barrel is free-floated for additional accuracy, and the 16.25-inch barrel is fluted to reduce weight. The rear sight is of the flip-up variety and is removable. The stock is an M4-type sliding stock. The metalwork is finished in a coating called NP3, a combination of Teflon, electroless nickel, and some other ingredients. NP3 allows the UT-15 to work much better when dirty; it also makes cleaning much easier and minimizes the need for lubrication. At the buyer's option, the metal exposed to the elements may be further coated with ArmorTuff, which resists corrosion and wear. Though the standard finish is black, OD green, tan and gray are also available.

The M4T is related to the UT-15, but is designed primarily as an entry weapon. The M4T is made with an upper and lower receiver of even tougher 7075 T6 aluminum forgings. The stock is a sliding M4-type stock, but the length can be more finely adjusted. The barrel is similar to that of the UT-15, but is not fluted. The trigger group may be a precision JP target group, or a tactical trigger group.

The SM-15 is described as a "no frills tactical rifle." It is basically a version of the AR-15 with a shorter 16.25-inch barrel and a Weaver rail on top instead of the standard carrying handle, and M4-style handguards. The law enforcement version has a collapsible stock, while the civilian model has a fixed stock. The civilian model also does not have a flash suppressor.

The SS-15 (Super Sniper) is included here for completeness; however it is a tactical marksman's rifle rather than an assault rifle, and can also be used as a civilian hunting and target rifle. The 20-inch barrel of the SS-15 is of extra-heavy profile, free-floating, fluted, premium match-grade, and made of stainless steel, with a target crown instead of a flash suppressor or muzzle brake. The upper and lower receivers are of 7075 T6 aluminum forgings. Standard finish is black (Parkerized on aluminum parts and ArmorTuff on steel parts), with a black polymer M16A2-type stock; OD green, tan, and gray finishes are also available. The receiver halves are also hard-anodized, and the working parts are coated with NP3. The upper receiver is topped by MIL-STD-1913 rail, as well as folding front and rear sights; another very short length of MIL-STD-1913 rail is found over the gas block. The pistol grip is an improved version of an M16A2-type pistol grip, called an ERGO grip. The handguards are of aluminum, ventilated, and round, with ribs for gripping. The trigger group is a match-quality JP group (competition or tactical type) that is tuned to be crisp and smooth. A removable light bipod adjustable for height and cant is attached under the front of the handguards; the front sling swivel is attached to the same point. A telescopic sight is included in the price below.

It should be noted that the UT-15, M4T, and SM-15 are not listed on Wilson Combat's web site as of the time of this writing (mid-May 2012).

Twilight 2000 Notes: It should be noted that the UT-15, M4T, and SM-15 are not listed on Wilson Combat's web site as of the time of this writing (mid-May 2012). The SM-15 and SS-15 are not available in the Twilight 2000 timeline in any case.

Weapon	Ammunition	Weight	Magazines	Price
UT-15	5.56mm NATO	3.13 kg	5, 10, 20, 30	$645
M4T	5.56mm NATO	3.13 kg	5, 10, 20, 30	$647
SM-15 (Civilian)	5.56mm NATO	2.95 kg	5, 10, 20, 30	$562
SM-15 (LE)	5.56mm NATO	2.95 kg	5, 10, 20, 30	$587
SS-15	5.56mm NATO	3.95 kg	5, 10, 20, 30	$1120

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
UT-15	3	3	1-Nil	4/6	2	3	43
M4T	5	3	1-Nil	4/6	2	5	44
SM-15 (Civilian)	SA	3	1-Nil	5	3	Nil	41
SM-15 (LE)	SA	3	1-Nil	4/6	3	Nil	41
SS-15	SA	3	1-Nil	6	2	Nil	61
With Bipod	SA	3	1-Nil	5	1	Nil	79

Wilson Combat Recon Tactical Rifles

Notes: In about 2006 (I'm not sure; if someone knows, tell me) Wilson Combat revamped, dressed up, brought new calibers and barrels, and essentially turned the Wilson Combat Tactical Rifles line into rifles much different from the original Tactical Rifles design. These rifles are designed for civilian, police, park ranger, and military use. (Reports of active military use, unfortunately, remain rumors.)

The Recon SR Tactical is designed not only as an entry weapon, but as a short-ranged suppressed weapon. The Recon SR Tactical has handguards that are equipped with Wilson Combat's TRIM Rail – essentially a handguard with four MIL-STD-1913 rails.

This fits around the 14.7-inch barrel, which free-floats inside the handguard. The Recon SR Tactical is specially designed for easy mounting, dismounting, and use of the Whisper Suppressor. (The standard muzzle attachment is the Accu-Tac muzzle brake, which, except in jurisdictions which prohibit it, can also be quickly mounted or dismounted.) A number of muzzle brakes and flash suppressors can also be mounted. Despite the 14.7-inch barrel, the Recon SR Tactical has a 13.8-inch TRIM Rail handguard with three MIL-STD-1913 rails; the top rail joins with the rail atop the receiver, the side rails are very short and adjustable, and the underside rail is full-length. The barrel is free-floating and match-grade, and the barrel has an M4-type feed ramp. The pistol grip is an Ergo pistol grip, similar in shape to the M4 and M16's pistol grip, but with a softer grip due to a thin layer of rubber. The trigger guard is enlarged somewhat. The trigger itself is a Wilson Combat TTU, which is designed to have a shorter pull length and lighter pull weight. The sliding stock is a Rogers/Wilson Super-Stoc, a skeletonized stock with a textured rubber grip butt plate and a compartment for batteries like might be used in optics. The entire rifle is NP3-coated, with an outer finish that is black Armor-Tuff over a Mil-Spec hard anodizing. Interior parts, except for the bore of the barrel (which is chromed), have an Armor-Tuff finish over the NP-3.

