

AK-47 AS A LETHAL WEAPON: WORLD FAMOUS KALASHNIKOV

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ABSTRACT

Mikhail Kalashnikov, a Soviet and Russian military engineer, is best known for designing the AK-47 assault rifle, which became a ubiquitous weapon in the Soviet Union and beyond. The AK-47, officially named Avtomat Kalashnikova (Kalashnikov's automatic rifle), was adopted by the Soviet Army in 1949 and subsequently became a symbol of the Soviet era. Kalashnikov's design was born out of his experiences as a tank mechanic during World War II, where he witnessed the advantages of German firearms. Mikhail Kalashnikov's Background: Kalashnikov was a Soviet tank mechanic who, after being wounded in combat during World War II, dedicated himself to developing a superior weapon. The AK-47's Development: The AK-47, designed in 1947, is a 7.62×39mm assault rifle. It's known for its reliability, ease of use, and relatively low production cost. Adoption and Impact: The AK-47 was officially adopted by the Soviet Army in 1949 and became the standard-issue rifle. Its adoption extended to other countries in the Warsaw Pact and beyond, making it one of the most widely used firearms in the world. Legacy: The AK-47 and its variants, collectively known as the Kalashnikov rifle, have been involved in numerous conflicts and are still in widespread use today. Kalashnikov's Later Life: Kalashnikov became a lieutenant general in the Soviet and Russian military and continued to design firearms, including the AKM, AK-74, RPK, and PK machine guns. In later life, Kalashnikov expressed regret over the weapon's use in conflicts and the suffering it caused.

KEYWORDS: AK-47, Kalashnikov, Bullet, Cartridge.

History: Mikhail Timofeyevich Kalashnikov (10 November 1919 – 23 December 2013) was a Soviet and Russian lieutenant general, inventor, military engineer, writer, and small arms designer. He is most famous for developing the AK-47 assault rifle and its improvements, the AKM and AK-74, as well as the RPK light machine

gun and PK machine gun. The initials AK represent Avtomat Kalashnikova, Russian for “automatic Kalashnikov,” for its designer, Mikhail Timofeyevich Kalashnikov, who designed the accepted version of the weapon in 1947.

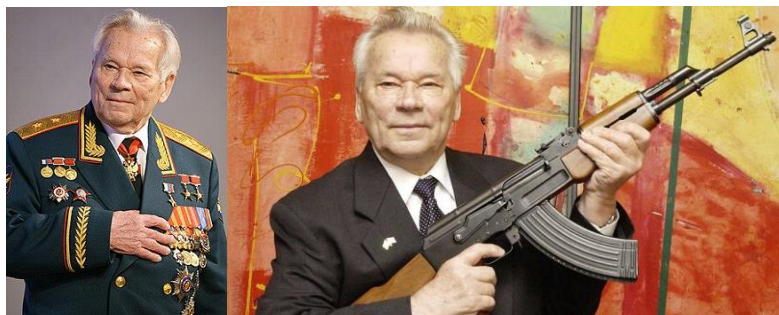




Figure-1: Mikhail Timofeyevich Kalashnikov; the inventor of AK-47.

While often used interchangeably, the Kalashnikov and AK-47 are not exactly the same, though closely related. The AK-47 is a specific model of the Kalashnikov rifle. The term "Kalashnikov" refers to the entire family of rifles based on Mikhail Kalashnikov's original design, while the AK-47 is the first of those rifles, officially adopted by the Soviet army in 1949.

Kalashnikov (AK platform): This is a general term for a family of assault rifles, all sharing the basic design principles developed by Mikhail Kalashnikov.^[1]

AK-47: This is a specific model within the Kalashnikov family, the first one developed and adopted by the Soviet military. It stands for Avtomat Kalashnikova model 1947. In essence, the AK-47 is a specific type of Kalashnikov rifle, and the term "Kalashnikov" can refer

to the entire series of rifles based on that original design. This process culminated in 1947, when he designed the AK-47 (standing for Avtomat Kalashnikova model 1947). In 1949, the AK became the standard issue assault rifle of the Soviet Army and went on to become Kalashnikov's most famous invention. The AK-47 is named after its creator, Mikhail Kalashnikov, and its design year, 1947. The "AK" stands for "Avtomat Kalashnikova" (Автомат Калашникова), which translates to "Kalashnikov's automatic rifle" in Russian. The "47" specifies the year the rifle's design was finalized and began trials for adoption by the Soviet Armed Forces. The model and its variants owe their global popularity to their reliability under harsh conditions, low production cost (compared to contemporary weapons), availability in virtually every geographic region, and ease of use.



