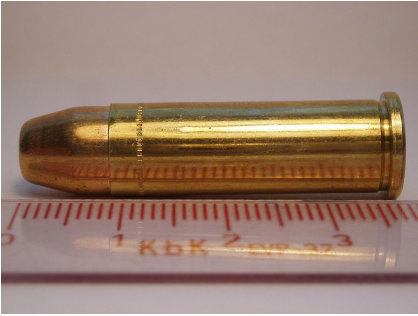



.38 Special

.38 Special		
		
.38 Special round		
Type	Revolver	
Place of origin	 United States of America	
Production history		
Designer	Smith & Wesson	
Designed	1898	
Specifications		
Parent case	.38 Long Colt	
Case type	Rimmed, straight	
Bullet diameter	.357 in (9.1 mm)	
Neck diameter	.379 in (9.6 mm)	
Base diameter	.379 in (9.6 mm)	
Rim diameter	.44 in (11 mm)	
Rim thickness	.058 in (1.5 mm)	
Case length	1.155 in (29.3 mm)	
Overall length	1.55 in (39 mm)	
Primer type	Small pistol	
Ballistic performance		
Bullet weight/type	Velocity	Energy
110 gr (7 g) JHP	980 ft/s (300 m/s)	235 ft·lbf (319 J)
130 gr (8 g) FMJ	810 ft/s (250 m/s)	189 ft·lbf (256 J)
148 gr (10 g) LWC	690 ft/s (210 m/s)	156 ft·lbf (212 J)
158 gr (10 g) LRN	770 ft/s (230 m/s)	208 ft·lbf (282 J)
200 gr (13 g) LRN	679 ft/s (207 m/s)	204 ft·lbf (277 J)
<i>Test barrel length: 4 in (vented)</i> <i>Source(s):</i> ^{[1][2][3][4][5]}		

The **.38 Smith & Wesson Special** (commonly **.38 Special**, **.38 Spl**, or **.38 Spc**, pronounced "thirty-eight special") is a rimmed, centerfire cartridge designed by Smith & Wesson. It is most commonly used in revolvers, although some semi-automatic pistols and carbines also use this round. The .38 Special was the standard service cartridge of most

police departments in the United States from the 1920s to the early 1990s, and was also a common sidearm cartridge used by soldiers in World War I. In other parts of the world, it is known by its metric designation of **9×29.5mmR**^[6] or **9.1x29mmR**.[□]

Noted for its fine accuracy and manageable recoil, it remains the most popular revolver cartridge in the world more than a century after its introduction.^[7] It is used for target shooting, formal target competition, personal defense, and for hunting small game.

Characteristics

Despite its name, the caliber of the .38 Special cartridge is actually .357–.358 inches (9.0678 mm), with the ".38" referring to the approximate diameter of the loaded brass case. This came about because the original .38-caliber cartridge, the .38 Short Colt, was designed for use in converted .36-caliber cap-and-ball (muzzleloading) Navy revolvers, which had cylindrical firing chambers of approximately 0.374-inch (9.5 mm) diameter, requiring heeled bullets, the exposed portion of which was the same diameter as the cartridge case (see the section on the .38 Long Colt).

Except for case length, the .38 Special is identical to that of the .38 Short Colt, .38 Long Colt, and the .357 Magnum. This allows the .38 Special round to be safely fired in revolvers chambered for the .357 Magnum, and the .38 Long Colt to be fired in revolvers chambered for .38 Special, and the .38 Short Colt to fire in revolvers chambered for .38 Long Colt, increasing the versatility of this cartridge. However, the longer and more powerful .357 Magnum cartridge will usually not chamber and fire in weapons rated specifically for .38 Special (e.g. all versions of the Smith & Wesson Model 10), which are not designed for the greatly increased pressure of the magnum rounds. Both .38 Special and .357 Magnum will chamber in Colt New Army revolvers in .38 Long Colt, due to the straight walled chambers, but should not be done under any circumstances, due to dangerous pressure levels, up to three times what the New Army is designed for.