The Recon Tactical uses the same basic heart as the Recon SR Tactical, but uses a match-grade medium-weight free-floating barrel that is fluted along the last third of its length to reduce weight somewhat. Most of the components around the receiver are the same as on the Recon SR Tactical, as are the finishes and coatings. The stock used is also the same. Unlike the Recon SR Tactical, the Recon Tactical has BUIS fitted as standard, though of course they can be easily removed or folded down as to not interfere with optics. The barrel length depends on the caliber, from the 16 inches of the 5.56mm NATO or .300 Blackout, 16 or 18 inches of the 6.8mm SPC, the 18 inches of the .204 Ruger, or the 16, 18, or 20 inches of the 7.62mm WT. Barrels in all cases are made from stainless steel. The gas block is made to a low profile to help keep from obstructing optics. Though related to the Recon SR Tactical, the Recon Tactical is a heavier and stronger build. The handguards and upper receiver have the same TRIM Rail System, but the handguards are still the same length as those of the Recon SR Tactical. Note that while the .204 Ruger version is designed primarily for civilian use, it can also take flash suppressors, muzzle brakes, and take silencers and sub-loaded rounds.

The SBR Tactical (Short Barreled Rifle) looks very much like a shorter-barreled version of the Recon SR. The SBR Tactical also has the TRIM rail system, again with the top rail contiguous with the upper receiver rail and extending to the gas block. The lower rail extends the length of the handguard, and the sides have short (about 76mm long) rails that can be placed anywhere along the sides of the handguards. The SBR Tactical is equipped with folding BUIS as standard. The pistol grip, stock, and finish are the same as above. The barrel is a short 11.3 inches; it can be tipped with a flash suppressor, muzzle brake, or a silencer (normally the Wilson Combat-designed compact Whisper Suppressor). The barrel is match-quality and free-floating. Construction standards are the same as on other Wilson Combat Tactical Rifles. The SBR Tactical is specifically designed for police or military use; in most countries and jurisdictions in the world, special (and usually expensive) permits, lots of paperwork, and long waiting periods are required for a civilian to own one, particularly if it has automatic capability.

The SPR (Special Purpose Rifle) is based on a designated marksman rifle version of the AR-15 called the Mark 12 Mod X. The SPR is of equal utility to military designated marksmen, police, target shooters, or civilian hunters. As with the other rifles here, it is equipped with the TRIM rail system. The SPR has other features in common with other Wilson Combat Tactical Rifles, including the low-profile gas block, a BUIS, the Wilson Combat TTU trigger pack, the enlarged trigger guard, the Rogers/Wilson stock, the Ergo pistol grip, and the finish. However, the SPR is essentially a small-caliber sniper rifle and has some features that the other rifles in this section do not. The SPR has a very high-quality 18-inch barrel, which is match-grade, free-floating, heavy-profile, and tipped with an Accu-Tac flash suppressor (though it can also take a muzzle brake or the Whisper silencer). The lower MIL-STD-1913 rail normally has a light bipod, though it can be easily removed. Unlike the other rifles in this section, the SPR comes only in a version chambered in 5.56mm NATO. Various scopes or other optics can be mounted; the standard is a Trijicon Accupoint 3-9x40mm scope.

The Super Sniper is, and the name would indicate, a true, if small-caliber, sniper rifle. The chambering of .223 Wylde allows the Super Sniper to use 5.56mm NATO military or .223 Remington civilian ammunition with (in game terms) equal results. Unlike other members of the Tactical Rifles family, the Super Sniper is normally equipped with non-folding, AR-15A2-type stock, though it still has the Ergo pistol grip, TTU trigger pack, and TRIM rails, the same finish and coatings, and can be had with a sliding stock if desired. The Super Sniper does not normally come with BUIS sights. The Super Sniper is equipped with a hardened bolt and bolt carrier group. The Super Sniper's barrel is a full 20 inches, with a fluted stainless steel bull barrel which is floating, match grade and a target crown. Unfortunately, the special profile barrel means that the Super Sniper cannot mount a flash suppressor, muzzle brake, or silencer. (It could use subsonic ammunition, but there's little point in doing that.) A bipod is normally mounted on the bottom MIL-STD-1913 rail, but of course it is easily removed and installed.

The Tactical Lightweight is a lighter version of the Recon Tactical. It has most of the same features as the Recon Tactical, but weight has been trimmed by using a barrel made of lighter but strong steel (It's still a medium weight barrel), aluminum handguards, and aluminum MIL-STD-1913 rails on its TRIM handguards. The Tactical Lightweight retains the Ergo pistol grip, the Rogers/Wilson sliding stock, the TTU trigger pack, the TRIM rail system, and the BUIS backup iron sights. The finish and coatings are the same as on the Recon Tactical. The barrel is 16 inches long, and can mount the same muzzle devices as the Recon Tactical. The barrel has a medium profile, is match-quality, and is free floating. The Tactical Lightweight is meant to be a light, handy carbine; the marketing is targeted primary at police departments, and police and civilian models are semiautomatic-only.

Versions of these rifles in .300 Blackout and 7.62mm WT are essentially the same in fit and finish, except as noted above, the caliber changes and the changes in the rifle (usually the upper receiver and barrel) necessary to accommodate this change. Note that since the .300 Blackout is normally subsonic, no line is provided below for the .300 Blackout with a suppressor with subsonic ammunition. Note further that the versions in 7.62mm WT can feed from any 5.56mm magazine, except for the exotic (100-Round C-

Mag, 90mm MWG, etc).
The 6.8mm version of the Tactical Custom (A Recon Tactical which has been greatly modified by Wilson Combat's Custom shop) has been nicknamed by firearms expert Paul Markel the "Hoginator," due to its ability to take down wild boar at long range and with great accuracy (though the skill of Mr Markel with a rifle no doubt plays into this).