Figure-2: Soviet Russia.

The AK-47, designed by Mikhail Kalashnikov, is known for its simple, robust, and reliable design. It features a long-stroke gas piston system, a stamped or milled steel receiver, and a detachable box magazine. The rifle's core components include the barrel assembly, firing mechanism, stock, and various smaller parts. The AK-47's design prioritized ease of maintenance and operation in diverse conditions, contributing to its widespread use.

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variants owe their global popularity to their reliability under harsh conditions, low production cost (compared to contemporary weapons), availability in virtually every geographic region, and ease of use. The Kalashnikov is one of the most widely used firearms in the world, with an estimated 72 million rifles in global circulation.^[2]

The AK-47, or Avtomat Kalashnikova, was designed and developed in the Soviet Union by Russian small-arms designer Mikhail Kalashnikov. While its design originated in the Soviet Union, the AK-47 has been manufactured in numerous countries, both with and without licenses.

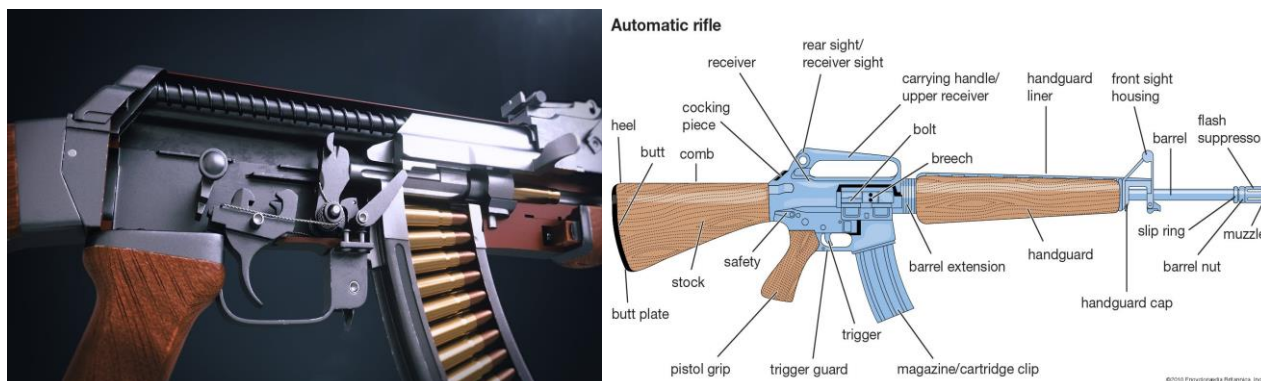


Figure-3: Internal structure of Kalashnikov.

Origin: The AK-47 was designed and first manufactured in the Soviet Union.

Designer: Mikhail Kalashnikov, a Russian, is credited with its design.

Initial Production: The first AK-47s were produced in 1948, becoming the standard assault rifle for the Soviet Army in 1949.

Global Proliferation: Due to the Soviet Union's policy of sharing designs with friendly nations, the AK-47 and its variants have been produced in many countries, both with and without official licenses.

Examples of Manufacturing Countries: Countries like Albania, Bulgaria, China, Egypt, Hungary, Poland, Romania, Yugoslavia, and Vietnam have all produced their own versions of the AK-47 or its derivatives.

Specification: The AK-47 fires 7.62mm diameter bullets using a 39mm long cartridge, usually referred to as 7.62×39mm rounds. These are significantly less powerful than the 7.62mm NATO bullets which are fired using a larger, 51mm long, cartridge, usually referred to as 7.62×51mm rounds.

