Sten

Carbine, Machine, Sten	
Sten Mk. II (trigger mechanism cover is missing)	
Type	Submachine gun
Place of origin	🇬🇧 United Kingdom
Service history	
In service	1941−1960s
Used by	See Users
Wars	World War II, Indonesian National Revolution, Korean War, Mau Mau Uprising, Suez Crisis, 1948 Arab-Israeli War, Sino-Indian War, Vietnam War, Indo-Pakistan Wars, Border Campaign (IRA)
Production history	
Designer	Major Reginald V. Shepherd Harold J. Turpin
Designed	1940
Manufacturer	Royal Small Arms Factory, Enfield; BSA; ROF Fazakerley; ROF Theale, Berkshire; Lines Brothers Ltd; Long Branch, Canada plus numerous sub-contractors making individual parts.
Produced	1941− (version dependent)
Number built	3.7−4.6 million (all variants, depending on source)
Variants	Mk. I, II, IIS, III, IV, V, VIS
Specifications	
Weight	3.2 kg (7.1 lb) (Mk. II)
Length	760 mm (29.9 in)
Barrel length	196 mm (7.7 in)
Cartridge	9x19mm Parabellum
Action	Blowback-operated, Open bolt
Rate of fire	version dependent; ~500 round/min
Muzzle velocity	365 m/s (1198 ft/s)
Effective range	60 m
Feed system	32-rd detachable box magazine
Sights	fixed peep rear, post front

The **Sten** (or **Sten gun**) was a family of British 9 mm submachine guns used extensively by British and Commonwealth forces throughout World War II and the Korean War. They were notable for having a simple design and very low production cost.

STEN is an acronym, cited as derived from the names of the weapon's chief designers, Major Reginald **S**hepherd and Harold **T**urpin, and **EN** for Enfield.[1] Over 4 million Stens in various versions were made in the 1940s.

The official designation "Carbine, Machine, Sten" should not be confused with the common understanding of carbine; the Sten was a typical, almost stereotypical submachine gun while the term carbine is used to refer to short, light rifles. The "Carbine, Machine" element of the designation resulted from the British term for a submachine gun—"Machine Carbine"—in the early part of the Second World War.

History

The Sten emerged while Britain was engaged in the Battle of Britain, facing invasion by Germany. The army was forced to replace weapons lost during the evacuation from Dunkirk while expanding at the same time. Prior to 1941 (and even later) the British were purchasing all the Thompson submachine guns they could from the United States, but this did not begin to meet demand. The American entry into the war at the end of 1941 placed an even bigger demand on the facilities making Thompsons. In order to rapidly equip a sufficient fighting force to counter the Axis threat, the Royal Small Arms Factory, Enfield, was commissioned to produce an alternative.

The credited designers were Major R. V. Shepherd, OBE, Inspector of Armaments in the Ministry of Supply Design Department at The Royal Arsenal, Woolwich, (later Assistant Chief Superintendent at the Armaments Design Department) and Mr. Harold John Turpin, Senior Draughtsman of the Design Department of the Royal Small Arms Factory (RSAF) Enfield. Shepherd had been recalled to service after having retired and spending some time at BSA.

The Sten shared design features, such as its side-mounted magazine configuration, with the Royal Navy's Lanchester submachine gun, which was a copy of the German MP28. In terms of manufacture, the Lanchester was entirely different, being made of high-quality materials with pre-war fit and finish, in stark contrast to the Sten's austere execution. The Lanchester and Sten magazines were even interchangeable (though the Lanchester's magazine was longer with a 50 round capacity, as opposed to the 32 round capacity of the Sten's magazine).

The Sten required a minimum amount of machining and manufacturing effort by using simple stamped metal components and minor welding. Much of the production could be performed by small workshops and the firearms assembled at the Enfield site. Over the period of manufacture the Sten design was further simplified: the most basic model, the Mark III, could be produced from five man-hours work. Some of the cheapest versions were made from only 47 different parts. It was distinctive for its bare appearance (just a pipe with a metal loop for a stock), and its horizontal magazine. The Mark I was a more finely finished weapon with a wooden foregrip and handle; later versions were generally more spartan, although the final version, the Mark V, which was produced after the threat of invasion had died down, was produced to a notably higher standard.

