# .30 Carbine

.30 Carbine (7.62×33mm)			
.30 Carbine cartridge			
Туре	Carbine		
Place of origin	United States		
Service history			
In service	World War II–present		
Used by	See Users		
Wars	World War II Korean War Vietnam War		
Production history			
Produced	World War II to 1950s, present (civilian)		
Variants	M1, M6 (Grenade) M13 (Dummy) M18 (Heavy, High Pressure Test) 152gr M27 (Tracer)		
Specifications			
Parent case	.32 Winchester Self-Loading		
Bullet diameter	7.82 mm (0.308 in)		
Neck diameter	8.41 mm (0.331 in)		
Base diameter	8.99 mm (0.354 in)		
Rim diameter	9.14 mm (0.360 in)		
Case length	32.76 mm (1.290 in)		
Overall length	41.91 mm (1.650 in)		
Case capacity	0.92874 cm <sup>3</sup> (14.3326 gr H <sub>2</sub> O)		
Rifling twist	1:20"		
Primer type	Small rifle		
Maximum pressure	265.45 MPa (38,500 psi)		
Ballistic performance			
Bullet weight/type	Velocity	Energy	
110 gr (7 g) FMJ	606.5 m/s (1,990 ft/s)	1,311 J (9	967 ft·lbf)
Test barrel length: 457.2mm  Source(s): Winchester [1]			

The .30 Carbine (7.62×33mm) is the cartridge used in the M1 Carbine introduced in the 1940s. It is an intermediate round designed to be fired from the M1 carbine's 18-inch (458 mm) barrel.

# **History**

Shortly before World War II, the U.S. Army started a "light rifle" project to provide support personnel and rear area units more firepower and accuracy than the standard issue M1911A1 .45 ACP caliber handgun at half the weight of the M1 Garand rifle or the .45 Thompson submachine gun. The .30 Carbine cartridge was developed by Winchester and is basically a rimless .30 caliber (7.62 mm) version of the much older .32 Winchester Self-Loading cartridge of 1906 introduced for the Winchester Model 1905 rifle. [2] The propellant was much newer, though, taking advantage of chemistry advances. The cartridge's relatively straight case and the rounded nose of its bullet led some to believe it was designed for use in pistols.



4.6x30mm, 5.7x28mm, .30 Carbine

At first, Winchester was tasked with developing the cartridge but did not submit a carbine design. Other firms and individual designers submitted several carbine designs, but most prototypes were either unreliable or grossly off the target weight of five pounds. Maj. Rene Studler persuaded Winchester that the Winchester M2 .30-06 rifle, a design started by Ed Browning and perfected by Winchester engineer Marshall Williams, could be scaled down for the .30 Carbine cartridge. [3]

The M1 Carbine was issued to infantry officers, machine gun, artillery and tank crews, paratroopers and other line-of-communications personnel in lieu of the larger, heavier M1 Garand. The weapon was originally issued with a 15-round detachable magazine. The Carbine and cartridge were not intended to serve as a primary infantry weapon, nor was it comparable to more powerful intermediate cartridges later developed for assault rifles. The M2 Carbine was introduced late in

WWII with a selective-fire switch allowing optional fully automatic fire at a rather high rate (850–900 rpm) and a 30-round magazine. The M1 and M2 Carbines continued in service during the Korean War. A postwar U.S. Army evaluation reported on the weapon's cold-weather shortcomings, and noted complaints of failure to stop heavily clothed North Korean and Chinese troops at close range after multiple hits. [4] However, the carbine was again issued to some U.S. troops in Vietnam, particularly reconnaissance units (LRRP) and advisors as a substitute standard weapon. Reports of the ineffective stopping power of the .30 Carbine in close combat continued through the rest of its U.S. service.

In 1994, Israel introduced the *Magal*, a compact weapon based on the Galil MAR using the .30 Carbine cartridge. After complaints of overheating and other malfunctions, the *Magal* was withdrawn from service in 2001. The M1 Carbine is still issued to the Israel Police and Civil Guard.