Twilight 2000 Notes: These rifles are not available in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
Recon SR Tactical (Flash Suppressor)	5.56mm NATO	2.86 kg	5, 10, 20, 30	$584
Recon SR Tactical (Muzzle Brake)	5.56mm NATO	3.01 kg	5, 10, 20, 30	$629
Recon SR Tactical (Flash Suppressor)	6.8mm SPC	3.31 kg	5, 10, 20, 30	$724
Recon SR Tactical (Muzzle Brake)	6.8mm SPC	3.83 kg	5, 10, 20, 30	$768
Recon SR Tactical (Flash Suppressor)	.300 Blackout	3.18 kg	5, 10, 20	$765
Recon SR Tactical (Muzzle Brake)	.300 Blackout	3.5 kg	5, 10, 20	$807
Recon Tactical SR (Flash Suppressor)	7.62mm WT	4.78 kg	10, 20, 30	$884
Recon SR Tactical (Muzzle Brake)	7.62mm WT	4.97 kg	10, 20, 30	$885
Recon Tactical (Flash Suppressor)	.204 Ruger	3.18 kg	5, 10, 20	$571
Recon Tactical (Muzzle Brake)	.204 Ruger	3.38 kg	5, 10, 20	$616
Recon Tactical (Flash Suppressor)	5.56mm NATO	3.23 kg	5, 10, 20, 30	$599
Recon Tactical (Muzzle Brake)	5.56mm NATO	3.33 kg	5, 10, 20, 30	$645
Recon Tactical (Flash Suppressor, 16" Barrel)	6.8mm SPC	3.54 kg	5, 10, 20, 30	$740
Recon Tactical (Muzzle Brake, 16" Barrel)	6.8mm SPC	3.59 kg	5, 10, 20, 30	$763
Recon Tactical (Flash Suppressor, 18" Barrel)	6.8mm SPC	3.59 kg	5, 10, 20, 30	$762
Recon Tactical (Muzzle Brake, 18" Barrel)	6.8mm SPC	3.64 kg	5, 10, 20, 30	$804
Recon Tactical (Flash Suppressor)	.300 Blackout	3.63 kg	5, 10, 20	$780
Recon Tactical (Muzzle Brake)	.300 Blackout	3.68 kg	5, 10, 20	$821
Recon Tactical (Flash Suppressor, 16" Barrel)	7.62mm WT	3.78 kg	10, 20, 30	$859
Recon Tactical (Muzzle Brake, 16" Barrel)	7.62mm WT	3.83 kg	10, 20, 30	$900
Recon Tactical (Flash Suppressor, 18" Barrel)	7.62mm WT	3.83 kg	10, 20, 30	$881
Recon Tactical (Muzzle Brake, 18" Barrel)	7.62mm WT	3.88 kg	10, 20, 30	$921
Recon Tactical (Flash Suppressor,	7.62mm WT	3.88 kg	10, 20, 30	$903

20" Barrel)				
Recon Tactical (Muzzle Brake, 20" Barrel)	7.62mm WT	3.93 kg	10, 20, 30	$943
SBR Tactical (Flash Suppressor)	5.56mm NATO	2.86 kg	5, 10, 20, 30	$549
SBR Tactical (Muzzle Brake)	5.56mm NATO	2.94 kg	5, 10, 20, 30	$594
SBR Tactical (Flash Suppressor)	6.8mm SPC	3.18 kg	5, 10, 20, 30	$688
SBR Tactical (Muzzle Brake)	6.8mm SPC	3.27 kg	5, 10, 20, 30	$733
SBR Tactical (Flash Suppressor)	.300 Blackout	3.27 kg	5, 10, 20	$730
SBR Tactical (Muzzle Brake)	.300 Blackout	3.36 kg	5, 10, 20	$772
SBR Tactical (Flash Suppressor)	7.62mm WT	3.43 kg	10, 20, 30	$807
SBR Tactical (Muzzle Brake)	7.62mm WT	3.52 kg	10, 20, 30	$850
SPR (Flash Suppressor)	5.56mm NATO	4.03 kg	5, 10, 20, 30	$1285
SPR (Muzzle Brake)	5.56mm NATO	4.14 kg	5, 10, 20, 30	$1330
Super Sniper	.223 Wylde or 5.56mm NATO	4.34 kg	5, 10, 20, 30	$1325
Tactical Lightweight (Flash Suppressor)	5.56mm NATO	3.03 kg	5, 10, 20, 30	$605
Tactical Lightweight (Muzzle Brake)	5.56mm NATO	3.18 kg	5, 10, 20, 30	$650
Tactical Lightweight (Flash Suppressor)	6.8mm SPC	3.03 kg	5, 10, 20, 30	$758
Tactical Lightweight (Muzzle Brake)	6.8mm SPC	3.18 kg	5, 10, 20, 30	$801
Tactical Lightweight (Flash Suppressor)	.300 Blackout	3.03 kg	5, 10, 20	$766
Tactical Lightweight (Muzzle Brake)	.300 Blackout	3.18 kg	5, 10, 20	$807
Tactical Lightweight (Flash Suppressor)	7.62mm WT	3.03 kg	5, 10, 20	$843
Tactical Lightweight (Muzzle Brake)	7.62mm WT	3.18 kg	5, 10, 20	$885
Tactical Lightweight (Flash Suppressor)	.458 SOCOM	3.03 kg	5, 10, 14	$2094
Tactical Lightweight (Muzzle Brake)	.458 SOCOM	3.18 kg	5, 10, 14	$2122

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Recon SR Tactical (5.56mm, Flash Suppressor)	5	3	1-Nil	4/5	3	6	37
Recon SR Tactical (5.56mm, Muzzle Brake)	5	3	1-Nil	4/5	2	5	37
Recon SR Tactical (5.56mm, Silencer)	5	3	1-Nil	6/7	2	6	31
Recon SR Tactical (5.56mm, Silencer, Subsonic)	5	2	1-Nil	6/7	1	3	26
Recon SR Tactical (6.8mm, Flash Suppressor)	5	3	1-2-Nil	5/6	3	6	50

