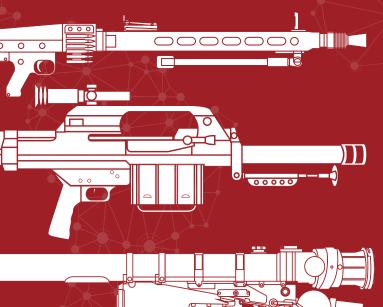
THE ARES GLOSSARY

Edited by N.R. Jenzen-Jones



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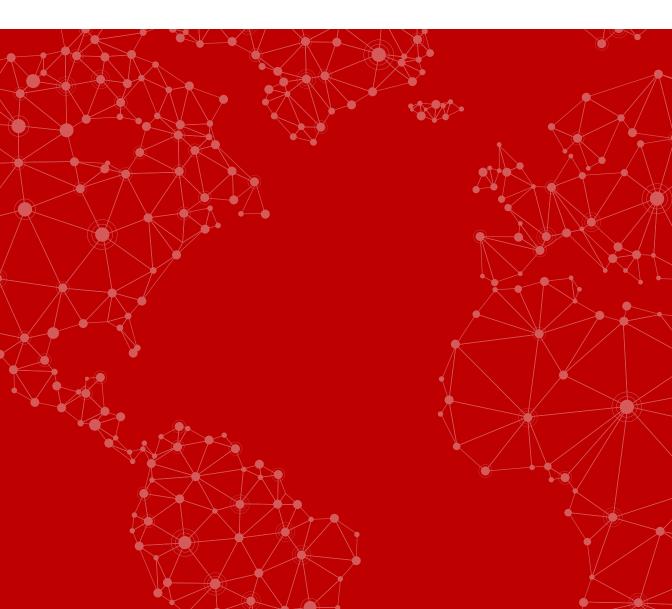
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Glossary

This glossary presents brief explanations of some of the important terms used within ARCS. ARES is continuing to update the terms herein, and is also developing further glossary entries and definitions. The most recent public versions of these are being made available at:

<www.armamentresearch.com/glossary>.

Where possible, please refer to the most current web version in the first instance.

Note that not all of the definitions contained within this glossary have been subject to the same rigorous development and testing as the 'core' ARCS definitions (stylised in the body of this report in coloured boxes). In some cases, definitions in the glossary have been sourced from previous publications by ARES and other organisations. Where applicable, a citation indicating this effect has been provided. Note that these may have been lightly adapted for the purposes of this glossary, and should not be taken as verbatim representations of the source definition.

Accessories: Items which may be fitted to <u>small arms</u>, <u>light weapons</u>, or <u>heavy</u> <u>weapons</u> to provide some ancillary capability, but which are not <u>critical</u> <u>components</u>.

Accuracy: The measure of <u>mean point</u> of impact (MPI) deviation from the desired MPI (i.e., the proximity of a fired <u>munition</u> to its intended target) (Dullum, 2017). See also: '<u>Precision</u>'.

Action: The mechanical means by which a <u>gun</u>'s <u>operating cycle</u> is carried out, whether manually or by one of several <u>systems of operation</u> powered by the <u>chemical energy</u> stored in the weapon's <u>ammunition</u>. Hence 'bolt-action', 'leveraction ', etc.

Air weapon: A <u>barrelled</u> weapon shooting potentially <u>lethal projectiles</u> by means of compressed gas.

Ammunition: <u>Munitions</u> which are fired by a weapon or <u>weapon system</u>. A single unit is a '<u>round</u>'. Colloquial shortened form: 'ammo'. Anti-aircraft mount: A mechanism holding a weapon which allows for 360-degree rotation, elevation adjustment up to the vertical (or nearly so), and rapid traverse.

Anti-personnel (APERS): A user, weapon, or <u>munition</u> role concerned primarily with the attack of human targets.

Anti-tank (AT): A user, weapon, or <u>munition</u> role concerned with the attack of armoured vehicles, especially heavily armoured vehicles such as tanks. Sometimes 'anti-vehicle (AV)'.

Anti-tank guided weapon: A weapon or weapon system firing guided munitions primarily intended to defeat armoured vehicles. Includes missiles, mortar projectiles, and artillery gun projectiles).

Anti-tank guided missile: A guided missile primarily intended to defeat armoured vehicles.

Arm:

1. (*Noun*) Shortened form of 'armament'.

2. (Verb) To make a weapon or weapon system ready to fire. Often necessitating the disengagement of a <u>safety mechanism</u>.

3. (Verb) To make a <u>munition</u> ready to function, such as by the removal or disengagement of a safety mechanism, or the alignment of the components of a <u>fuze</u>. May be effected by internal or external forces.

Armament: A weapon (often abbreviated to 'arm').

Artillery: Weapons designed to engage targets at the limits of, or beyond, a user's line-of-sight (i.e., those weapons capable of long-range fire, typically indirect fire).

Automatic (action): A weapon action that will fire continuously as long as the <u>firing mechanism</u> is activated, until the <u>feed device</u> is empty. Not to be confused with '<u>semi-automatic</u>' (including the popular but improper usage of 'automatic' where 'semiautomatic' is meant).

Automatic rifle:

1. (*Noun*) A <u>rifle</u> capable of <u>automatic</u> fire.

2. (*Proper noun, U.S.*) A <u>light</u> <u>machine gun fed</u> from a box <u>magazine</u>.

3. (*Proper noun, UK*) A <u>select-fire</u> infantry rifle.

Auxiliary weapon: A secondary weapon fitted to another (primary) weapon (e.g., an <u>under-barrel grenade</u> launcher).

Ball (cartridge): In modern usage, <u>full</u> <u>metal jacket</u> ammunition. The term derives from archaic <u>firearms</u> which primarily fired lead spheres—either 'ball' or smaller 'shot'.

Barrel: The primary pressure-bearing component of a **projectile** weapon that contains and directs the projectile. See also: '<u>Chamber</u>'.

Belt-fed (weapon): A weapon using a <u>feed device</u> consisting of a flexible metal, polymer, or cloth strip of <u>ammunition</u>, typically holding at least 100 <u>rounds</u>. This belt may be continuous or consist of individual links which separate when <u>cartridges</u> (or fired <u>cartridge cases</u>) are removed.

Bipod: A pair of stabilising legs attached to a weapon to steady it when resting against the ground or another solid surface or object.

Birdshot: A shotgun cartridge load

consisting of numerous small pieces of shot, primarily intended for shooting birds (hence the name) and other small game animals. Most birdshot is between 1 and 4 mm in diameter.

Black powder: A low explosive

composed of a mixture of sulphur, carbon, and potassium nitrate (saltpetre). Commonly used as a propellant for small arms, light weapons, and heavy weapons until the advent of smokeless powder in the late-19th century. Also 'gunpowder'. **Blank (cartridge)**: A cartridge with no lethal <u>projectile</u>, used to create noise (e.g., for training purposes, or to scare away wildlife) or to generate pressure for launching another projectile (e.g., a rifle grenade or distress flare). Blank cartridges designed specifically for launching rifle grenades are sometimes called 'grenade blanks'.

Blank-firing adaptor (BFA): A specialised muzzle device which restricts the bore of a gun and thus increases gas pressure, allowing a <u>self-loading</u> weapon to <u>cycle</u> reliably when used with <u>blank cartridges</u>. See also: '<u>Operating cycle</u>'.

Blank-firing weapon: A <u>firearm</u>-shaped object which is designed to generate the <u>report</u> of a firearm but not fire a <u>projectile</u>.