# **Development**

U.S. Army specifications for the new cartridge mandated the caliber to be greater than .27, with an effective range of 300 yards or more, and a midrange trajectory ordinate of 18 inches (460 mm) or less at 300 yards. With these requirements in hand, Winchester's Edwin Pugsley chose to design the cartridge with a .30 caliber, 100–120 grain bullet at a velocity of 2,000 feet per second (610 m/s). The first cartridges were made by turning down rims on .32SL cases and loading with .308 caliber bullets sharing a similar profile as the U.S. military .45 ACP bullet. The first 100,000 cartridges manufactured were headstamped ".30 SL". [5]

### Civilian use

The popularity of the M1 Carbine for collecting, sporting, and re-enactment use has resulted in continued civilian popularity of the .30 Carbine cartridge. For hunting, it is considered a small/medium-game cartridge, of marginal power for deer-size game. [2] Even in long-barreled carbines, military-style full metal jacket projectiles do not expand as easily as soft or hollow point. In addition, the high sectional density of the projectile causes the bullet to overpenetrate. Soft-point and hollowpoint cartridges are considered to be more effective for hunting and self-defense, [6] and are offered by Winchester, Remington UMC and Federal Cartridge ammunition manufacturers. The .30 carbine cartridge is suitable for the same game targeted with the .32-20 Winchester, .327 Federal Magnum, and .32 Winchester Self-Loading cartridges as used in rifles and handguns.

# **Handguns**

A number of handguns have been chambered for .30 Carbine ammunition. In 1944, Smith & Wesson developed a hand-ejector revolver to fire .30 Carbine. It went through 1,232 rounds without incident. From a four-inch (102 mm) barrel, it launched the standard GI ball projectile at 1,277 ft/s (389 m/s), producing a large average group of 4.18 inches (106 mm) at 25 yards (23 m); the military decided not to adopt the revolver. The loud blast is the most oft-mentioned characteristic of the .30 M1 Carbine cartridge fired in a handgun. [7]

In 1958, the short-lived J. Kimball Arms Co. produced a .30 Carbine caliber pistol that closely resembled a slightly scaled-up High Standard Field King .22 target pistol. The Ruger Blackhawk revolver chambered for the .30 Carbine round has been in the catalogs since the late 1960s. Standard government-issue rounds clock over 1,500 feet per second (460 m/s), with factory loads and handloads producing similar velocities.

Universal Firearms made a .30 caliber pistol from 1964 to 1983, it was named the Enforcer. Built similar to the M1 carbine it lacked the stock, therefore, making it a pistol or a handgun. Sold to Iver-Johnson in 1983 The Enforcer continued to be made until 1986. Other handguns chambered for this cartridge include the Thompson Center Contender, Taurus Raging Thirty, and AMT AutoMag III. [7]

# Comparison

A standard .30 carbine ball round weighs 110 grains (7.1 g) and has a muzzle velocity of 1,990 ft/s (610 m/s) giving it 967 ft·lb  $_{\rm f}$  (1,311 joules) of energy. By comparison, a .357 Magnum revolver fires the same weight bullet from a 4-inch (100 mm) barrel at about 1,500 ft/s (460 m/s) for about 550 ft·lb  $_{\rm f}$  (750 J) of energy, though it is important to note that the .357 bullet is larger in diameter (caliber) and is normally an expanding or hollow-point design.  $^{[1]}$  The above comparison is between a full length .30 carbine barrel and a 4-inch barreled .357 handgun.  $^{[citation\ needed]}$ 

The .30 carbine was developed from the .32 Winchester Self-Loading used in an early semi-auto sporting rifle; both rounds are comparable to the .32-20 Winchester round used in carbines and revolvers. .30 Carbine sporting ammunition is factory recommended for hunting and control of large varmints like fox, javelina or coyote. The .30 Carbine generates half the muzzle energy of the typical .30-30 Winchester deer rifle round and one-third the energy of the typical .30-06 Springfield big game



From left: 8 mm Mauser, two 8mm Lebel cartridges, .30 Carbine compared to WWII rifle rounds

round. The game laws of several states do not allow hunting big game with the .30 Carbine either by name or minimum muzzle energy allowed.