Recon SR Tactical (6.8mm, Muzzle Brake)	5	3	1-2-Nil	5/6	2	4	50
Recon SR Tactical (6.8mm, Silencer)	5	3	1-2-Nil	6/7	2	5	35
Recon SR Tactical (6.8mm, Suppressor, Subsonic)	5	2	1-Nil	6/7	2	4	26
Recon SR Tactical (.300, Flash Suppressor)	5	3	2-Nil	5/6	4	9	42
Recon SR Tactical (.300, Muzzle Brake)	5	3	2-Nil	5/6	3	7	42
Recon SR Tactical (.300, Silencer)	5	3	2-Nil	6/7	4	9	35
Recon SR Tactical (7.62mm, Flash Suppressor)	5	4	1-2-Nil	5/6	3	8	50
Recon SR Tactical (7.62mm, Muzzle Brake)	5	4	1-2-Nil	5/6	2	6	50
Recon SR Tactical (7.62mm, Silencer)	5	3	1-2-Nil	6/7	3	8	35
Recon SR Tactical (7.62mm, Silencer, Subsonic)	5	3	1-Nil	6/7	2	5	26
Recon Tactical (.204, Flash Suppressor)	5	3	1-Nil	5/6	2	6	44
Recon Tactical (.204, Muzzle Brake)	5	3	1-Nil	5/6	2	5	44
Recon Tactical (.204, Silencer)	5	3	1-Nil	7/8	2	6	37
Recon Tactical (.204, Silencer, Subsonic)	5	2	1-Nil	7/8	1	3	32
Recon Tactical (5.56mm, Flash Suppressor)	5	3	1-Nil	5/6	2	6	43
Recon Tactical (5.56mm, Muzzle Brake)	5	3	1-Nil	5/6	2	4	43
Recon Tactical (5.56mm, Silencer)	5	3	1-Nil	6/7	2	6	36
Recon Tactical (5.56mm, Silencer, Subsonic)	5	2	1-Nil	6/7	1	3	29
Recon Tactical (6.8mm, 16”, Flash Suppressor)	5	3	1-2-Nil	5/6	3	6	48
Recon Tactical (6.8mm, 16”, Muzzle Brake)	5	3	1-2-Nil	5/6	2	5	48
Recon Tactical (6.8mm, 16”, Silencer)	5	3	1-Nil	7/8	2	6	40
Recon Tactical	5	3	2-Nil	7/8	2	6	29

(6.8mm, 16", Silencer, Subsonic)							
Recon Tactical (6.8mm, 18", Flash Suppressor)	5	3	1-2-Nil	5/6	3	6	69
Recon Tactical (6.8mm, 18", Muzzle Brake)	5	3	1-2-Nil	5/6	2	5	69
Recon Tactical (6.8mm, 18", Silencer)	5	3	1-Nil	8/9	2	6	57
Recon Tactical (6.8mm, 18", Silencer, Subsonic)	5	3	2-Nil	8/9	2	6	39
Recon Tactical (.300, Flash Suppressor)	5	3	2-Nil	5/6	4	9	48
Recon Tactical (.300, Muzzle Brake)	5	3	2-Nil	5/6	3	7	48
Recon Tactical (.300, Silencer)	5	3	2-Nil	8/9	3	7	40
Recon Tactical (7.62mm, 16" Flash Suppressor)	5	4	1-2-Nil	5/6	4	9	57
Recon Tactical (7.62mm, 16" Muzzle Brake)	5	4	1-2-Nil	5/6	3	7	57
Recon Tactical (7.62mm, 16", Silencer)	5	4	2-Nil	8/9	3	7	48
Recon Tactical (7.62mm, 16", Silencer, Subsonic)	5	3	1-Nil	8/9	2	6	35
Recon Tactical (7.62mm, 18" Flash Suppressor)	5	4	1-2-3	6/7	4	9	68
Recon Tactical (7.62mm, 18" Muzzle Brake)	5	4	1-2-3	6/7	3	7	68
Recon Tactical (7.62mm, 18", Silencer)	5	4	2-3-Nil	8/9	3	7	57
Recon Tactical (7.62mm, 18", Silencer, Subsonic)	5	3	1-1-Nil	8/9	2	6	39
Recon Tactical (7.62mm, 20" Flash Suppressor)	5	4	1-2-3	6/7	4	9	77
Recon Tactical (7.62mm, 20" Muzzle Brake)	5	4	1-2-3	6/7	3	7	77
Recon Tactical (7.62mm, 20", Silencer)	5	4	2-3-Nil	8/9	3	7	65
Recon Tactical	5	3	1-1-Nil	8/9	2	6	43

(7.62mm, 20", Silencer, Subsonic)							
SBR Tactical (5.56mm, Flash Suppressor)	5	2	1-Nil	3/5	3	6	25
SBR Tactical (5.56mm, Muzzle Brake)	5	2	1-Nil	3/5	2	5	25
SBR Tactical (5.56mm, Silencer)	5	2	1-Nil	5/7	2	5	21
SBR Tactical (5.56mm, Silencer, Subsonic)	5	2	1-Nil	5/7	1	3	19
SBR Tactical (6.8mm, Flash Suppressor)	5	3	1-1-Nil	3/5	3	6	34
SBR Tactical (6.8mm, Muzzle Brake)	5	3	1-1-Nil	3/5	2	5	34
SBR Tactical (6.8mm, Silencer)	5	3	1-Nil	5/7	2	5	28
SBR Tactical (6.8mm, Silencer, Subsonic)	5	2	1-Nil	5/7	2	5	23
SBR Tactical (.300, Flash Suppressor)	5	3	2-Nil	4/5	3	7	29
SBR Tactical (.300, Muzzle Brake)	5	3	2-Nil	4/5	2	5	29
SBR Tactical (.300, Silencer)	5	3	2-Nil	6/8	2	5	24
SBR Tactical (7.62mm, Flash Suppressor)	5	3	1-2-Nil	4/5	3	6	34
SBR Tactical (7.62mm, Muzzle Brake)	5	3	1-2-Nil	4/5	2	5	34
SBR Tactical (7.62mm, Silencer)	5	3	1-Nil	6/8	2	5	28
SBR Tactical (7.62mm, Silencer, Subsonic)	5	3	2-Nil	6/8	2	5	23
SPR (Flash Suppressor)	SA	3	1-Nil	5/6	2	Nil	52
With Bipod	SA	3	1-Nil	5/6	1	Nil	68
SPR (Muzzle Brake)	SA	3	1-Nil	5/6	2	Nil	52
With Bipod	SA	3	1-Nil	5/6	1	Nil	68
SPR (Silencer)	SA	3	1-Nil	7/8	2	Nil	44
With Bipod	SA	3	1-Nil	7/8	1	Nil	57
SPR (Silencer, Subsonic)	SA	2	1-Nil	7/8	2	Nil	33
With Bipod	SA	2	1-Nil	7/8	1	Nil	43
Super Sniper	SA	3	1-Nil	6	2	Nil	61
With Bipod	SA	3	1-Nil	6	1	Nil	79
Tactical Lightweight (5.56mm, Flash	5	3	1-Nil	4/5	3	6	44