Blowback: An <u>operating system</u> in which the <u>bolt</u> is not locked to the <u>breech</u> on firing, being held in place only by its own inertia and the return spring. Only suitable for relatively lowpressure <u>ammunition</u>, such as <u>handgun</u> <u>cartridges</u> or ammunition for <u>grenade</u> <u>launchers</u>.

Body (British English): See 'Receiver'.

Bolt: The component of a <u>gun</u> that closes and (together with a <u>cartridge</u> <u>case</u>) seals the breech. In some guns, especially <u>light weapons</u> and <u>heavy</u> <u>weapons</u>, a form of bolt is instead known as a 'breechblock'. See also: '<u>Breech</u>'; '<u>Bolt carrier</u>'.

Bolt action: A type of <u>manually</u> <u>operated firearm action</u> in which the weapon is <u>cycled</u> by manipulating a handle affixed to its <u>bolt</u>. The most common variants are turn-bolt and straight-pull actions. **Bolt carrier**: A <u>gun</u> component which 'carries' the <u>bolt</u> back and forth within the <u>receiver</u> in order to engage with locking recesses in the receiver or <u>barrel</u> extension.

Bore:

1. The inside of a gun barrel.

2. Shortened form of 'bore diameter', historically measured in inches (e.g., a '.410 bore' shotgun features a barrel with a bore diameter of .410 of an inch).

3. (*British English*) Often used interchangeably with gauge, although this use is not recommended.

Box magazine: See 'Magazine'.

Break-open (action): A type of <u>manually</u> <u>operated gun action</u> in which the weapon is <u>reloaded</u> by disconnecting the <u>barrel</u> from the <u>breech</u>, normally by pivoting the barrel downwards or to one side relative to the <u>receiver</u>.

Breech: the rear opening of a <u>barrel</u> (opposite the <u>muzzle</u>), usually containing the <u>chamber</u> and closed by the <u>bolt</u>.

Buckshot: A shotgun cartridge load

consisting of several pieces of <u>shot</u>, each of approximately .33 inches in diameter, originally intended for deer hunting (hence the name) but now also used for sports shooting and <u>anti-personnel</u> purposes.

Burst-fire mechanism: A mechanism which restricts an otherwise <u>automatic</u> weapon to firing a fixed number of <u>rounds</u> (typically three) each time the <u>firing mechanism</u> is activated. **Bullet**: A **projectile** fired from a **firearm**. Projectiles of 20 mm or larger in diameter are often referred to simply as 'projectiles'. See also: '<u>Calibre</u>'; '<u>Shell</u>'.

Bullpup (firearm): A <u>firearm</u> in which the <u>firing grip</u> is located in front of the <u>breech</u> (Ferguson, 2020).

Butt: See 'Buttstock'.

Buttstock: The part of a weapon which is braced against the user's body (typically the shoulder) when firing, and which may form part of a larger <u>stock</u>. Also 'butt', 'stock', or 'shoulder stock'.

Calibre:

1. Strictly, the diameter of the bore of a gun (thus synonymous with a common usage of 'bore') or the projectile itself. Practically, the diameter of bore and projectile often differ noticeably, especially in rifled weapons. Calibre may thus be determined by measuring the bore between either the lands or grooves, or may be expressed as an average of both diameters. For design and marketing purposes, even an arbitrary figure may be used (Jenzen-Jones, 2019).

2. In the context of artillery guns, a measurement of barrel length with respect to the bore diameter. The effective length of the barrel is divided by the bore diameter to give a figure in calibres, which is often expressed alongside the bore diameter (U.S. Navy, 1957, p. 81). For example, a '5"/40' gun has a 5-inch bore and barrel length of 40 calibres, or 200 inches (5 × 40 = 200).

3. Sometimes used synonymously with <u>cartridge designation</u> (e.g.,

'7.62 mm NATO calibre') or for a collective type of ammunition (e.g., '<u>intermediate-calibre cartridge</u>').

Cannon:

1. A gun chambered for highvelocity ammunition of at least 20 mm in <u>calibre</u>, designed for <u>direct fire</u>. <u>Self-loading</u> cannon are sometimes called 'autocannon'.

2. (*Historical*) An <u>artillery gun</u> primarily firing large <u>shot</u>.

Captive piston: An <u>operating system</u> in which <u>propellant</u> gases drive a piston up a cylinder and impart velocity to the projectile whilst remaining trapped within the sealed cylinder. As a result, there is no <u>muzzle flash</u> or blast, and firing the weapon is extremely quiet. Used by some <u>light mortars</u>, lowvelocity <u>grenade launchers</u>, and <u>pistols</u> intended for covert operations.

Carbine:

1. (*Historical*) A short <u>rifle</u> intended for use by military personnel in noninfantry (e.g., cavalry, artillery) roles.

2. (*Contemporary*) Any short rifle, especially where a longer version is also (or was previously) in service. This use is not recommended.

Cartridge: A single, self-contained unit of <u>ammunition</u> consisting of a <u>cartridge</u> <u>case</u>, <u>primer</u>, <u>propellant</u>, and one or more <u>projectiles</u>. In <u>caseless cartridges</u>, the cartridge case may be absent, the cartridge's propellant fulfilling some of the same functions.

Cartridge case: The portion of a <u>cartridge</u> that encloses the <u>propellant</u>, <u>projectile(s)</u>, and <u>primer</u>. In many weapons, the cartridge case also helps to provide rearward <u>obturation</u>. Absent from <u>caseless cartridges</u>. **Cartridge designation**: An expression of the nominal <u>calibre</u> of a <u>cartridge</u>'s <u>projectile</u> and the <u>cartridge case</u> length (e.g., '5.56 × 45 mm') and/or a descriptive term (e.g., '5.56 NATO' or '5.56 × 45 mm NATO'). Cartridges expressed in Imperial (or U.S. Customary) units most often use the combination of a cartridge's calibre and a descriptive term (e.g., '.338 Lapua Magnum'), whilst those expressed in SI (metric) units most often use the calibre and cartridge case length, and optionally include a descriptive term (e.g., 12.7 × 108 mm) (Jenzen-Jones, 2019).

Cartridge headspace (CHS): The distance from the face of the closed **breech** of a **firearm** to the surface in the **chamber** on which the **cartridge case** seats. This point usually corresponds to either the rim or shoulder of the cartridge case, and varies depending upon the geometry of the **cartridge** being chambered (Ferguson, 2015b).

Caseless cartridge: A type of <u>cartridge</u> which lacks a <u>cartridge case</u>. Instead, the <u>projectile</u> is partially or entirely embedded ('telescoped') into a block of <u>propellant</u>. In weapons firing caseless cartridges, rearward <u>obturation</u> must be provided for solely by the design of the weapon itself. Distinct from <u>separate-</u> <u>loading</u> ammunition.

Chamber:

1. (*Noun*) The component of a gun designed to accept a round of ammunition and contain the pressure generated on firing. Often, but not always, formed from the breech of the barrel.

2. (*Verb*) To position a <u>round</u> of <u>ammunition</u> within the <u>chamber</u> [noun] of a <u>firearm</u>.

Chambered (for): An indication of which cartridge(s) a gun (usually a firearm) is designed to chamber. Usually expressed in terms of cartridge designation (e.g., 'the rifle was chambered for the 7.62 × 39 mm cartridge').

Charger clip: A <u>clip</u> used to load a <u>magazine</u>, whether internal to the weapon or detachable. Also '<u>stripper</u> <u>clip</u>'.