# **Chambered weapons**

#### **Rifles**

- Armalon AL30C
- CEAM Modèle 1950
- · Chapina carbine
- · Cristobal carbine
- Excel Arms X30R
- FAMAE CT-30<sup>[]</sup>
- Franchi LF-58
- Garand carbine
- Hillberg CarbineIMI Magal
- M1 carbine
- Marlin Levermatic Model 62
- Southern Gun Company La-30
- Taurus Carabina CT-30<sup>[]</sup>
- Thompson Light Rifle

### **Handguns**

- AMT AutoMag III
- Excel Arms X-30
- Kimball (Standard, Target, Aircrew)
- · Ruger Blackhawk
- · Taurus Raging Thirty
- Universal Enforcer

#### **Users**

- Austria (1950s–70s, Austrian Army and Police)
- Savaria (1945–early 1950s, Border Guard)
- Samuel (present, BOPE, PMESP)
- Cambodia (1967–1975)
- <u>thiopia</u> Ethiopia
- France (1954–1962, Algerian War)
- Germany (German Border Guard, some Police forces and German Army paratroopers (1950s-1960s)
- E Greece (Hellenic (Greek) Air Force until mid 80s)
- Israel (1945–1957, Israeli Defence Forces; 1970s–present, Israeli Police; 1974–present, Civil Guard)
- Italy (Carabinieri, as of 1992)
- Japan (National Police Reserve) (1950–1989)
- Liberia [9]
- Mexico (police departments and security forces)
- Netherlands (1940s–70s, Army and Police)
- Norway (Norwegian Army 1951–70, with some Norwegian police units until the 1990s)

- Philippines (Post-WWII)
- South Korea (1950s–present, Reserve Force)
- Suriname (?–present, Army)
- South Vietnam (1960s–70s)
- Taiwan (Republic of China) (1950s–present)
- Thailand Locally known as the ปสบ.87.
- United Kingdom
- United States (1940s–60s/70s, Armed Forces) and some law enforcement agencies (1940s–present)
- Vietnam (Captured batches)

# Cartridge types

Common types used by the military with the carbine include:

- Cartridge, Caliber .30, Carbine, Ball, M1
- Cartridge, Caliber .30, Carbine, Grenade, M6
- Cartridge, Dummy, Caliber .30, Carbine, M13
- Cartridge, Caliber .30, Carbine, Ball, High Pressure Test, M18
- Cartridge, Caliber .30, Carbine, Tracer; M27

# **Synonyms**

- .30 M1 Carbine
- 7.62×33mm
- .30 SL

#### **Notes**

- [1] Winchester Ammunition (http://www.winchester.com/)
- [2] Barnes, Frank C., Cartridges of the World, DBI Books, 1975, 1989.
- [3] Larry Ruth, M1 Carbine: Design, Development & Production, (The Gun Room Press, 1979, ISBN 978-0-87947-023-4
- [4] S.L.A. Marshall, *Commentary on Infantry and Weapons in Korea 1950–51*, 1st Report ORO-R-13 of 27 October 1951, Project Doughboy [Restricted], Operations Research Office (ORO), U.S. Army (1951)
- [5] Schreier, Konrad F., Jr. (1990). Winchester Centerfire Automatic Rifles. ARMAX: Journal of the Buffalo Bill Historical Center, Vol. III(1): p. 36.
- [7] Cumpston, Mike, "The .30 Carbine Blackhawk: Ruger's Enduring Dark Horse", *Guns Magazine*, December 2001, San Diego, Von Rosen Publications.

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