The Sten underwent various design improvements over the course of the war. For example, the Mark 4 cocking handle and corresponding hole drilled in the receiver were created to lock the bolt in the closed position in order to reduce the likelihood of accidental discharges inherent in the design. However, most changes to the production process were more subtle, designed to give greater ease of manufacture and increased reliability. Sten guns of late 1942 and beyond were, in general, highly effective weapons, though complaints of accidental discharge continued throughout the war. Such was the ease of manufacture that the Germans also produced a version of the Sten, the MP 3008, late in the war.

The Sten was replaced by the Sterling submachine gun from 1953 and was gradually withdrawn from British service in the 1960s. The other Commonwealth nations made or adopted their own replacements. The Sten was used extensively by Jewish partisans during the Israeli War of Independence.

Design

The Sten was a blowback-operated submachine gun firing from an open bolt with a fixed firing pin on the face of the bolt. This means the bolt remains to the rear when the weapon is cocked, and on pulling the trigger the bolt flies forward under spring pressure, stripping the round from the magazine, chambering it and firing the weapon all in the same movement. There is no breech locking mechanism, the rearward movement of the bolt caused by the recoil impulse is arrested only by the mainspring and the bolt's inertia. The basic operating principles were similar to those of the German MP40, Russian PPSh-41, US M3 submachine gun and numerous other designs. These shared similar attributes and faults; they were simple and cheap to manufacture, and put an automatic weapon into the hands of soldiers, greatly increasing the short-range firepower of the infantry, especially when the main infantry weapon was a bolt-action rifle capable of only around 15 rounds per minute and not suited for short-range combat. However, the open-bolt firing and use of pistol ammunition severely restricted accuracy, with an effective range of around 100m.

Stoppages could occur due to a variety of problems: some as a result of poor maintenance, while others were peculiar to the Sten. Carbon buildup on the face of the breech[2] or debris in the bolt raceway could cause a failure to fire, while a dirty chamber could cause a failure to feed.[3] Firing the Sten by grasping the magazine with the supporting hand tended to wear the magazine catch, altering the angle of feed and causing a failure to feed.

Additional problems stemmed from the Sten's magazine, which was a direct copy of the one used in the German Erma MP38/MP40, originally in order to facilitate the use of German 9 mm magazines.[4] Unfortunately, this decision necessarily incorporated the Erma magazine's faults in the process. The magazine had two columns of 9 mm cartridges in a staggered arrangement, merging at the top to form a single column. While other staggered magazines, such as the Thompson, fed from both the left and right side alternately (double-column, double feed), the Sten magazine, like the MP38, required the cartridges to gradually merge at the top of the magazine to form a single column (double column, single feed). As a consequence, any dirt or foreign matter in this taper area could cause feed malfunctions. Additionally, the walls of the magazine lip had to endure the full stresses of the rounds being pushed in by the spring. This, along with rough handling could result in deformation of the magazine lips (which required a precise 8° feed angle to operate), resulting in misfeeding and a failure to fire.

Modern 9 mm magazines, such as those used by the Sterling SMG, are curved and feed both sides to avoid this problem. If a Sten failed to feed due to jammed cartridges in the magazine, standard practice to clear it was as follows: remove magazine from Sten, tap the base of the magazine against the knee, re-insert magazine in Sten, then recocking the weapon and firing again as normal.[3] To facilitate easier loading when attempting to push the cartridges down to insert the next one, a magazine filler tool was developed and formed part of the weapon's kit.

The slot on the side of the body where the cocking knob ran was also a target of criticism, as the long opening could allow foreign objects to enter. On the other hand, a beneficial side-effect of the Sten's minimalist design was that it would fire without any lubrication.[3] This proved useful in desert environments such as the Western Desert Campaign, where oil attracted and retained dust and sand.