History

The .38 Special was introduced in 1898 as an improvement over the .38 Long Colt which, as a military service cartridge, was found to have inadequate stopping power against the frenzied charges of Moro warriors during the Philippine-American War.^[8]

Upon its introduction, the .38 Special was originally loaded with black powder, but the cartridge's popularity caused manufacturers to offer smokeless powder loadings within a year of its introduction.^[9]

During the late 1920s, and in response to demands for a more effective law enforcement version of the cartridge, a new standard-velocity loading for the .38 Special was developed by Western Cartridge Company. This .38 Special variant incorporated a 200-grain (13g) round-nosed lead 'Lubaloy' bullet, the *.38 Super Police*.^[10] Remington-Peters also introduced a similar loading. Testing revealed that the longer, heavier 200-grain .38-calibre bullet fired at low velocity tended to 'keyhole' or tumble upon impact, providing more shock effect against unprotected personnel.^[11] At the same time, authorities in Great Britain, who had decided to adopt the .38 caliber revolver as a replacement for their existing .455 service cartridge, also



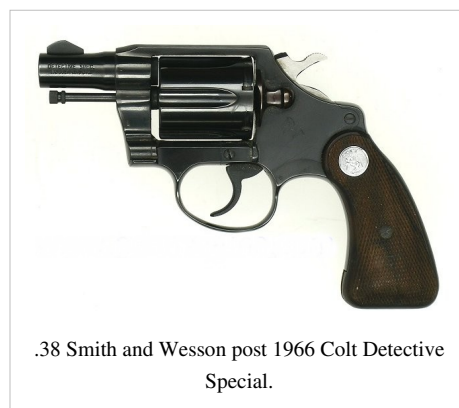
First model M&P revolver designed in 1899 for the .38 Special cartridge. This particular revolver left the factory in 1900.

tested the same 200-grain bullet in the smaller .38 S&W cartridge. This cartridge was called the .38 S&W Super Police or the .38/200. Britain would later adopt the .38/200 as its standard military handgun cartridge.

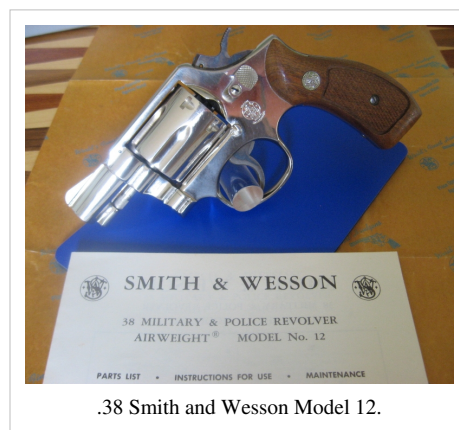
In 1930, Smith & Wesson introduced a large frame .38 Special revolver with a 5-inch (125mm) barrel and fixed sights intended for police use, the Smith & Wesson .38/44 *Heavy Duty*.^{[12][13]} The following year, a new high-power loading called the .38 *Special Hi-Speed* with a 158-grain metal-tip bullet was developed for these revolvers in response to requests from law enforcement agencies for a handgun bullet that could penetrate auto bodies and body armor.^[14] That same year, Colt Firearms announced that their Colt Official Police would also handle 'high-speed' .38 Special loadings.^[15] The .38/44 high-speed cartridge came in three bullet weights: 158, 150, and 110-grain, with either coated lead or steel jacket, metal-piercing bullets.^[16] The media attention gathered by the .38/44 and its ammunition eventually led Smith & Wesson to develop a completely new cartridge with a longer case length in 1934 - the .357 Magnum.