Chemical energy: A form of potential energy which is stored in the bonds of a substance and released when it undergoes a chemical reaction.

Clip: A <u>feed device</u> lacking its own feeding spring (as opposed to a <u>magazine</u>). May be of <u>charger clip</u> or <u>en</u> <u>bloc clip</u> type.

Cock [*verb*]: The <u>action</u> of making a <u>firearm</u> ready for firing by moving to the rear and against spring tension a <u>hammer</u> or <u>striker</u> that is then released by a <u>trigger</u>. Note that the etymologically related noun 'cock' refers to that part of a <u>flintlock</u> firearm that holds the flint.

Coilgun: A weapon utilising electromagnetic coils through which a **projectile** is accelerated by precisely timed changes in magnetic flux. See also: '<u>Railgun</u>'.

Control hand: The hand employed by the user of a weapon to activate its <u>firing mechanism</u>. In most cases, this is the user's dominant hand (e.g., the right hand, in the case of a right-handed user). See also: '<u>Support hand</u>'.

Control surfaces: Aerodynamic surfaces which can be moved to control the path of a <u>munition</u> in flight.

Crew: Two or more persons assigned to operate (and often transport) a weapon or <u>weapon system</u>.

Crew-portable (weapon): A weapon which can be transported and operated by no more than five people on foot. Where the weapon is broken down into several loads for transport, it is sometimes referred to as a 'manpackable' weapon. See also: '<u>Crew-</u> served'.

Crew-portable mortar: A relatively short-barrelled <u>light gun</u> designed predominantly for <u>indirect fire</u> and firing <u>low-velocity projectiles</u> of at least 50 mm in <u>calibre</u> but less than 100 mm in calibre. See also '<u>Mortar</u>'; '<u>Mortar</u> <u>projectile</u>'.

Crew-served (weapon): A weapon typically operated by a <u>crew</u>. Most often used to describe <u>small arms</u> or <u>light</u> <u>weapons</u>, but applicable to many <u>heavy</u> <u>weapons</u>.

Critical components: Those parts of a weapon or <u>weapon system</u> that are necessary for the weapon to function as intended. In the case of <u>guns</u>, these are often <u>pressure-bearing components</u>.

Cycle [*verb*]: The act of completing a weapon's <u>operating cycle</u>, either manually or automatically.

Cylinder: The rotating cluster of <u>chambers</u> comprising the integral feed device of a <u>revolver</u>.

Damage mechanism: See 'Effect mechanism'.

Delayed blowback:

1. A variety of <u>blowback operating</u> <u>system</u> in which the opening of the <u>bolt</u> is mechanically delayed, allowing <u>chamber</u> pressure to drop to a level deemed safe for the user and the structural integrity of the <u>gun</u>. The <u>action</u> remains fully locked until peak gas pressures have subsided.

2. (*Colloquially*) Synonymous with '<u>retarded blowback</u>'. This use is not recommended.

Deringer: See 'Derringer'.

Derringer: A form of compact <u>single-shot</u> or (later) multi-barrelled <u>handgun</u> derived from a particular style of single-shot, <u>muzzle-loading pistol</u> invented by Henry Deringer in the 1820s. Despite the spelling of the inventor's last name, 'derringer' remains the most common form today. Also 'Deringer'.

Designate (a target) [verb]: To identify and assign a target for engagement. In modern usage, the term often refers to the process of selecting a target for a weapon system (whether one's own or that used by friendly personnel) using electronic, electro-optical, or other technological means.

Designated marksman rifle (DMR): A medium-range, accurised self-loading rifle for use at the <u>squad</u> or section level.

Destructive (weapon; munition): A weapon or <u>munition</u> that is capable of damaging materiel, vehicles, or structures. In almost every case, a 'destructive' weapon is capable of <u>lethal</u> effects if used in the <u>anti-personnel</u> role.

Directed energy: An umbrella term covering technologies that relate to the production of a beam of concentrated electromagnetic energy or atomic or subatomic particles (U.S. DoD, 2020, p. 64). **Directed-energy weapon**: A weapon achieving <u>less-lethal</u> or <u>lethal</u> effects by means of <u>directed energy</u>.

Direct fire: Fire aimed at targets within the operator's line-of-sight, where the weapon can be aimed directly at the target (Dullum et al., 2017).

Double-action (weapon): A weapon (typically a <u>revolver</u>) that can either be manually <u>cocked</u> (and then fired using the <u>trigger</u>—i.e., <u>single-action</u> operation) or both cocked and fired simply by pulling the trigger.

Double-action only (DAO) (weapon): A

weapon (typically a <u>revolver</u>) that can be <u>cocked</u> and fired simply by pulling the <u>trigger</u>, but which lacks a <u>hammer</u> spur and internal mechanism to allow for <u>single-action</u> fire.

Drill weapon: A replica weapon

specifically designed to simulate the form of a weapon or weapon system in order to enable or enhance training exercises.

Dummy weapon: An object presenting the general appearance of a <u>lethal</u>purpose weapon, in order to enable or enhance training exercises.

Effect mechanism: The means by which a weapon or <u>munition</u> achieves its desired effect on a target (e.g., blast, kinetic, thermal, chemical, electromagnetic). When referring to <u>lethal</u> arms or munitions, the term 'damage mechanism' is common.

Ejection: The phase of a **gun**'s **operating cycle** in which the extracted **cartridge case** is thrown clear of the weapon. See also: '<u>Extraction</u>'.

En bloc clip: A type of <u>clip</u> that remains within or attached to the weapon until

empty, at which point it is manually removed, drops free, or is ejected.

Explosive:

1. (*Noun*) A substance (or a mixture of substances) which, under external influence, is capable of rapidly releasing energy at such a temperature and pressure as to be <u>destructive</u> (NATO Standardization Agency, 2002, p. C-28; 2013, p. 2-E-7). Further divided into <u>high</u> <u>explosives</u> and <u>low explosives</u>.

2. (*Munition; weapon*) A <u>munition</u> with an <u>explosive</u> [noun] (typically <u>high explosive</u>) <u>payload</u>, or a weapon which fires munitions with an explosive payload.

Extraction: The phase of a <u>gun</u>'s <u>operating cycle</u> in which a fired <u>cartridge case</u> is mechanically removed from the <u>chamber</u>. See also: '<u>Ejection</u>'.

Feed:

1. (*Verb*) To move a <u>round</u> of <u>ammunition</u> from a <u>feed device</u> to the point at which it is <u>chambered</u>. See also: <u>'Operating cycle</u>'.

2. (*Noun*) The assembly or assemblies which feed [verb] ammunition to a weapon. Sometimes understood to include the feed device.

Feed device: An <u>ammunition</u> storage and loading device. Also 'feeding device'.

Feeding device: See 'Feed device'.

Felt recoil: The portion of a weapon's <u>recoil</u> that is felt by the firer, assessed in terms of relative recoil energy (only a portion of which is actually perceived by the firer). Also 'perceived recoil'.

Fire-and-forget (F&F) (guidance):

A guidance system which requires no further input once the user has designated a target and launched a <u>munition</u>. In some cases, the user may then fire at another target as the previous munition continues its attack.

Firearm: A <u>man-portable gun</u> (i.e., a gun falling into the <u>Small Arms</u> or, occasionally, <u>Light Weapons</u> classes under ARCS). In historical usage (*ca.* 14th– 17th centuries), the word was instead synonymous with the hierarchically superior term 'gun' (i.e., it referred collectively to guns now regarded separately as either small arms, light weapons, or <u>heavy weapons</u>).