Suppressor)							
Tactical Lightweight (5.56mm, Muzzle Brake)	5	3	1-Nil	4/5	2	5	44
Tactical Lightweight (6.8mm, Flash Suppressor)	5	3	1-2-Nil	5/6	3	7	54
Tactical Lightweight (6.8mm, Muzzle Brake)	5	3	1-2-Nil	4/6	2	5	54
Tactical Lightweight (.300, Flash Suppressor)	5	3	2-Nil	5/6	4	9	44
Tactical Lightweight (.300, Muzzle Brake)	5	3	2-Nil	4/6	3	7	44
Tactical Lightweight (7.62mm WT, Flash Suppressor)	5	4	2-Nil	5/6	4	10	45
Tactical Lightweight (7.62mm WT, Muzzle Brake)	5	4	2-Nil	4/6	3	7	45
Tactical Lightweight (.458, Flash Suppressor)	5	6	1-3-Nil	5/7	5	13	45
Tactical Lightweight (.458, Muzzle Brake)	5	6	1-3-Nil	5/7	4	10	45

Windham Weaponry Assault Rifles (and a Battle Rifle, too…)

Notes: for the most part, Windham Arms makes more-or-less AR-15/AR-10 clones, most of which are very close in detail to military and police AR-15s, or for that matter Colt AR-15/AR-10s. A closer examination, however reveals tome differences. Barrels are 4150 Chrome-Moly-Vanadium steel; this gives them resistance to wear and fouling, as well as ease of maintenance. The receivers, top and bottom, are of 7075 T6 aluminum, and the heat shields in the handguards also are made of this aluminum grade. A number of “special touches” have been added or modified from original parts to make the Windham Rifle more reliable, easier to maintain, and in some cases, more accurate. The trigger guard is made as part of the same assembly as the lower receiver.

One thing. I have placed figures for automatic versions, though they *do not officially exist*.

The SRC308 is an AR-10 clone. The SRC308 has a 16.5-inch medium-profile barrel, and is tipped with a A2-type flash suppressor. In front of the carbine-length handguards is a low-profile gas block. The handguards are standard AR fair, they are round and polymer. Controls are not ambidextrous, but to show indicators on the opposite side to aid in seeing what position a control is in. The pistol grip is by Hogue; is it overmolded and the fingers and hand can sink a bit into the grip if necessary. The upper receiver is topped with a MIL-STD-1913 rail, as is the top of the gas block. Iron sights are not sold with the SRC308. The entire SRC308 is finished in black, with external metal finished in Hardcoat Black Anodize. The stock is an M4-type sliding stock (except for the Windham Weaponry decal).

The 5.56mm Windham Weaponry rifles differ by degree, but that degree can be large. The TimberTec Camo SRC is sort of a base edition; in addition to the details in the first paragraph. The TimberTec Camo SRC can take any sort of magazine a standard AR-15 can take. The barrel, ejection port cover, and exterior of the barrel is finished in Hardcoat Black Anodize; the rest, including the stock (but not the magazine); virtually all the rest are finished in TimberTec Camo, over the Hardcoat Black Anodize. The 16-inch barrel has a military profile with an A2-type flash suppressor. The stock is an M4-type sliding stock. A variant of this rifle was the TruTimber Snowfall Camo SRC; instead of the Timber finish, the rifle has snow camouflage.

The Carbon Fiber SRC is a significant departure from the standard AR clone: The upper and lower receivers are made from carbon fiber instead of aluminum. The result is a rifle much lighter than a standard AR, and with new technology, as tough as aluminum. Other construction is the same as the weapons above. This sort of weapon hasn’t been tried in 15 years, and the carbon fiber AR clones tried at the time failed regularly and easily. The Carbon Fiber SRC is built of far stronger composites. A “California Compliant” version differs primarily in not having a bayonet lug.

The CDI is not made of carbon fiber; it differs from the TimberTec in the finish and the sheer amount of MIL-STD-1913 rails present. The upper receiver is based on the military M4A4, with a monolithic rail atop this receiver. This rail continues down the mid-length handguards to connect to the mini-rail above the low-profile gas block. Removable rails are found on either side of the handguards, running virtually the entire length of the handguard. A half-length rail is found under the handguard; anything could be attached here, but Windham Weaponry sells the CDI with a Magpul AFG angled grip. Folding BUIS come with the rifle, with the rear BUIS being fully adjustable. The barrel is 16 inches, and tipped by a Vortex muzzle brake. The barrel is military profile, made of 4150 Chrome Moly Vanadium steel, and floating. Finish is black all over. Other construction details are as the TimberTec.

The MPC is essentially a basic carbine, with a MIL-STD-1913 rail atop the receiver, with a removable carrying handle and a standard AR front sight and a normal profile gas block. Handguards are of short length, similar to the length of the M4's handguards. It has the quality steel barrel of other Windham Weaponry rifles. Except for the longer barrel, it could be mistaken for an M4 at first glance. The SRC is a version of the MPC which has a flattop receiver with a MIL-STD-1913 rail, a low-profile gas block with a length of rail over it. It has also been lightened through careful machining (and the omission of the carrying handle and sights). The HBC is essentially the same as the MPC, except for its heavy profile barrel and heat shields in the handguards which have double normal thickness.