The open bolt design combined with cheap manufacture and rudimentary safety devices also meant the weapon was prone to accidental discharges, which proved hazardous. A simple safety could be engaged while the bolt was in the rearwards (cocked) position. However, if a Sten with a loaded magazine, with the bolt in the closed position, was dropped or the butt was knocked against the ground, the bolt could move far enough rearward to pick up a round (but not far enough to be engaged by the trigger mechanism) and the spring pressure could be enough to chamber and fire the round. The Mk 4 cocking handle was designed to prevent this by enabling the bolt to be locked in its forward position, thereby immobilising it. Wear and manufacturing tolerances could render these safety devices ineffective.

Variants

Sten guns were produced in several basic marks, (though the MKI saw limited service, and the MKIV was never issued) and nearly half of the total produced were of the Mark II. Approximately 4.5 million Stens were produced during the war.

Mark I

The first ever Mk I Sten gun (number 'T-40/1' indicating its originator Harold Turpin, the year 1940 and the serial number "1") was handmade by Turpin at the Philips Radio works at Perivale, Middlesex during December 1940/January 1941. This particular weapon is held by the historical weapons collection of the British Army's Infantry and Small Arms School Corps in Warminster, Wiltshire.[5]

The first model had a conical flash hider and fine finish. It had a wooden foregrip and forward handle (sometimes this was made of steel), as well for a section of the stock. The stock was a small tube outline, rather like the Mark II Canadian. One unique feature was that the front pistol grip could be rotated forward to make the firearm easier to stow. The barrel sleeve extended all the way to the end, where it met the flash hider. Along the top of the tube surrounding the barrel was a line of small holes and its sights were configured somewhat differently. About 100,000 were made before production switched to the Mark II. Sten Mk I's in German possession were designated MP.748(e), the 'e' standing for *englische*.

Mark I*

This was the first simplification of the Mk I. The foregrip, the wooden furniture and the flash hider were deleted for production expediency.[6]

Mark II

The Mark II was the most common variant, with two million units produced. It was a much rougher weapon than the Mk I. The flash eliminator and hand guard (grip) of the Mk I were eliminated. A removable barrel was now provided which projected 3 inches beyond the barrel sleeve. Also, from the operator's perspective, a special catch allowed the magazine to be slid partly out of the magazine housing and the housing rotated 90 degrees counter-clockwise, together covering the ejection opening and allowing the weapon and magazine both to lie flat on its side.

The barrel sleeve was shorter and rather than have small holes on the top, it had three sets of three holes equally spaced on the shroud. Sten Mk II's in German possession were designated MP.749(e). Some MkIIs were fitted with a wooden stock as this part was desirable and interchangeable with the Mk V.

Regular Mark II:

- Overall Length: 762 mm (30 in)
- Barrel Length: 197 mm (7.8 in)
- Weight: 3.2 kg (7.1 lb)

Winston Churchill with a Sten Mk II in Shoeburyness on June 13th 1941.

Mark II (Canadian)

During World War II a version of the Sten gun was produced at the Long Branch Arsenal in Long Branch, Ontario now part of Toronto, Ontario. This was very similar to the regular Mark II, with a different stock ('skeleton' type instead of strut type) and improved quality of manufacture. It was first used in combat in the Dieppe Raid in 1942.

Mark II:

- Overall Length: 896 mm (35.3 in)
- Barrel Length: 198 mm (7.8 in)
- Weight: 3.8 kg (8.4 lb)

Mark III

This simple design was the next most commonly produced after the Mark II. It was a simplification of the Mk I made both in Canada and the UK. Lines Bros Ltd was the largest manufacturer. The biggest difference from the Mark II was the unification of the receiver, ejection port, and barrel shroud that now extended farther up the barrel. The barrel was fixed and the body was welded shut along the centre of the top. Captured Sten Mk IIIs in German possession were designated MP.750(e).

Female worker posing with a Sten Mk II in the factory on May 26, 1942.

Mark IV

The Mark IV [7] was a smaller version which did not progress beyond the prototype stage. It was near pistol-sized and it had a different configuration with a conical flash hider, a rear pistol grip, a very light stock and a much shorter barrel.