Firing cycle: See 'Operating cycle'.

Firing grip: The portion of a weapon that is grasped in the <u>control hand</u>. Typically co-located with the <u>trigger</u>.

Firing mechanism: The assembly within a weapon responsible for initiation of loaded/chambered <u>ammunition</u>. In a <u>firearm</u>, typically a <u>trigger mechanism</u>.

Firing pin: A component of a firearm's action which contacts the <u>primer</u> in a <u>round</u> of <u>ammunition</u>, firing it. Within a <u>hammer</u>-fired <u>firing mechanism</u>, the firing pin is first struck by the hammer.

Flare gun: A <u>firearm</u> primarily intended to fire illuminating <u>munitions</u> and not intended to kill or wound.

Flight path: The trajectory of a <u>munition</u> through the air.

Flintlock (firearm): A <u>firearm</u> with a <u>firing mechanism</u> which utilises the interaction of a hardened steel component and piece of siliceous stone (typically flint) to create sparks for the ignition of a priming charge. Frame: See '<u>Receiver</u>'.

Full metal jacket (FMJ) (projectile): A projectile that is covered from tip to base with an outer envelope of thin metal. In some cases, the base may also be covered.

Full-power rifle cartridge: A <u>rifle</u> <u>cartridge</u> generating more than 2,600 J of <u>muzzle energy</u> when fired from a <u>barrel</u> having a minimum length of 400 mm (Jenzen-Jones, 2019).

Fully automatic: Redundant (if commonplace) term. See: 'Automatic'.

Functional type: A descriptor conveying information about the purpose of a <u>munition</u>, typically by describing its primary role (e.g., <u>anti-personnel</u>), <u>payload</u> (e.g., <u>high explosive</u>) and/or effect mechanism (e.g., blast). Usually preceding a classifying term (e.g., 'tracer cartridge', 'fragmentation grenade').

Furniture: Those components fitted to a weapon to enable its carriage and control by the operator. May include a unitary <u>stock</u> or <u>gripstock</u>, or separate <u>buttstock</u>, handguard and (often) <u>pistol</u> <u>grip.</u>

Fuse: A cord- or tube-like container filled with deflagrating (<u>low explosive</u>) or detonating (<u>high explosive</u>) materials (Picatinny Arsenal, 1974). The word fuse will, in many cases, be preceded by additional information such as 'time', 'cannon', or 'blasting' to clarify its function. See also: '<u>Fuze</u>'.

Fuze: A mechanism with explosive components designed to initiate a train of fire or detonation in a <u>munition</u> by a mechanical, chemical, or electrical action (e.g., hydrostatic pressure, impact, inertia, mechanical time delay). The vast majority of fuzes will also feature some type of safing/arming mechanism. Especially in an EOD context, fuzes will often be referred to by their method of initiation and arming (e.g., 'a setback-armed, impact-initiated fuze'). See also: '<u>Fuse</u>'.

Gas-operated (gun): A <u>self-loading gun</u> <u>action</u> in which <u>propellant</u> gas is tapped (typically from the barrel) to operate the action.

Gauge: The number of lead <u>balls</u> of a weapon's <u>bore</u> diameter which would be required to make a total weight of one pound. Generally applied only to <u>shotguns</u>. Often used, incorrectly, as synonymous with 'bore'. See also: '<u>Calibre</u>'.

Grenade:

1. Shortened form of 'hand grenade' or '<u>rifle grenade</u>'.

2. (*Historical*) A hand grenade.

3. Shortened form of 'grenade launcher cartridge'. This use is not recommended.

4. (*Colloquially*) Any <u>explosive</u> <u>munition</u>. This use is not recommended.

Grenade blank: See 'Blank'.

Gripstock: A detachable device which incorporates a <u>firing grip</u> and <u>buttstock</u> in a single unit. Simple versions, such as those which enable an <u>under-</u> <u>barrel grenade launcher</u> to be used separate to a host weapon, typically have few mechanical and no electronic components. More elaborate examples, such as those used on <u>MANPADS</u>, may include <u>firing mechanisms</u>, <u>optical</u> <u>sights</u>, fire control systems, etc. **Grooves**: The recessed portions of the **bore** in a <u>rifled barrel</u> (i.e., the inverse of the <u>lands</u>). See also: '<u>Rifling</u>'.

Guided missile: A <u>powered guided</u> <u>munition</u> designed to travel above the surface of the earth.

Guided munition: A <u>munition</u> capable of altering its <u>flight path</u> in response to internal or external inputs. See also: '<u>Guided missile</u>'.

Guided weapon:

1. A <u>weapon system</u> firing a <u>guided</u> <u>munition</u>.

2. A guided munition.

Guidance principle: The means by which a <u>guided munition</u> is steered to its target, most commonly manual command to line-of-sight (MCLOS), semi-automatic command to line-ofsight (SACLOS), or a variety of <u>fire-andforget (F&F) guidance</u>.

Guidance system: The portion of a <u>guided munition</u> responsible for steering the <u>munition</u> its target (often by controlling the manipulation of <u>control surfaces</u>) in response to internal or external inputs.

Gun:

1. A weapon which uses the combustion of a <u>propellant</u> to generate high-pressure gas in a sealed <u>chamber</u> in order to accelerate a <u>projectile</u> in a controlled manner.

2. (*Experimentally*) A weapon which uses electromagnetic force in order to accelerate a **projectile** in a controlled manner (e.g., <u>railgun</u>, <u>coilgun</u>).

Gunpowder:

1. Black powder.

2. (*Colloquially*) **<u>Propellant</u>**. This use is not recommended.

Hammer: A component responsible for impacting the <u>primer</u> in a <u>cartridge</u> or <u>munition</u>, firing the weapon. The hammer may operate in an arc or in linear fashion (a 'linear hammer') and may impact the primer either directly or via an intermediate <u>firing pin</u>. See also: '<u>Striker</u>'.

Hand grenade: A relatively small <u>munition</u> which contains a <u>fuze</u> and is designed to be thrown by an individual towards a target.

Handgun: A <u>firearm</u> which is grasped by placing both the <u>control hand</u> and <u>support hand</u> around the <u>pistol grip</u>, and which may be readily fired with one hand. Also 'pistol'.

Handgun-calibre cartridge: See 'Handgun cartridge'.

Handgun cartridge: A <u>small-calibre</u> <u>cartridge</u> typically fired from <u>handguns</u> with a <u>rifled bore</u>, and generally having an overall length of less than 60 mm (Jenzen-Jones, 2019). Also 'handguncalibre cartridge'; 'pistol-calibre cartridge'.

Heavy machine gun: A <u>crew-served</u> rifled light gun primarily intended for automatic fire and <u>chambered</u> for a <u>cartridge</u> of more than 8 mm but less than 20 mm in <u>calibre</u>.

Heavy weapon: A weapon or <u>weapon</u> <u>system</u> which must be transported and operated by a <u>crew</u> of no fewer than six individuals on foot, is dependent on a vehicle or aircraft to operate, or weighs more than 300 kg when in a firing configuration.

High explosive:

1. (*Noun*) An <u>explosive</u> material that detonates, rather than deflagrates or burns, when used under normal conditions (i.e., it can support a detonation wave by itself regardless of confinement) (U.S. Army Ordnance School, 1962; Thurman, 2017). See also: '<u>Low explosive</u>'.

2. (*Munition*) A <u>munition</u> with a high explosive [noun] <u>payload</u>.