AK-47: Soviet Union

Type: Assault rifle

Cartridge: 7.62×39mm

Length: 87 centimeters (34 inches) long

Weight: 3.47 kg

Muzzle velocity: 715 m/s

Barrel length: 41.5 cm

Length with Folding Stock (folded): 64.5 cm (25.4 inches)

Length with Folding Stock (extended): 87.5 cm (34.4 inches)



Figure-4: Magazine [Cartridge box] and Bullets.

The AK fires the 7.62×39mm cartridge with a muzzle velocity of 715 m/s (2,350 ft/s). The cartridge weight is 16.3 g (0.6 oz), and the projectile weight is 7.9 g (122 gr). The AK-47 fires 7.62×39mm rounds and has a cyclic rate of fire of 600 rounds per minute. This translates to about 10 rounds per second. However, due to the time it takes to reload, the practical rate of fire is lower, especially in automatic mode. In semi-automatic mode, the rate of fire is significantly lower, around 40 rounds per minute.

The "Kalashnikov discovery" most likely refers to the invention of the AK-47 assault rifle by Mikhail Kalashnikov. He designed this iconic firearm in the late 1940s, and it was adopted by the Soviet Army in 1949. The AK-47 is known for its simplicity, reliability, and ease of production, making it one of the most widely used and recognizable weapons in the world.

The Inventor: Mikhail Kalashnikov was a Soviet and Russian lieutenant general, military engineer, and small arms designer.



Figure-5: Cartridge.

The Weapon: The AK-47, or Avtomat Kalashnikova 1947 (Kalashnikov's automatic rifle model of 1947), is an assault rifle chambered for the 7.62×39mm cartridge.^[3]

Inspiration and Design: Kalashnikov designed the AK-47 after witnessing the shortcomings of Soviet weaponry in World War II. He drew inspiration from the German Sturmgewehr 44, but his design was a unique and improved weapon.

Gunpowder Specification: The gun powder consists of Potassium Nitrate, Sulphur and Charcoal in proportion of 75:15:10. Gunpowder is not suitable for high velocity ammunition as large amount of the powder is required to get high velocity. Besides it leaves large quantity of powder residue which tends to foul the barrel. Gunpowder, also commonly known as black powder to

distinguish it from modern smokeless powder, is the earliest known chemical explosive. It consists of a mixture of sulphur, charcoal (which is mostly carbon), and potassium nitrate (saltpetre). The sulphur and charcoal act as fuels, while the saltpetre is an oxidizer. Gunpowder does not go into a Kalashnikov firearm directly; instead, the AK-47 and other Kalashnikov rifles are designed to use cartridges containing a propellant, such as a nitrocellulose-based powder, which, when ignited by the primer, generates gases to launch the projectile. Traditional gunpowder is not used in modern firearms like the AK-47 because it creates excessive residue and does not provide the high velocities needed for modern cartridges. Price of AK47 at ₹ 400000/piece. India has a joint venture factory in Amethi, Uttar Pradesh, called Indo-Russian Rifles Private Limited (IRRPL), which manufactures the Kalashnikov AK-47.



Figure-6: BSF soldiers in action.

Key Features: The AK-47 is characterized by its gas-operated, selective-fire mechanism, allowing for both semi-automatic and fully automatic fire. Its robust construction and simple design contribute to its reliability in various conditions.

Global Impact: The AK-47's widespread adoption and use in conflicts around the world have made it a symbol of revolution and conflict. It has been produced in numerous countries and remains in use today.

The Kalashnikov, or AK-47, is one of the world's most familiar and widely used weapons. Its comparative simplicity made it cheap to manufacture, as well as reliable and easy to maintain.

CONCLUSION

The AK-47, officially known as the Avtomat Kalashnikova (Russian: Автомат Калашникова, lit. 'Kalashnikov's automatic [rifle]'; also known as the Kalashnikov or just AK), is an assault rifle that is chambered for the 7.62×39mm cartridge. Developed in

the Soviet Union by Russian small-arms designer Mikhail Kalashnikov, it is the originating firearm of the Kalashnikov (or "AK") family of rifles. After more than seven decades since its creation, the AK-47 model and its variants remain one of the most popular and widely used firearms in the world.

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