During World War II, some U.S. aircrew (primarily Navy and Marine Corps) were issued .38 Special S&W Victory revolvers as sidearms in the event of a forced landing. In May 1943, a new .38 Special cartridge with a 158-grain, full steel jacketed, copper flash-coated bullet meeting the requirements of the rules of land warfare was developed at Springfield Armory and adopted for the Smith & Wesson revolvers.^[17] The new military .38 Special loading propelled its 158-grain bullet at a standard 850 ft/s (260 m/s) from a 4-inch (100 mm) revolver barrel.^[17] During the war, many U.S. naval and marine aircrew were also issued red-tipped .38 Special tracer rounds using either a 120-grain or 158-grain bullet for emergency signaling purposes.^[17]

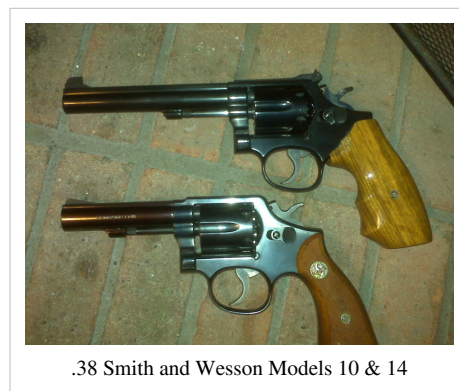
In 1956, the U.S. Air Force adopted the *Cartridge, Caliber .38, Ball M41*, a military variant of the .38 Special cartridge designed to conform to the rules of land warfare. The original .38 M41 ball cartridge used a 130-grain full metal jacketed bullet, and was loaded to an average pressure of only 13,000 psi, giving a muzzle velocity of approximately 725 ft/s (221 m/s) from a 4-inch (100 mm) barrel.^{[18][19]} This ammunition was intended to prolong the life of S&W M12 and Colt Aircrewman revolvers equipped with aluminum cylinders and frames, which were prone to stress fractures when fired with standard .38 ammunition. By 1961, a slightly revised M41 .38 cartridge specification known as the *Cartridge, Caliber .38 Ball, Special, M41* had been adopted for U.S. armed forces using .38 Special caliber handguns.^[19] The new M41 *Special* cartridge used a 130-grain FMJ bullet loaded to a maximum allowable pressure of 16,000 psi for a velocity of approximately 950 ft/s (290 m/s) in a solid 6-inch



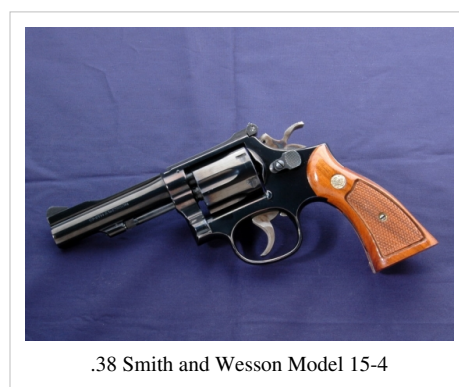
.38 Smith and Wesson post 1966 Colt Detective Special.



.38 Smith and Wesson Model 12.



.38 Smith and Wesson Models 10 & 14



.38 Smith and Wesson Model 15-4

(150 mm) test barrel, and about 750 ft/s (230 m/s) from a 4-inch (100 mm) revolver barrel.^{[20][21]} The M41 ball cartridge was first used in .38 revolvers carried by USAF aircrew and Strategic Air Command security police, and by 1961 was in use by the U.S. Army for security police, dog handlers, and other personnel equipped with .38 Special caliber revolvers.^[21] A variant of the standard M41 cartridge with a semi-pointed, unjacketed lead bullet was later adopted for CONUS (Continental United States) police and security personnel.^[19]

At the same time, .38 tracer cartridges were reintroduced by the US Navy, Marines, and Air Force to provide a means of emergency signaling by downed aircrew. Tracer cartridges in .38 Special caliber of different colors were issued, generally as part of a standard aircrew survival vest kit.