High explosive anti-tank (HEAT) (munition): A <u>munition</u> primarily designed to defeat armoured vehicles, and which carries one or more shaped charges as a <u>payload</u>.

High explosive fragmentation (HE-FRAG) (munition): A <u>munition</u> which utilises a <u>high explosive</u> payload to rapidly disperse fragmentation (either pre-formed or formed from the rupturing body of the munition).

High-velocity cartridge: A <u>cartridge</u> in which the <u>projectile</u> develops a <u>muzzle</u> <u>velocity</u> greater than 800 m/s.

Incendiary (weapon; munition): A weapon or <u>munition</u> which utilises thermal effects as its primary <u>effect</u> <u>mechanism</u>.

Indirect fire:

1. Fire directed at targets which may or may not be within the operator's line-of-sight, where the weapon is not aimed directly at the target (i.e., fire which uses the trajectory of a <u>projectile</u> and/or the <u>guidance</u> characteristics of a <u>munition</u> to strike targets) (Dullum et al., 2017). See also: '<u>Direct fire</u>'.

2. (Uncommon) Fire delivered in circumstances where the target is visible from the <u>weapon system</u>,

but where the direct 'vision link' between the operator and target is not used for aiming (Ryan, 1982).

Intermediate-calibre (cartridge):

1. Shorthand for <u>intermediate-</u> calibre rifle cartridge.

2. A <u>cartridge</u> intermediate in <u>calibre</u> between two broad groupings of cartridges (e.g., between <u>handgun cartridges</u> and <u>rifle cartridges</u>, or between cartridges typically associated with general-purpose machine guns and those typically associated with <u>heavy machine guns</u>). This use is non-specific and not recommended without additional qualifiers.

Intermediate-calibre rifle cartridge: A rifle cartridge generating between 1,300 and 2,600 J of muzzle energy when fired from a barrel having a minimum length of 400 mm (Jenzen-Jones, 2019). See also: 'Intermediate-calibre (cartridge)'.

Lands: The raised portions of the <u>bore</u> in a <u>rifled barrel</u> (i.e., the inverse of the <u>grooves</u>). See also: '<u>Rifling</u>'.

Large-calibre cartridge: A <u>cartridge</u> greater than 57 mm in <u>calibre</u>.

Launch platform: A weapon and/or mount which provides static support and initial flight orientation for a powered munition (Ostendorf, 1985, p. 19-13). Can range from a crude metal frame to part of a complex weapon system. May be called a 'launch tube', 'launch rail', etc. depending on its form factor.

Launcher: A weapon which provides a <u>launch platform</u> and a method of initiation for a <u>munition</u>. This term is best applied to weapons firing <u>powered</u> <u>munitions</u>, but also forms part of the term 'grenade launcher' and is sometimes applied to other guns firing low-velocity cartridges.

Less-lethal (weapon; munition): A weapon or <u>munition</u> designed to incapacitate and/or gain the compliance of a human target without killing or seriously wounding.

Lethal (weapon; munition): A weapon capable of killing or seriously wounding a human target. Some <u>arms</u> or <u>munitions</u> intended primarily to wound are referred to as 'incapacitating'.

Lever action: A type of <u>manually</u> <u>operated firearm action</u> in which the weapon is <u>cycled</u> by manipulating a lever, usually operated by the <u>control hand</u>.

Light cannon: A <u>light gun</u> intended for <u>direct fire</u> and <u>chambered</u> for <u>high-</u> <u>velocity</u>, <u>medium-calibre ammunition</u>. See also '<u>Cannon</u>'.

Light flamethrower: A <u>man-portable</u> device which ejects a flammable substance (a fuel) towards the target without the use of a delivery <u>munition</u>.

Light grenade launcher: A light gun intended predominantly for direct fire and chambered for low-velocity, medium-calibre ammunition.

Light guided missile launcher: A <u>light</u> weapon which provides a <u>launch</u> <u>platform</u> and a method of initiating a guided missile.

Light gun: A <u>light weapon</u> which uses the combustion of a <u>propellant</u> to generate high-pressure gas in a sealed chamber in order to accelerate a <u>projectile</u> in a controlled manner.

Light mortar: A crew-portable mortar

firing **projectiles** of less than 70 mm in <u>calibre</u>, transported and operated by a <u>crew</u> of no more than three individuals on foot. See also '<u>Mortar</u>'; '<u>Mortar</u> **projectile**'.

Light powered munition launcher: A light weapon which provides a <u>launch</u> <u>platform</u> and a method of initiating a powered munition.

Light projector: A <u>light weapon</u> which propels a <u>projectile</u> by way of stored mechanical energy.

Light recoilless gun: A <u>light gun</u> of no more than 120 mm in <u>calibre</u> operating on the <u>recoilless principle</u>.

Light rocket launcher: A <u>light weapon</u> which provides a <u>launch platform</u> and a method of initiating a <u>rocket</u>.

Light weapon: A weapon or weapon system which may be transported (with its ammunition and any critical components) and operated by a crew of no more than five individuals on foot, weighs 300 kg or less (excluding ammunition) in a firing configuration, and does not meet the definition of a small arm.

Load:

1. (*Verb*) To introduce <u>ammunition</u> into the <u>operating system</u> of a weapon.

2. (Noun) A given combination of propellant and projectile within a cartridge, which may be varied to achieve differing effects within cartridges of the same calibre. A change in load may result in a change in functional type, but the term is usually applied to variations within one functional type. Also 'loading'.

3. (*Noun*) Shortened form of 'combat load'. The total ammunition load carried by a soldier, vehicle, squad, etc. (e.g., 'the tank carried a 55-round load').

Loading: See 'Load'.

Long gun: A <u>firearm</u> which is grasped by placing the <u>control hand</u> and <u>support</u> <u>hand</u> in different locations, and which is typically fitted with a <u>buttstock</u> intended to be braced against the user's shoulder when fired.

Low explosive: An <u>explosive</u> material that deflagrates or burns, rather than detonates, when used under normal conditions (U.S. Army Ordnance School, 1962). See also: '<u>High explosive</u>'.

Low-velocity cartridge: A <u>cartridge</u> in which the <u>projectile</u> develops a <u>muzzle</u> <u>velocity</u> of less than 250 m/s.

Magazine: A <u>feed device</u> which can hold multiple <u>cartridges</u> and uses an outer shell or frame containing a spring to move cartridges towards a weapon's <u>action</u>.

Man-portable (weapon): A weapon which can be transported and operated by a single individual on foot. See also: (Crew-portable (weapon)'.

Man-portable air defence system (MANPADS): A <u>man-portable light</u> guided missile launcher firing a <u>surface-</u> to-air missile.

Man-portable machine gun: A <u>self-</u> <u>loading long gun</u> chambered for a <u>rifle</u> <u>cartridge</u> and primarily intended for <u>automatic</u> fire from a <u>bipod</u> or <u>mount</u>. Manually operated (firearm): A firearm making use of an <u>operating system</u> which relies on the user, rather than the <u>chemical energy</u> contained within a <u>cartridge</u>, to <u>extract</u> and <u>eject</u> fired <u>cartridge cases</u> and load new cartridges.

Manually operated rifle: A <u>rifle</u> with an <u>operating system</u> which relies on the user, rather than the <u>chemical energy</u> contained within a <u>cartridge</u>, to <u>extract</u> and <u>eject</u> fired <u>cartridge cases</u> and load new cartridges.