The VEX-SS (aka Varmint Exterminator) is designed in a manner similar to most varmint rifles. The 20-inch barrel is matte steel finished heavy profile fluted barrel which is free floating. The barrel has no muzzle device, nor provision for one, but has a target crown. Tolerances have been tightened up somewhat. The stock is a fixed skeletonized stock, with a recoil pad on the butt and a foam pad for the top of the stock. The VEX-SS is flattopped with a MIL-STD-1913 rail atop; two riser blocks come with the VEX-SS to aid in mounting optics. The gas block is low profile, topped with a short length of rail. The handguards do not come in halves; they are one-piece aluminum handguards. The front handguard sling swivel can be used to mount most types of bipods. Some military sources have pointed out that the VEX-SS would make a good DMR rifle. The Snow Camo VEX-SS is, as the name suggests, a version of the VEX-SS, with a snow-camouflage finish. The stock is also a standard A2 stock, with the butt recoil pad (or cheek pad, for that matter. It is otherwise the same as the VEX-SS in game terms. The VEX-SS-CA, MPC-MA, MPC-CA, SRC-CA, and SRC-MA are designed to be California, Massachusetts, and New Jersey compliant, the primary difference between these rifles and the standard rifles is the use of a magazine lock which requires the use of a tool to remove the magazine; in addition, it can use only 5-round proprietary magazines (or 10-round for Massachusetts, and New Jersey).

Weapon	Ammunition	Weight	Magazines	Price
SRC308	7.62mm NATO	3.43 kg	5, 10, 20	$1072
TimberTec Camo SRC	5.56mm NATO	2.86 kg	5, 10, 20, 30	$676
Carbon Fiber SRC	5.56mm NATO	2.65 kg	5, 10, 20, 30	$669
CDI	5.56mm NATO	3.19 kg	5, 10, 20, 30	$645
MPC	5.56mm NATO	3.11 kg	5, 10, 20, 30	$641
SRC	5.56mm NATO	2.86 kg	5, 10, 20, 30	$641
HBC	5.56mm NATO	3.38 kg	5, 10, 20, 30	$643
VEX-SS	5.56mm NATO	3.72 kg	5, 10, 20, 30	$735

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
SRC308	5	4	2-3-Nil	5/6	3	7	48
TimberTec Camo SRC	5	3	1-Nil	5/6	2	5	52
Carbon Fiber SRC	5	3	1-Nil	5/6	2	5	52
CDI	5	3	1-Nil	4/6	2	5	43
MPC	5	3	1-Nil	4/5	2	5	41
SRC	5	3	1-Nil	4/5	2	5	41
HBC	5	3	1-Nil	4/6	2	4	42
VEX-SS	SA	3	1-Nil	6	2	Nil	60

Windham Weaponry RCMS-4

Notes: If reliable, this rifle would present a sort of holy grail amongst shooters – the ability to fire multiple chamberings with a minimum of modification. On the RCMS-4,thus consists in some cases of merely swapping out the magazine well and barrel; some changes in caliber also need a change in bolts, as they require a different-sized bolt face (though most of the bolt carrier group remain the same). Bores for the 16-inch barrel are chromed, except on the 9mm Parabellum model, which has a Melonite bore. The barrels are machined from 4150 Chrome/Moly/Vanadium steel. and finished in Black Manganese Phosphate, and tipped with a simple flash suppressor taken from the A2. Receivers are CNC forged, and made from 7075 T6 aircraft-quality aluminum, and finished in Hardcoat Black Anodization. The lower receiver is a special construct able to take the changes in magazines and accommodate changes in bolts. Controls are essentially AR controls. The planform is that of an AR, and the rifle has an M4 sliding stock. There is a bayonet lug on the 5.56mm and 7.62mm Kalashnikov models, while the .300 Blackout and 9mm Parabellum versions do not have a bayonet lug. Changing to another caliber takes only seconds (2 phases) if you have the parts ready. Atop the receiver is a Picatinny rail; above the handguard is another rail, with a separation of 3.8 centimeters, allowing the barrels to be switched easier without taking off the

handguards if desired. Below the handguard there is another rail, as well on the sides. The gas block has another short strip of rail. All use gas impingement except for the 9mm version, which uses blowback operation. The trigger guard opens on the bottom got use with heavy gloves or mittens. The pistol grip is an A2-type. They have no sights; the player must supply them; they will, however, take any sort of optics or BUIS. The 5.56mm and .300 Blackout use the same magazines, magazine well, and bolt carrier group. 7.62mm Kalashnikov and 9mm Parabellum use different magazines, magazine wells, and bolt carrier groups. The 9mm bolt carrier group is very different from the rest, since it uses blowback operation. Trigger pull weight is about 8 pounds, acceptable for a military rifle but still abit heavy.

The RCMS-4 is considered the definitive form of this rifle. There is also an RCMS-3, which has only a three-caliber capability, and the RCMS-2, capable of using two calibers. The RCMS-3 can use 5.56mm NATO, .300 Blackout, and 7.62mm Kalashnikov, The RCMS-2 can use 5.56mm NATO or .300 Blackout. Otherwise, the RCMS-3 and 2 are identical to the appropriate calibers of the RCMS-4 in game terms.

Stats are given for a rumored automatic version.

Weapon	Ammunition	Weight	Magazines	Price
RCMS-4	5.56mm NATO	2.9 kg	5, 10, 20, 30, 40	$585
RCMS-4	7.62mm Kalashnikov	2.9 kg	10, 20 30, 60, 75D	$829
RCMS-4	.300 Blackout	2.9 kg	5, 10, 20, 30	$761
RCMS-4	9mm Parabellum	2.9 kg	10, 20, 32, 40	$305

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
RCMS-4 (5.56mm)	5	3	1-Nil	4/5	3	6	42
RCMS-4 (7.62mm)	5	4	2-Nil	4/5	4	10	47
RCMS-4 (.300)	5	3	2-Nil	4/5	4	10	46
RCMS-4 (9mm)	SA	2	1-Nil	4/5	1	3	37

Yankee Hill Machine KR-7

Notes: The KR-7 is an AR-15-type carbine in several calibers. In most respects, it is a simple AR-15 clone, but has some distinguishing features of its own. It is a lightweight carbine with a sliding M4-type stock, making it handy.