Mark V

Introduced in 1944, the Mk V was essentially a better-quality, more elaborate version of the Mk 2. Changes included a wooden pistol grip, a vertical wooden fore grip (deleted on later examples), a wooden stock, and a bayonet mount. There was a No4 Lee Enfield foresight and the weapon was of better quality manufacture and finish than the Mk2 and Mk3. The Sten bandolier issued to paratroopers held 7 full magazines.

Mark VI

- Overall Length: 908 mm (35.7 in)
- Barrel Length: 198 mm (7.8 in)
- Weight: 4.5 kg (9.9 lb)

British paratroopers in Oosterbeek during Operation Market Garden armed with the Sten Mk V.

Suppressed models

Mark IIS and Mark VIS models (sometimes recorded as 6(s)) were produced which incorporated an integral suppressor. This would heat up rapidly when fired and a canvas cover was laced around the suppressor for some protection for the firer's supporting hand. The MkIIS was, as the name suggests, a suppressed version of the Mk II. Captured examples of the Sten Mk IIS in German service were designated MP.751(e).

The Mk VI was a suppressed version of the Mk V. The Mark VI had a lower muzzle velocity than the others due to a ported barrel intended to reduce velocity to below the speed of sound; 305 m/s (1001 ft/s) and was also the heaviest regular version due to the added weight of the specially designed suppressor, as well as using a wooden pistol grip and wooden stock.

The suppressed models were produced at the request of the Special Operations Executive (SOE) for use on clandestine operations in occupied Europe, starting with the Mk. IIS in 1943. Due to their tendency to overheat, they were fired in short bursts or single shots.

In addition to its use in the European Theatre, the Mk. IIS saw service with clandestine units in the Southwest Pacific Area (SWPA) such as the Services Reconnaissance Department and SOE's Force 136 on operations against Imperial Japanese forces. The Sten Mk. IIS was used by the Operation Jaywick party during their raid into Japanese-occupied Singapore Harbour.

The Sten Mk. IIS also saw service with the Australian Special Air Service (SAS) in Vietnam.

## Foreign-built copies and derivatives

Norwegian Sten

In German-occupied Norway the resistance, under leadership of Bror With, created a large number of Sten guns from scratch, mainly to arm members of the underground army *Milorg*.

Danish Sten

Several groups in the Danish resistance movement produced Sten guns for their own use. BOPA produced around 200 Sten guns in a bicycle repair shop on Gammel Køge landevej (Old Køge road) located south of Copenhagen. Holger Danske produced about 150 Sten guns in workshops in Copenhagen. Employees of the construction company Monberg og Thorsen produced approximately 200 - 300 Sten guns in what is now the municipality of Gladsaxe - a suburb of Copenhagen for use by Holger Danske and other groups. Resistance groups 'Frit Danmark' and 'Ringen' also built a significant number of Sten guns.

Polish Sten

The Polish resistance was provided with numerous Stens of various models by the SOE and the Cichociemni. Between 1942 and 1944, approximately 11,000 Sten Mk IIs were delivered to the Armia Krajowa. Due to the simplicity of design, local production of Polish variants of Sten was started in at least 23 underground workshops in Poland. Some of them produced copies of Mark IIs, while others produced the so-called *Polski Sten*. The Polski Sten made in Warsaw under command of Ryszard Białostocki were built from a number of *legal* elements made in official factories or acquired through other means. The main body of the machine pistol was made from hydraulic cylinders produced for hospital equipment. All the pistols were marked in English to disguise their origin and the production facilities. A modernized version of the Sten was produced in Poland under the name Błyskawica.
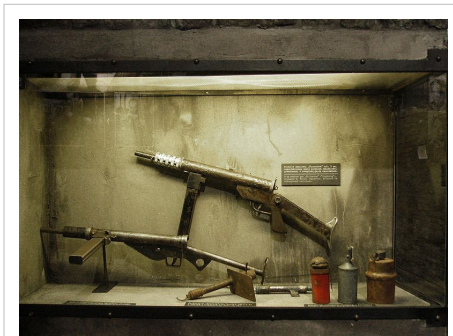
Błyskawica and Polish Sten on display in the Warsaw Rising Museum

Gerät Potsdam

In late 1944, the Mauser works in Germany secretly started manufacturing copies of British Mk II Sten, apparently for diversion and sabotage purposes. These weapons were intended to duplicate the British original as closely as possible, right down to the markings. The series was referred to as the *Gerät Potsdam* and approximately 28,000 weapons were made.