A request for more powerful .38 Special ammunition for use by Air Police and security personnel resulted in the *Caliber .38 Special, Ball, PGU-12/B High Velocity* cartridge.^[20] Issued only by the U.S. Air Force, the PGU-12/B had a greatly increased maximum allowable pressure rating of 20,000 psi, sufficient to propel a 130-grain FMJ bullet at 1,125 ft/s (343 m/s) from a solid 6-inch (150 mm) test barrel, and about 950–980 ft/s from a 4-inch (100 mm) revolver barrel.^[20] The PGU-12/B *High Velocity* cartridge differs from M41 *Special* ammunition in two important respects - the PGU-12/B is a much higher-pressure cartridge, with a bullet deeply set and crimped into the cartridge case.

In response to continued complaints over ineffectiveness of the standard .38 Special 158-grain cartridge in stopping assailants in numerous armed confrontations during the 1950s and 1960s, ammunition manufacturers began to experiment with higher-pressure (18,500 CUP) loadings of the .38 Special cartridge, known as .38 Special +P. In 1972, the Federal Bureau of Investigation introduced a new .38 +P loading that became known as the *FBI Load*.^[22] The *FBI Load* combined a more powerful powder charge with an 158-grain unjacketed soft lead^[23] semi-wadcutter hollow-point bullet designed to readily expand at typical .38 Special velocities obtained in revolvers commonly used by law enforcement.^[22] The *FBI Load* proved very satisfactory in effectively stopping adversaries in numerous documented shootings using 2- to 4-inch barreled revolvers.^{[22][24]} The *FBI Load* was later adopted by the Chicago Police Department and numerous other law enforcement agencies.^[22]

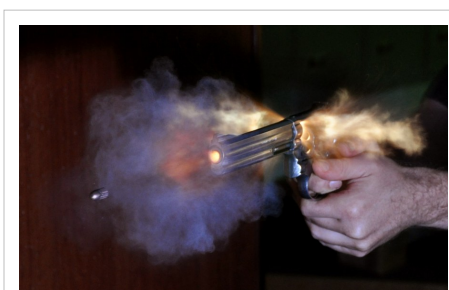
Demand for a .38 cartridge with even greater performance for law enforcement led to the introduction of the +P+ .38 Special cartridge, first introduced by Federal and Winchester. Originally labeled "For Law Enforcement Only",^[25] +P+ ammunition is intended for heavier-duty .38 Special and .357 Magnum revolvers, as the increased pressure levels can result in accelerated wear and significant damage to firearms rated for lower-pressure .38 Special loadings (as with other .38 Special loadings, the .38 Special +P+ can also be fired safely in .357 revolvers).^[26]

Performance

Due to its black powder heritage, the .38 Special is a low pressure cartridge, one of the lowest in common use today at 17,000 PSI. By modern standards, the .38 Special fires a medium-sized bullet at rather low speeds. The closest comparisons are the .380 ACP, which fires much lighter bullets slightly faster than most .38 Special loads; the 9x19mm Parabellum, which fires a somewhat lighter bullet significantly faster; and the .38 Colt Super, which fires a comparable bullet significantly faster. All three of these are usually found in semi-automatic pistols.

The higher-pressure .38 +P loads at 20,000 PSI offer about 20% more muzzle energy than standard-pressure loads and places between the .380 ACP and the 9 mm Parabellum; similar to that of the 9x18mm Makarov.

It is important to recognize that SAAMI changed the specifications for the .38 Special in 1972. Prior to that time the standard .38 Special was very close to today's "+P" cartridges.



.38 Special bullet coming from a Smith and Wesson 686, photographed with an air-gap flash.