The barrel of the KR-7 is a 16-inch 4140 steel barrel which is heat-treated to RC25-32 hardness. The muzzle is threaded to allow it to accept most muzzle devices, but it is sold with a YHM Phantom 5C2 flash suppressor mounted at the tip. The KR-7 has M4-type feed ramps. The barrel is in YHM KR-7 mid-length handguards, which allow the barrel to float. At the front of the handguard is a YHM-designed low-profile gas block. Atop the receiver is the near-ubiquitous MIL-STD-1913 rail, and this is continuous with rail going down the top of the handguard. The receiver halves are forged instead of stamped, and are made of the standard 7075-T6 aluminum. The handguard is also aluminum, but 6061-T6 instead of 7075-T6. Both are hardcoat anodized in black. The KR-7 are sold with one rail on the handguard, but has KeyMod mounting holes for more rails at every 45 degrees, for a potential total of six rails.

5.56mm come with a choice of barrels – one with a 1:7 twist, for older ammunition, and one with a 1:9 twist, for newer and military ammunition.

Weapon	Ammunition	Weight	Magazines	Price
KR-7	5.56mm NATO	2.86 kg	5, 10, 20, 30	$595
KR-7	6.8mm SPC	2.86 kg	5, 10, 20, 30	$762
KR-7	.300 Blackout	2.86 kg	5, 10, 20, 30	$772

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
KR-7 (5.56mm)	SA	3	1-Nil	4/6	3	Nil	41
KR-7 (6.8mm)	SA	3	1-2-Nil	5/6	3	Nil	56
KR-7 (.300)	SA	3	2-Nil	5/6	4	Nil	46

Z-M Weapons LR-300

Notes: First introduced in 1997, the LR-300 and LR-300S series of weapons were designed around the already familiar AR-15 gas-operated system. There were, however, some differences: the Vortex flash suppresser on the end of the barrel effectively eliminates flash from the rifle when fired, as well as reducing the felt recoil. The sporterized version of the rifle was designed with a stock that pays token respect to US arms laws instead of a normal pistol grip, and longer 419mm barrel, whereas the military/police variant uses a shorter 292mm barrel. (The civilian version also has military use, as it can accept any high-capacity magazine that can be put in an M16.) The sight mount used is a Weaver Rail, which can mount most US civilian and military optics.

Twilight 2000 Notes: The L-300 and L-300S were issued in small numbers to the US military during the Twilight War; the LR-300 was normally used by vehicle crews in the US military, while the LR-300S was sometimes employed as a platoon sharpshooter's weapon. The L-300 and LR-300S were also in common issue to US state, local, and Federal police forces.

Merc 2000 Notes: The LR-300S was widely sold to civilians in the US; the LR-300 apparently also had good sales, but Z-M Weapons did not release the records of those sales.

Weapon	Ammunition	Weight	Magazines	Price

LR-300	5.56mm NATO	3.2 kg	10, 20, 30	$734
LR-300	7.62mm Kalashnikov	3.2 kg	10, 30, 60, 75D	$978
LR-300S	5.56mm NATO	3.3 kg	10, 20, 30	$1174
LR-300S	7.62mm Kalashnikov	3.3 kg	10, 30, 60, 75D	$1343

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
LR-300 (5.56mm)	5	2	1-Nil	3/5	1	4	24
LR-300 (7.62mm)	5	3	2-Nil	3/5	2	4	27
LR-300S (5.56mm)	SA	3	1-Nil	4/6	1	Nil	41
LR-300S (5.56mm, Bipod)	SA	3	1-Nil	4/6	1	Nil	53
LR-300S (7.62mm)	SA	3	2-Nil	4/6	2	Nil	45
LR-300S (7.62mm, Bipod)	SA	3	2-Nil	4/6	1	Nil	59

Zastava M-21

Notes: The M-21 is an M-90 that has been upgraded to 21st century standards. The M-90 was not accepted for financial reasons; the Serbs made room in the budget for the M-21, under heavy pressure from the Serbian Army. The M-21 is, as is the M-90, based on the Kalashnikov, but fires 5.56mm NATO ammunition. The M-21 is fitted with a reflex optical sight of low power, and backup red-dot iron sights. It can mount the BG-15 grenade launcher, or a copy of the BG-15 that fires 40mm NATO Low-Velocity ammunition. Most parts are of light alloy or plastic composite. There are currently six operational versions of the M-21.

The base of the line, the M-21, is designated a submachinegun by the Serbian Army; most places in the world, however, would describe is as a short-barreled assault rifle due to its caliber. The barrel is 12.8 inches. Like all versions of the M-21, the stock is on a thick strut that widens to an open triangle at the butt; it folds to the right. The butt is fitted with a textured rubber cover to grip the shoulder. The M-21BS is the same weapon, but with MIL-STD-1913 rails above the receiver, atop the handguards, and below the handguards. It is a little heavier than the M-21.

The M-21S is a carbine version of the M-21, with a 14.76-inch barrel. The barrel is of chrome-moly steel. It is designed to have an underbarrel grenade launcher easily installed. The M-21SBS is the same carbine with the MIL-STD-1913 rail of the M-21BS.

The M-21A is the full-sized assault rifle version, with an 18.11-inch barrel and a recoil pad on the stock, as it is meant to be fielded in greater numbers with an underbarrel grenade launcher attached. As with the other versions, the M-21A has a version with MIL-STD-1913 rails – the M-21ABS.

The “Soldier of the Future” version of the M-21 debuted at the Defence Systems Asia 2008 show is a standard M-21 with a MIL-STD-1913 rail above the receiver and four more on the handguards, along with several night vision and aiming devices. I unfortunately do not have any hard information on this version, though it is probably an M-21ABS variant.

Twilight 2000/Merc 2000 Notes: This weapon does not exist in the Twilight 2000 timeline.