MP 3008

In early 1945, Germany was seeking a cheap version of the MP40 machine pistol for the *Volkssturm*. For that purpose a modified Sten was designed by Mauser and named the MP 3008. The main difference was the magazine attached below the weapon. Altogether, roughly 10,000 pieces were produced before the end of World War II.

Austen Mk I

The **Mark I Austen** (from "Australian Sten") was a 9 millimetre Australian submachine gun derived from the

British Sten gun developed during the Second World War by the Lithgow Small Arms Factory. It externally resembled the Sten but had twin pistol grips and folding stock resembling those of the German MP40. A Mk 2 version was also produced which was of different appearance and which made more use of die-cast components. Although 20,000 were made, the Austen never achieved the success of the competing Australian-designed Owen submachine gun, known as the "Owen Gun".

Imperia submachine gun

After the Second World War the Belgian army was mainly equipped with a mixture of British and American submachine guns. The army, wanting to replace them with a modern and preferrably native design, tested various designs with the Vigneron M2 and licence produced FN UZI being selected. However, the Imperia was an improved Sten with a fire selector and retractable stock.

Sputter Gun

A short-lived American invention, the Sputter Gun was designed to circumvent the law that defined a machine gun as something that fired multiple rounds with one pull of the trigger. The Sputter Gun had no trigger, but fired continuously after loading and the pulling back of its bolt, firing until it ran out of ammunition. The gun was very short lived as the ATF quickly reclassified it.

SaskSten

As of 2010, SMG International of Canada manufactures Sten Mk 1*, Mk II, Mk III and hybrid versions of the Sten gun from a combination of newly manufactured and original parts. SaskSten are registered with and approved by the Canadian Firearms Center. Most guns are restricted to semi-automatic fire only. However, an unrestricted version of the Mk II Sten is also available for $1,575 (Canadian).[8]

Service

The Sten, especially the Mark II, tended to attract affection and loathing in equal measure. Its peculiar appearance when compared to other firearms of the era, combined with sometimes questionable reliability made it unpopular with some front-line troops.[9] It gained nicknames such as "Plumber's Nightmare", "Plumber's Abortion", or "Stench Gun". The Sten's advantage was its ease of mass-production manufacture in a time of shortage during a major conflict.

Made by a variety of manufacturers, often with subcontracted parts, some early Sten guns were made poorly and/or not made to specification, and could malfunction in operation, sometimes in combat.[10] The double-column, single-feed magazine copied from the German MP40 was never completely satisfactory, and hasty manufacturing processes often exacerbated misfeed problems inherent in the design. A common statement heard from British forces at the time was that the Sten was made "by Marks and Spencer out of Woolworth."[11] British and Commonwealth forces in the early years of the war often extensively test-fired their weapons in training to weed out bad examples; a last-minute issue of newly-manufactured Stens prior to going into action was not always welcomed.
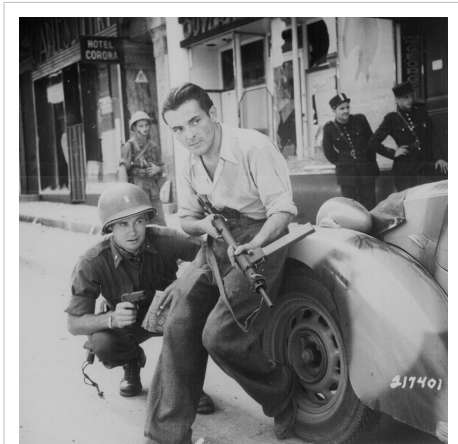
The MK II and MK III Stens were regarded by many soldiers as very temperamental, and could accidentally discharge if dropped or even laid on the ground whilst the gun was cocked.[11] Others would fire full-automatic when placed on 'single', or fire single shots when placed on 'automatic'.[11] This was particularly true of early Stens using bronze bolts, where the sear projection underneath the bolt could wear down more easily than ones made of case-hardened steel.