.38 Comparisons

Cartridge	Bullet weight	Muzzle velocity	Muzzle energy	Max pressure
.38 Short Colt	135 gr (8.7 g)	777 ft/s (237 m/s)	181 ft•lbf (245 J)	7,500 CUP
.38 Long Colt	150 gr (9.7 g)	777 ft/s (237 m/s)	201 ft•lbf (273 J)	12,000 CUP
.38 S&W	158 gr (10.2 g)	767 ft/s (234 m/s)	206 ft•lbf (279 J)	14,500 PSI
.38 S&W Special	158 gr (10.2 g)	940 ft/s (290 m/s)	310 ft•lbf (420 J)	17,000 PSI
.38 Special +P	158 gr (10.2 g)	1,000 ft/s (300 m/s)	351 ft•lbf (476 J)	20,000 PSI
.38 Special +P+	110 gr (7.1 g)	1,100 ft/s (340 m/s)	295 ft•lbf (400 J)	>20,000 PSI
.380 ACP	100 gr (6.5 g)	895 ft/s (273 m/s)	178 ft•lbf (241 J)	21,500 PSI
9x19mm Parabellum	115 gr (7.5 g)	1,300 ft/s (400 m/s)	420 ft•lbf (570 J)	39,200 PSI
9x19mm Parabellum	124 gr (8.0 g)	1,180 ft/s (360 m/s)	383 ft•lbf (520 J)	39,200 PSI
9x18mm Makarov	95 gr (6.2 g)	1,050 ft/s (320 m/s)	231 ft•lbf (313 J)	23,206 PSI
.38 Super	130 grains (8.4 g)	1,275 ft/s (389 m/s)	468 ft•lbf (634 J)	36,500 PSI
.357 Magnum	158 grains (10.2 g)	1,349 ft/s (411 m/s)	639 ft•lbf (866 J)	35,000 PSI
.357 SIG	125 grains (8.1 g)	1,350 ft/s (410 m/s)	506 ft•lbf (686 J)	40,000 PSI

All of the above specifications for .38 loadings, and the .357 Magnum, are applicable when fired from a 6-inch (150 mm) barreled revolver. The velocity is reduced when using the more standard 4-inch (100 mm) barreled guns.^[27] Power (muzzle energy) will, of course, decrease accordingly.

Although few, if any US police departments now issue or authorize use of the .38 Special revolver as a standard duty weapon, the caliber remains popular with some police officers for use in short-barreled revolvers carried when off-duty or for undercover police investigations. It is also widely used in revolvers purchased for civilian home defense or for concealed carry by individuals with a CCW permit.

Terminal performance and expansion

There are many companies that manufacture .38 Special ammunition. It can range from light target loads to more powerful defensive ammunition. Because of the relatively low pressure that the .38 Special cartridge and even its more powerful +P version can be loaded to, most .38 Special bullets do not expand reliably, even when using hollow-point designs, especially if fired from a short-barreled or 'snub-nose' revolver. In 2004, Speer Bullets introduced the *Gold Dot* jacketed hollow-point .38 Special cartridge in an attempt to solve this very problem. Another solution is to use an unjacketed soft lead hollow-point bullet as found in the *FBI Load*.^[22] The latter's 158-grain soft lead hollow point is loaded to +P pressures and velocity, which ensures more reliable expansion in unprotected flesh, even when fired in a 2-inch short-barreled revolver.^[22]



.38 Specials come with a range of different bullet types.

Handloading

The .38 Special is particularly popular among handloaders. The cartridge's straight walls, headspacing on the rim, ready availability of previously-fired cases, and ability to be fired in .357 Magnum firearms, all contribute to this popularity. Additionally, the .38 Special's heritage as a black powder cartridge gives it a case size capable of accommodating many types of powders, from slower-burning (e. g. Hodgdon H-110 or Hercules 2400) to fast-burning (e. g. Alliant Bullseye, the traditional smokeless powder for this cartridge). This flexibility in powders translates directly to versatility in muzzle energy that a handloader can achieve. Thus, with proper care, a suitably-strong revolver, and adherence to safe handloading practices, the .38 Special can accommodate ammunition ranging from light-recoiling target loads to +P+ self-defense rounds.^[28]



(Starting from Left) .44 Remington Magnum, .357 Magnum, .38 Special, 7.62x25 Tokarev, .45 Auto, 9x19 Parabellum. Notice the similarity in the .38 Special and .357 Magnum.

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External links

- The Snubnose Files (<http://www.snubnose.info>)
 - Ballistics By The Inch .38 special results. (<http://www.ballisticsbytheinch.com/38special.html>)
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