Manually operated shotgun: A <u>shotgun</u> with an <u>operating system</u> which relies on the user, rather than the <u>chemical</u> <u>energy</u> contained within a <u>cartridge</u>, to <u>extract</u> and <u>eject</u> fired <u>cartridge cases</u> and load new cartridges.

Mean point of impact (MPI): The average impact position of a number of fired <u>rounds</u> (Dullum, 2017, p. 60).

Medium-calibre cartridge: A <u>cartridge</u> of more than 20 mm but less than 57 mm in <u>calibre</u>.

Medium mortar: A <u>crew-portable</u> mortar firing <u>projectiles</u> of at least 70 mm in <u>calibre</u> but less than 100 mm in calibre. See also '<u>Mortar</u>'; '<u>Mortar</u> <u>projectile</u>'.

Medium-velocity cartridge: A <u>cartridge</u> in which the <u>projectile</u> develops a <u>muzzle velocity</u> of at least 250 m/s but less than 800 m/s.

Minute of angle: A measurement of angle over distance used to assess the <u>precision</u> of a firearm.

Missile:

1. Shortened form of 'guided missile'.

2. (*Ballistics*) Any object which is propelled or projected toward a target.

Mortar:

1. A relatively short-barrelled gun designed predominantly for indirect fire and firing low-velocity projectiles.

2. (*Colloquial*) Shortened form of '<u>mortar projectile</u>' or 'mortar bomb'. This use is not recommended.

Mortar bomb: See 'Mortar projectile'.

Mortar projectile: A relatively lowvelocity **projectile** designed specifically to be fired by a **mortar**. Also 'mortar bomb', although this use is not recommended.

Mount: A device to which a weapon is fitted in order to stabilise it for sustained, mobile, and/or long-range use. Also 'mounting'.

Mounting: See 'Mount'.

Munition: An expendable item which is designed to achieve operational effects by means of an <u>effect mechanism</u>, and which travels from a source (e.g., individual weapon, vehicle-integrated weapon, etc.), via a method of delivery (e.g., emplaced by hand, fired from a gun, etc.), to a target or target area.

Muzzle: The end of a **gun barrel** through which **projectiles** exit.

Muzzle device: Any component or assembly attached to the <u>muzzle</u> of a <u>gun</u> to achieve a desired effect, such as mitigation of sound and/or flash of combusting gases (flash suppressor, flash hider, or sound suppressor) or reduction in felt recoil and/or muzzle rise on firing (muzzle brake, compensator).

Muzzle energy: The energy generated by a given <u>cartridge</u> as measured at or near the <u>muzzle</u> of the <u>firearm</u>. Typically expressed in Joules (J).

Muzzle flash: The visible light emitted from the <u>muzzle</u> of a weapon when it is fired. Often attenuated by the use of a specialised <u>muzzle device</u>.

Muzzle-loading:

1. (*Weapon*) Any weapon which is loaded from the <u>muzzle</u>, rather than the <u>breech</u>.

2. (Firearm) A firearm which does not use self-contained <u>cartridges</u>, instead requiring the <u>separate</u> <u>loading</u> of <u>gunpowder</u> and <u>projectile</u>(s) from the muzzle end of the weapon.

Muzzle velocity: The velocity attained by a given **projectile** as measured at or near the **muzzle** of a weapon. Typically expressed in terms of metres per second (m/s).

Non-rifled (barrel): See 'Smoothbore'.

Obturation: The sealing of a weapon's <u>chamber</u> against the escape of <u>propellant</u> gases. In <u>firearms</u>, the chamber itself, as well as the body of the <u>cartridge case</u>, effects obturation forward of the chamber, while rearward obturation is typically effected by the base of the cartridge case and the firearm's <u>bolt</u>. In <u>munitions</u> fired by some <u>light weapons</u> and <u>heavy</u> weapons, a dedicated obturator may instead be used.

Operating cycle: The sequence of events that takes place within a weapon to facilitate repeated fire, whether operated by internal or external forces. In firearms, each cartridge progresses through an eight-step cycle of feedchamber-lock-fire-unlock-extract-ejectcock. That is, a cartridge is moved from the feed device (or manually loaded) into the gun's chamber, the **bolt** is locked, the cartridge is fired, the bolt is unlocked, and the cartridge is then **extracted** from the chamber and ejected from the gun. Simultaneously, the firearm is (re)cocked for the next shot. Also 'firing cycle'.

Operating rod: The part of a <u>gas-</u> <u>operated firearm</u> connecting the gas piston to the <u>bolt</u>, bolt assembly, or <u>bolt</u> <u>carrier group</u>.

Operating system: The arrangement of mechanisms that effect a weapon's **operating cycle**.

Optical sight: An aiming device which puts the aiming mark(s) on a single focal plane using one or more lenses. May be magnifying or non-magnifying.

Ordnance:

1. Military materiel, including combat weapons of all kinds, <u>ammunition</u> and equipment for their use, vehicles, and repair tools and machinery.

2. Munitions.

Pack animal: Domesticated livestock used to transport supplies or equipment, such as horses, mules, donkeys, camels, elephants, oxen, and llamas. **Payload**: The contents and/or components with which a <u>munition</u> achieves its intended operational effect(s) upon functioning.

Pistol:

1. A <u>handgun</u>.

2. Shortened form of 'self-loading pistol'. In American English, 'pistol' has come to refer specifically to a self-loading pistol, to the arbitrary exclusion of the <u>revolver</u>. The term 'handgun' is preferred to avoid confusion.

Pistol-calibre cartridge: See '<u>Handgun</u> cartridge'.

Pistol grip: A <u>firing grip</u> (often part of a weapon's <u>furniture</u>) shaped like that of a traditional <u>handgun</u> and typically intended for use by the user's <u>control</u> <u>hand</u>.

Powered munition: A <u>munition</u> which, after being fired, uses an on-board propulsion method (e.g., a <u>rocket motor</u>) to maintain or adjust its rate of travel.

Precision: the measure of the measure of MPI consistency or 'dispersion' (e.g., a gun's ability to repeatedly make accurate shots on the same target) (Dullum, 2017). See also: '<u>Accuracy</u>'.

Precision guided munitions (PGMs): <u>Munitions</u>, both <u>powered</u> and unpowered, which can alter their flight paths to strike a target with a high degree of <u>precision</u> (Jenzen-Jones & Shanley, 2021).

Pressure-bearing components: Those parts of a <u>gun</u> that contain the pressure generated by firing a <u>cartridge</u>. In many legal jurisdictions, these components are specifically regulated.

Primer: A small initiating element contained in the head of a <u>cartridge</u> <u>case</u>, which ignites the main <u>propellant</u> charge within the body of the cartridge case when initiated. Most often an <u>explosive</u> charge, but sometimes functioning via plasma or another principle. Also 'primer cap'.

Projectile: An object initially projected by an applied exterior force and continuing in motion by virtue of its own inertia, such as a <u>bullet</u> or <u>hand</u> <u>grenade</u>. Smaller projectiles (those fired from <u>firearms</u>) are often known as 'bullets', whilst certain larger projectiles are sometimes referred to as '<u>shells</u>'.

Propellant:

1. The main charge for a <u>round</u> of <u>ammunition</u> that burns to convert <u>chemical energy</u> into motive force for one or more <u>projectiles</u>. See also: <u>'Gunpowder</u>'; <u>'Smokeless</u> <u>powder</u>'.

2. Combustible material that is burned to provide thrust in a <u>rocket</u><u>motor</u>.

Pump action: A type of <u>manually</u> <u>operated small arm</u> or <u>light weapon</u> <u>action</u> in which the weapon is <u>cycled</u> by manipulating a handgrip, usually grasped by the <u>support hand</u>, in a linear fashion. Also 'slide action'.