Stens could jam at inopportune moments. One of the more notable instances of this was the assassination of Reinhard Heydrich on 27 May 1942, when a Slovak soldier - Warrant Officer Jozef Gabčík - fired his Sten point blank at Heydrich, only to have it misfire. Another partisan hastily tossed a grenade, which mortally wounded Heydrich.[10] There are other accounts of the Sten's unreliability, some of them true, some exaggerated and some which are apocryphal. France[12] manufactured (well-made) Sten copies postwar into the early 1950s, evidently believing in the basic reliability and durability of the design.

A well-maintained (and properly-functioning) Sten gun was a devastating close-range weapon for sections previously armed only with bolt-action rifles. In addition to regular British and Commonwealth military service, Stens were air-dropped in quantity to resistance fighters and partisans throughout occupied Europe. Due to their slim profile and ease of disassembly/reassembly, they were good for concealment and guerrilla warfare. Wrapping the barrel in wet rags would also cause the Sten to sound like a heavier weapon, with opposing troops believing they were faced with machine guns.[13] Guerrilla fighters in Europe became adept at repairing, modifying and eventually scratch-building clones of the Sten (over 2,000 Stens and about 500 of the similar Błyskawica SMGs were manufactured in occupied Poland).

Canadian infantry battalions in northwest Europe retained spare Sten guns for special missions and the Canadian Army reported a surplus of the weapons in 1944. The Sten was not used in Italy due to constraints on the shipping of ammunition; .45 ACP was already being used in that theatre by the US Army and a requirement for the 9 mm pistol round used by the Sten would have been in competition with limited shipping space.

Staged photograph: A partisan armed with Sten Mk II smg, France, 1944.

The Sten saw use even after the economic crunch of World War II, replacing the Royal Navy's Lanchester submachine guns into the 1960s and was used in the Korean War, including specialist versions for British commandos. It was slowly withdrawn in the 1960s and replaced by the Sterling SMG in British Army service, while Canada adopted a similar weapon, the C1 SMG, to replace the Sten.

The Sten was one of the few weapons that the State of Israel could produce domestically during the 1948 Arab-Israeli War. Even before the declaration of the State of Israel, the Yishuv had been producing Stens for the Haganah; after the declaration, Israel continued making Stens for IDF use. The opposing side also used (mostly British-made) Stens, particularly the irregular and semi-regular Arab Liberation Army.[14]

In the 1950s "L numbering" came into use in the British Army for weapons - Stens were then known as L50 (Mk II), L51 (Mk III) and L52 (Mk V).

One of the last times the Sten was used in combat during British service was with the RUC during the IRA border campaign of 1956 - 1962. In foreign service, the Sten was used in combat at least as recently as the Indo-Pakistani War of 1971.

In 1971 various marks of Stens were used by guerilla fighters during the Bangladesh Liberation War.

A number of suppressed Stens were in limited use by the US Special Forces during the Vietnam war, including circa 1971, by the United States Army Rangers.[15]

In 1984, Indira Gandhi was assassinated by two of her Sikh bodyguards, one of whom emptied the entire magazine of his Sten into the Prime Minister at point-blank range.

In the Chinese Civil War, both sides used the Sten.

The Finnish Army acquired moderate amounts of Stens in the late 1950s, mainly Mk. III versions. Refurbishment at the Kuopio Arsenal included bluing of the arms. Stens in Finnish service saw limited usage by conscripts (notably combat swimmers) and were mostly stockpiled for use in a future mobilization.

During the Zapatista movement in 1994 some Zapatista soldiers were armed with Sten guns.