Weapon	Ammunition	Weight	Magazines	Price
M-21	5.56mm NATO	3.91 kg	30	$884
M-21BS	5.56mm NATO	4 kg	30	$893
M-21S	5.56mm NATO	4.07 kg	30	$905
M-21SBS	5.56mm NATO	4.2 kg	30	$915
M-21A	5.56mm NATO	4.15 kg	30	$1091
M-21ABS	5.56mm NATO	4.3 kg	30	$1102

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
M-21	3/5	3	1-Nil	4/5	2	3/5	28
M-21S	3/5	3	1-Nil	4/5	2	3/5	36
M-21A	3/5	3	1-Nil	5/6	2	3/5	48

Zastava M-59/66A1

Notes: This is Yugoslavia’s version of the Russian SKS carbine (which the Yugoslavians called the M-59). Key differences between the M-59/66A1 and the SKS are the permanently-attached rifle-grenade launching attachment on the muzzle, and flip up sights to use when launching those rifle grenades. A folding bayonet is attached under the barrel; unlike Russian or Chinese SKSs, the bayonet of the M-59/66A1 is an actual blade rather than a cruciform spike. The M-59/66A1 has been out of production for a little over a decade, but is still a quite common weapon among Yugoslavian troops and those of the former Yugoslavian republics.

Weapon	Ammunition	Weight	Magazines	Price
M-59/66A1	7.62mm Kalashnikov	4.1 kg	10 Clip	$881

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
M-59/66A1	SA	4	2-3-Nil	7	4	Nil	74

Zastava M-70B1/M-70AB2/M-77B2

Notes: These are Yugoslavian versions of the AKM (M-70B1) and AKMS (M-70AB2). The significant differences, other than the manufacturing methods employed, are the permanent rifle grenade launching attachment on the muzzle and flip up sights for use when rifle grenades are being launched. The receivers are also based on the stronger RPK rather than being standard AKM receivers, and they incorporate features to make disassembly and reassembly easier than a standard AKM. The stocks have a recoil pad, unlike an AKM, and have a longer length of pull, as the average Yugoslavian soldier is taller than his Russian counterpart. The M-72 has a bolt hold-open feature, unlike the AKM, but it works only with proprietary Yugoslavian magazines. The M-77B1 is almost the same as the M-70B1, but is chambered for 7.62mm NATO ammunition. The M-77B1 also has a closed-prong-type flash suppressor, and a removable rifle grenade-launching attachment and sights are included in the cost (the sight normally stays on the rifle, even when the grenade launcher attachment is not mounted, and it folds down when not in use. The barrel is longer than the 16.3-inch barrel of the M-70 at 21.06 inches. The M-77B1 was built primarily for export; there were some small sales in Africa (and there are rumors of its use by Iraq), but most were sold as semiautomatic variants, without the grenade launcher, to civilians in Western Europe and Central America.

Twilight 2000 Notes: Hungry for weapons of any sort, the Yugoslavians kept most M-77B1s for themselves. In Croatia and Slovenia, production was actually stepped up after 1998.

Merc 2000 Notes: The Yugoslavians were in need of cash so badly that they sold these weapons (and most others they made) all over the world in a rather indiscriminate manner.

Weapon	Ammunition	Weight	Magazines	Price
M-70B1	7.62mm Kalashnikov	3.7 kg	30	$876
M-70AB2	7.62mm Kalashnikov	3.5 kg	30	$906
M-77B1	7.62mm NATO	4.49 kg	20	$1106

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
M-70B1	5	4	2-Nil	6	3	8	46
M-70AB2	5	4	2-Nil	4/6	3	8	46
M-77B1	5	4	2-3-Nil	8	3	8	67

Zastava M-80/80A/90/90A

Notes: These are versions of the M-70B1 and M-70AB2 in 5.56mm NATO. They were built solely for the export market and were never issued to Yugoslavian troops or those of the former Yugoslavian republics. It had moderate success on the export and civilian market; it is even rumored that there were some sales to countries like Iraq, Yemen, and Somalia. They are very reliable weapons, even when not fed with quality ammunition.

The M-90 and M-90A are modernized versions of the M-80 and M-80A. They have a more modern look and are built of better materials to closer tolerances. They are more reliable than their predecessors, but otherwise very similar.

Twilight 2000 Notes: These weapons were sold on the international market until about 1994, when remaining quantities and production were diverted to Yugoslavian use.

Merc 2000 Notes: As the Merc 2000 Notes for the M-70B1 and M-70AB2.

Weapon	Ammunition	Weight	Magazines	Price
M-80	5.56mm NATO	3.6 kg	30	$577
M-80A	5.56mm NATO	3.5 kg	30	$607
M-90	5.56mm NATO	4 kg	30	$587
M-90A	5.56mm NATO	3.9 kg	30	$607

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
M-80	5	3	1-Nil	6	2	6	48
M-80A	5	3	1-Nil	5/6	2	6	48
M-90	5	3	1-Nil	6	2	6	48
M-90A	5	3	1-Nil	5/6	2	6	48

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Zastava M-85

Notes: This is a short assault rifle version of the M-80A. It resembles the Russian AKS-74U, but fires 5.56mm NATO ammunition. It was designed with vehicle crews, special operations, and internal security troops in mind. There appear to be no official sales on record, but rumors abound of unofficial sales to various countries.

The M-92 is the same short assault rifle, chambered for 7.62mm. Like the M-85, it has a folding stock, a conical flash suppressor/muzzle booster, and a 10-inch barrel.

Twilight 2000 Notes: These weapons were put into limited production in 1995. None of them were sold outside of Yugoslavia or former Yugoslavia until at least 2001, and most of them went to Romania, Turkey, and Greece.

Merc 2000 Notes: Like other Yugoslavian weapons, these were sold far and wide on the international market for badly-needed cash.

Weapon	Ammunition	Weight	Magazines	Price
M-85	5.56mm NATO	3.2 kg	10, 20, 30	$548
M-92	7.62mm Kalashnikov	3.57 kg	20, 30, 40, 75D	$766

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
M-85	5	3	1-Nil	3/5	2	6	27
M-92	3	3	2-Nil	4/5	2	6	22

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