Railgun: A weapon utilising parallel electromagnetic rails to accelerate a **projectile** by way of the Lorentz force. See also '<u>Coilgun</u>'.

Reaction propulsion: The means by which potential energy stored in a <u>rocket</u> is released as recoil energy to achieve forward motion. **Receiver**: The body of a projectile weapon (usually a <u>firearm</u>), which maintains <u>critical components</u> in their correct positions. Sometimes breaking into separate parts, often referred to as the 'upper receiver' and 'lower receiver'. Also 'body'; 'frame' (pistols).

Recoil: The rearward force exerted by a gun in reaction to the forward motion of the projectile and propellant gas on firing, in accordance with Newton's third law. See also: '<u>Felt recoil</u>'.

Recoilless (principle): A <u>gun</u> design in which <u>propellant</u> gases (or another counter-mass, such as a powder or liquid) are expelled from the rear of the weapon's <u>barrel</u> at the time a projectile is fired. The forward momentum of the projectile is effectively balanced by the rearward momentum of the countermass, mitigating <u>felt recoil</u> (Jenzen-Jones, 2015c).

Repeating (firearm): A <u>firearm</u> in which the number of <u>cartridges</u> held in the weapon is greater than the number of <u>barrels</u>, one or more cartridges are held elsewhere than the firing <u>chamber</u>, and more than one shot can be fired before the weapon needs to be <u>reloaded</u>.

Replica firearm: A gun-shaped object intended to closely resemble a firearm.

Report: The loud noise generated by firing most guns.

Retarded blowback: A variety of <u>blowback operating system</u> in which the opening of the <u>bolt</u> is mechanically retarded, allowing <u>chamber</u> pressure to drop to a level deemed safe for the user and the structural integrity of the <u>gun</u>. The <u>action</u> begins to move rearward immediately after a <u>cartridge</u> is fired. Often conflated with <u>delayed blowback</u>. **Revolver**: A <u>manually operated</u> <u>handgun</u> with a fixed <u>barrel</u> and a rotating cylinder containing multiple parallel <u>chambers</u>.

Revolving (action):

1. A <u>manually operated action</u> used with <u>small arms</u> and <u>light weapons</u> which features a fixed <u>barrel</u> and a rotating <u>cylinder</u> containing multiple parallel <u>chambers</u>, in which the weapon is <u>cycled</u> by operating the <u>trigger</u>, <u>hammer</u>, or other component, typically using the <u>control hand</u>. May be <u>single-action</u>, <u>double-action</u>, or <u>double-actiononly</u> weapons.

2. An <u>automatic action</u> used with <u>light weapons</u> and <u>heavy weapons</u> which features a fixed <u>barrel</u> and a rotating <u>cylinder</u> containing multiple parallel <u>chambers</u>. Most often externally powered (e.g., by an electric motor), but may be <u>gas</u> <u>operated</u>.

Rifle: A <u>long gun</u> with a <u>rifled bore</u>, primarily intended to fire individual bore-diameter <u>projectiles</u> ('<u>bullets</u>').

Rifle cartridge: A <u>small-calibre cartridge</u> typically fired from <u>long guns</u> with a <u>rifled bore</u>, and generally having an overall length of 45 mm or greater (Jenzen-Jones, 2019). Also 'rifle-calibre cartridge'; 'rifle and machine gun cartridges'.

Rifle grenade: A relatively small <u>munition</u> which contains a <u>fuze</u> and is designed to be projected from the <u>muzzle</u> of a <u>firearm</u>—with or without the use of an adaptor—by the motive force generated by firing a <u>small-calibre</u> <u>cartridge</u> (either a <u>ball cartridge</u> or a <u>grenade blank</u>).

Rifled (barrel): A barrel with rifling.

Rifling: A pattern of helical <u>grooves</u> in the <u>bore</u> of a <u>barrel</u> which are designed to impart spin to a fired <u>projectile</u>. This rotation provides gyroscopic stability to the projectile, increasing <u>accuracy</u> and <u>precision</u>, and ensuring the projectile flies point-first toward the target. In some cases, projectile rotation is achieved by the use of a barrel with a polygonal cross-section.

Rocket: A <u>powered munition</u> designed to travel above the surface of the earth, which cannot alter its <u>flight path</u> once in flight.

Rocket motor: A reaction propulsion

system which derives its thrust from the ejection of hot gases generated by the burning of propellant (Department of the Air Force, 1972, pp. 3-30). The term 'rocket motor' usually refers to a simple, unitary solid propellant rocket, specifically the section containing the propellant, nozzle/venturi, and igniter(s). More complex systems may be referred to as 'rocket engines'.

Round: A complete unit of <u>ammunition</u>. Some ammunition is self-contained (e.g., modern <u>small-calibre cartridges</u>), whilst other ammunition is <u>separate</u> <u>loading</u>. In the case of separate-loading ammunition, a round comprises all of the necessary components to fire the <u>munition</u> as intended.

Safety: See 'Safety mechanism'.

Safety mechanism: The assembly within a weapon that serves to engage and disengage one or more of the weapon's safety measures (e.g., by blocking or unblocking the <u>firing pin</u>). Shortened form: 'safety'.

Section (Commonwealth): See: 'Squad'.

Selective fire: A <u>firing mechanism</u> which enables the operator to switch between <u>semi-automatic</u> and <u>automatic</u> (and/or burst) fire.

Self-loading firearm: A <u>firearm</u> which make use of the <u>chemical energy</u> stored in a <u>cartridge</u> to <u>cycle</u> the weapon's <u>action, extracting</u>, and <u>ejecting</u> the <u>cartridge case</u> immediately after firing, and <u>chambering</u> a new cartridge from the weapon's <u>magazine</u>.

Self-loading pistol: A handgun which makes use of the <u>chemical energy</u> stored in a <u>cartridge</u> to <u>cycle</u> the weapon's <u>action</u>, <u>extracting</u>, and <u>ejecting</u> the <u>cartridge case</u> immediately after firing, and <u>chambering</u> a new cartridge from the weapon's <u>magazine</u>.

Self-loading rifle: A <u>rifle</u> that makes use of the <u>chemical energy</u> stored in a <u>cartridge</u> to <u>cycle</u> the weapon's <u>action</u>, <u>extracting</u>, and <u>ejecting</u> the <u>cartridge</u> <u>case</u> immediately after firing, and <u>chambering</u> a new cartridge from the weapon's <u>magazine</u>.

Self-loading shotgun: A <u>shotgun</u> that makes use of the <u>chemical energy</u> stored in a <u>cartridge</u> to <u>cycle</u> the weapon's <u>action</u>, <u>extracting</u>, and <u>ejecting</u> the <u>cartridge case</u> immediately after firing, and <u>chambering</u> a new cartridge from the weapon's <u>magazine</u>.

Semi-automatic (action): A <u>self-</u> <u>loading</u> action which is capable of firing only one shot each time the <u>firing</u> <u>mechanism</u> is activated.

Separate-loading (ammunition): <u>Ammunition</u> in which two or more components are loaded into a weapon separately (e.g., a <u>muzzle-loading</u> <u>firearm</u> where a measure of <u>propellant</u> is loaded before a <u>projectile</u>). See also: '<u>Cartridge</u>'; '<u>Round</u>'.