Users

- 🇦🇺 Australia
- 🇧🇩 Bangladesh
- 🇧🇪 Belgium
- 🇨🇦 Canada
- 🇨🇳 People's Republic of China
- 🇹🇼 Republic of China
- ⬛ Commonwealth of Nations
- 🇫🇮 Finland
- 🇫🇷 France
- 🇮🇳 India
- 🇮🇩 Indonesia
- 🇮🇱 Israel
- 🇲🇾 Malaysia
- 🇳🇱 Netherlands
- 🇳🇿 New Zealand
- 🇳🇴 Norway
- 🇵🇱 Poland
- 🇷🇭 Rhodesia
- 🇿🇦 South Africa[16]
- 🇻🇳 South Vietnam
- 🇹🇷 Turkey
- 🇬🇧 United Kingdom
- 🇺🇸 United States

Gallery

Sten Mk II—bolt is not cocked

Sten Mk II—bolt is not cocked

Sten Mk II—dorsal view. Bolt is not cocked

Sten Mk II—detail of rear sight

Sten Mk II—detail of magazine well and foresight

Sten Mk IIS (suppressed)

Sten Mk VIS (suppressed)

British Paratroops with Sten Mk Vs on D-Day+1

Malayan police submachinegunner (right) with Sten Mk V on Malayan Emergency

Canadian soldier holding Sten Mk II guards German prisoners captured at Juno Beach on D-Day, 6 June 1944

Close-up of a suppressed Sten (at the top of the photo) on display at the Imperial War Museum

French Resistance members captured by Milice in July 1944. The man on the left carries a captured Sten Mk II

External links

- Various high-resolution photos of the Sten Mk II, III and V [17]
- How to field-strip a Sten [18]
- Complete machinist's plans to manufacture a Sten Mk II [19]
- Sten at Modern Firearms [20]
- REME Museum [21]
- MP3008 [22]
- Imperia submachine gun [23]

References

[1] Not all sources agree. Colonel Shepherd discussing how it was named when he received an Award from the Board of the Royal Commission Awards to Inventors. Lord Cohen: "Why was it called the Sten?" Colonel Shepard: "It was called the Sten by the then Director General of Artillery. The *S* was from my name, the *T* from Mr. Turpin who was my draughtsman and who did a very large amount of the design and the *EN* was for England. That is the origin of the name, for which I accept no responsibility." In: Laidler, Peter (2000). *The Sten Machine Gun*. Ontario: Collector Grade Publications. pp. 363−364. ISBN 0889352593. In the official history of the Royal Ordnance Factories, ST is for Shepard and Turpin and EN is for Enfield. In: Ian Hay (Maj.-Gen. John Hay Beith, CBE, MC) (1949). *R.O.F. The Story of the Royal Ordnance Factories, 1939−1948*. London: His Majesty's Stationery Office.

[2] Carbine, Machine, STEN 9mm Mk II, *General Instructions*, (February 1942) Manual (http://ferret-afv.org/manuals/ sten_mk_2_users_manual.pdf): Heavy carbon buildup could prevent the firing pin from detonating the primer.

[3] Carbine, Machine, STEN 9mm Mk II, *General Instructions*, (February 1942)

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[8] http://smginternational.net/index.html

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[12] (http://web.archive.org/web/20040716040536/http://stenguns.tripod.com/id12.html)

[13] Dear, I. *SABOTAGE AND SUBVERSION - The SOE and OSS at War*,Arms and Armour (1996) p. 137-155

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[15] "The Vietnam Experience LRRP 1966-1972" (http://25thaviation.org/history/id908.htm). 25thaviation.org. . Retrieved 2009-06-09.

[16] http://www.time.com/time/magazine/article/0,9171,869441-1,00.html

[17] http://www.gunpics.net/uk/uk.html

[18] http://www.prexis.com/sten/Sten%20field%20Stripping.pdf

[19] http://www.scribd.com/doc/2624298/sten-mk2-complete-machine-instructions

[20] http://world.guns.ru/smg/smg38-e.htm

[21] http://www.rememuseum.org.uk/arms/submachg/armsmg2.htm

[22] http://www.mek-schuetzen.de/Blueprints/volksmaschinenpistole_1.jpg

[23] http://www.geocities.com/Yosemite/Forest/5078/imperia.htm

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