Shell:

1. A <u>medium-calibre</u> or <u>large-calibre</u> projectile containing an <u>explosive</u> payload. Informally, also applied to a complete <u>cartridge</u> loaded with such a projectile. The term 'projectile' is generally preferred.

2. (*U.S. English*) Shortened form of 'shotshell' (i.e., a <u>shotgun cartridge</u>). This use is not recommended.

3. (*U.S. English*) A <u>cartridge case</u>. This use is not recommended.

Shot:

1. One or more spherical projectiles, typically used in small arms ammunition intended for smoothbore barrels (hence 'shotgun'). See also: 'Buckshot'; 'Birdshot'.

2. A single discharge of one or more rounds of ammunition from any weapon.

Shot column: A grouping of <u>shot</u>, typically fired by a <u>shotgun</u>, as it leaves the <u>muzzle</u> of a weapon and travels toward its target.

Shotgun: A <u>smoothbore long gun</u>, primarily intended to fire multiple <u>projectiles</u> of less than bore diameter ('<u>shot</u>').

Shotgun cartridge: A low-pressure, relatively large-<u>bore cartridge</u> designed for use in a <u>shotgun</u> and often containing multiple <u>projectiles</u> (<u>'shot</u>') (Jenzen-Jones, 2019). Also 'shotshell'.

Shotshell: See 'Shotgun cartridge'.

Shoulder-fired: <u>Man-portable</u> weapons that are typically fired from the shoulder, either resting in the 'pouch' of the shoulder (for weapons with a <u>buttstock</u>, such as a <u>shotgun</u>) or resting on top of the shoulder (for weapons generating minimal <u>felt recoil</u>, such as a <u>light rocket</u> launcher). See also: 'Crew-served'.

Shoulder stock: See 'Buttstock'.

Single-action (weapon): A weapon (typically a <u>revolver</u>) that must be manually <u>cocked</u> for firing.

Single-shot (weapon): A weapon capable of firing only a single shot before it must be <u>reloaded</u>.

Slide action: See 'Pump action'.

Slug: A single <u>projectile</u> for use with a <u>shotgun</u> (as opposed to the multiple projectiles contained in most <u>shotgun</u> <u>cartridges</u>). Single shotgun projectiles of a spherical shape are sometimes still referred to as '<u>ball</u>'.

Small arm: A <u>firearm</u> of less than 20 mm in <u>calibre</u>.

Small-calibre cartridge: A <u>cartridge</u> of less than 20 mm in <u>calibre</u>.

Small-calibre, high-velocity (SCHV) (cartridge): A <u>cartridge</u> of less than 6 mm in <u>calibre</u>, which achieves a high <u>muzzle velocity</u> relative to other cartridges of a similar overall length. See also: '<u>Small-calibre, high-velocity</u> (SCHV) handgun cartridge'; '<u>Smallcalibre, high-velocity (SCHV) rifle</u> <u>cartridge</u>'.

Small-calibre, high-velocity (SCHV) handgun cartridge: A handgun cartridge of less than 6 mm in <u>calibre</u> which achieves a <u>muzzle velocity</u> of at least 600 m/s when fired from a <u>barrel</u> having a minimum length of 100 mm (Jenzen-Jones, 2019). See also: '<u>Small-calibre,</u> high-velocity (cartridge)'. Small-calibre, high-velocity (SCHV) rifle cartridge: An <u>intermediate-calibre</u> <u>cartridge</u> of less than 6 mm in <u>calibre</u> which achieves a <u>muzzle velocity</u> of at least 800 m/s (Jenzen-Jones, 2019). See also: <u>'Small-calibre, high-velocity</u> (cartridge)'.

Smokeless powder: Propellant that produces less residual carbon when burned than traditional <u>black powder</u>. Usually more efficient, and hence produces higher <u>muzzle velocity</u> for a given <u>load</u> volume.

Smoothbore (barrel): A <u>barrel</u> which is not <u>rifled</u>, such as that found in a typical <u>shotgun</u>. In <u>light weapons</u> and <u>artillery</u> guns, projectiles fired from smoothbore barrels are often stabilised by fins to ensure that they fly accurately and point-first. Also 'non-rifled'; 'unrifled'.

Squad (infantry): A small unit of infantry typically led by a non-commissioned officer, and generally numbering between six and twelve individuals. Infantry squads are normally equipped primarily with <u>small arms</u> and limited quantities of <u>light weapons</u>.

Stock:

1. The support structure of a weapon (traditionally a <u>firearm</u>) into which the <u>barrel</u> and <u>action</u> are set. Where applicable, includes the <u>buttstock</u> that is braced against the user's body (typically the shoulder) when firing.

2. (*Colloquial*) Shortened form of 'buttstock'.

Striker: A weapon component responsible for impacting the <u>primer</u> in a <u>munition</u>, firing the weapon. The striker operates in a linear fashion and impacts the primer directly. See also: '<u>Hammer</u>'; '<u>Firing pin</u>'. Stripper clip: See 'Charger clip'.

Sub-machine gun: A <u>self-loading long</u> gun chambered for a <u>handgun cartridge</u> and capable of <u>automatic</u> fire.

Subsonic: An object travelling below the speed of sound in air. This varies according to atmospheric conditions (especially air pressure), but at sea level is approximately 340 m/s.

Surface-to-air missile (SAM): A guided missile designed to be fired from the ground to engage an aerial target, such as a fighter aircraft or unmanned aerial vehicle. See also: 'Man-portable air defence system (MANPADS)'.

Surface-to-surface missile (SSM): A guided missile designed to be fired from the ground to engage ground targets such as personnel, vehicles, and structures. See also: 'Anti-tank guided missile (ATGM)'.

Support hand: The hand employed by the user of a weapon to provide additional stability and to maintain proper sight picture and alignment. This is usually a user's non-dominant hand (e.g., the left hand, in the case of a righthanded user). See also: '<u>Control hand</u>'.

Trigger: A common component of a weapon's <u>firing mechanism</u>, which allows a user to directly interact with a weapon's <u>operating system</u>. Typically absent from weapons which are fired remotely.

Trigger mechanism: A type of <u>firing</u> <u>mechanism</u> specific to weapons that are fired by means of a <u>trigger</u> (whether external or internal), consisting of the trigger itself and other fire control components. **Trigger pull (colloquial)**: The amount of pressure required to activate a weapon's **trigger**.

Tripod: A mechanical <u>mount</u> onto which a weapon can be fitted to absorb <u>recoil</u> and provide stability. Typically tripods have three legs, as the word implies, but the term is also used colloquially for some four-legged mounts serving the same function.

Under-barrel grenade launcher (UBGL):

A <u>light grenade launcher</u> which can be fitted to a <u>small arm</u> as an <u>auxiliary</u> weapon.

Unguided (munition): A <u>munition</u> that, once fired or launched, cannot alter its <u>flight path</u>.

Unrifled: See 'Smoothbore'.

Weapon system: A light weapon or heavy weapon along with its munitions and critical components such as a mount or launch platform, guidance system, power supply, or sighting system. Sometimes taken to include a weapon's host or towing vehicle(s). Increasingly, if unhelpfully, applied to small arms and their accessories. Distinct from a 'weapons system', which is a system integrating and/or controlling multiple weapons or weapon systems.

Windage:

1. The difference in diameter between a gun's **bore** and the diameter of the **projectile**.

2. (*Colloquial*) Any lateral shift in the point of impact, and the sight adjustments required to align the point of aim with the point of impact.

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Note: For details of the literature review underpinning much of what is contained herein (including an expansive bibliography), see: Jenzen-Jones, 2020.

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