**Forensic Ballistics Definition Of Terms**

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| **Acetone** - The simplest ketone. A solvent for gun powder.A highly flammable,water-soluble solvent.**Action** - the action of the gun consists of all the moving parts that facilitate the loading,firing,discharging of the empty case and unloading of the gun.**Action, revolver** - a firearm,usually a handgun with a cylinder having several chambers so arrange as to rotate around an axis and be discharge successively by the same firing mechanism.**Action, semi-automatic** - a repeating firearm requiring a separate pull of the trigger for each shot fired and which uses the energy of discharge to perform a portion of the operating or firing cycle (usually the loading portion).**Actuator** - part of the firing mechanism in certain automatic firearms that slides forward and back in preparing each cartridge to be fired.Also called trigger actuator.**Ammunition** - one or more loaded cartridges consisting of a primed case,propellant and with one or more projectiles.**Anvil marks** - microscopic marks impressed on the  forward face of the rim of a rimfire cartridge case as it is forced against the breech end of the barrel by the firing pin.These marks are characteristic of the breech under the firing pin and have been used to identify firearm.**AP** - abbreviation for armor-piercing ammunition.**Apogee** - the maximum altitude a projectile will reach when shot in the air.**Assault rifle** - automatic weapon designed to be fired by one man.Ammunition is fed from a magazine.**Automatic** - a firearm capable of ejecting a cartridge casing following  discharge and reloading the next cartridge from the magazine.**Automatic action** - a firearm design that feeds cartridges,fires, and ejects cartridge cases as long as the trigger is fully depressed and there are cartridges available in the feed system.**Auto-safety** - a locking device on some firearms designed to return to the on or safe position when the firearm is opened.**Azo dye** - a result of the Griess test where nitrates from gunpowder residues are converted to an orange-red dye.Ball ammunition - military small arms ammunition with full metal jacket bullets,also known as hard ball.**Ballistics** - the study of a projectile in motion,following the projectile travel from primer ignition to barrel exit,to target entry and until motion is stopped.**Ballistics,exterior** - The study of the motion of the projectile after it leaves the barrel of the firearm.**Ballistics,Interior** - the study of the motion of the projectile within the firearm from the moment of ignition  until it leaves the barrel.**Ballistics,terminal** - the study of the projectiles impact on the target.**Barium** - alkaline earth metal with chemical symbol Ba,atomic number 56.Present as barium nitrate in the primer.**Barium nitrate** - a common oxidizer of the primer compound used in gun cartridges.**Barrel** - that part of a firearm through which a projectile travels under the impetus of powder gases,compressed air, or other like means,may be rifled or smooth.**BB** - air rifle projectile of 0.177 in. diameter or a shotgun pellet of 0.18 in. diameter.**BBB shot** - shotgun pellet of 0.19 in. diameter.**Beretta** - is an Italian firearms manufacturer.It is the oldest active firearms manufacturer in the world.**Beveling** - (external or internal) defects that occur when a projectile passes through a flat bone.The perforation in the bone is typically larger and more cone shaped as the bullet passes from the entrance through the bone to the exit.**Bipod** - is an attachment for a weapon that creates a steady plane for whatever it may be attached.             A two-legged rest or stand as for rifle or machine gun.**Black powder** - the earliest form of propellant.It is a mechanical mixture of potassium nitrate or sodium nitrate,charcoal and sulfur.**Blasting cap** - a small explosive charge triggered by lighting a safety fuse or applying an electric current used to detonate high explosives.**Blunderbuss** - is a muzzle-loading firearm with a short,large caliber barrel which is flared at the muzzle and frequently throughout the entire bore and used with shot and other projectiles of relevant quantity and/or caliber.**Bolt action** - is a type of firearm action in which the weapons bolt is operated manually by opening and closing of the breech (barrel) with a small handle most commonly placed on the right hand side of the weapon for (right hand users).                     A firearm in which the breech closure is in line with the bore at all times.It is manually reciprocated to load,unload and cock and is locked in place by breech-bolt lugs and engaging abutments usually in the receiver.**Bore** - the interior of a barrel,forward of the chamber.**Bore brush** - A brush usually having brass,nylon,or plastic bristles which is used to clean deposits from the bore of a firearm.**Bore diameter** - in a rifled barrel,it is the minor diameter of a barrel which is the diameter of a circle formed by the tops of the lands.In a shotgun,it is the  interior dimensions of the barrel forward of the chamber but before the choke.**Brass** - a slang term sometimes used for fired cartridge cases.**Breech** - the part of the firearm at the rear of the bore into which the cartridge of propellant is inserted.**Breech block** - the locking and cartridge head-supporting mechanism of a firearm that does not operate in line with the axis of the bore.**Breech blot** - the locking and cartridge head-supporting mechanism of a firearm that operates  in line with the axis of the bore.**Breech face** - that part of the breech block or breech bolt that is against the head of the cartridge  case or shot shell during firing.**Breech face markings** - negative impression of the breech face of the firearm found on the head of the cartridge case after firing.**Breech-loading weapon** - is a firearm in which the cartridge or shell is inserted or loaded into a chamber integral to the rear portion of a barrel.**Broach** - rifling tool consisting of a series of circular cutting tools mounted on a long rod.The rifling is cut in on pass of the broach through the gun barrel.**Browning arms co.** - is a maker of firearms founded in Utah in 1927.**Buckshot** - lead pellet ranging in size from 0.20 in. to 0.36 in. diameter.**Bullet** - is a projectile propelled by a firearm,sling,or air gun.**Bullet-bearing surface** - that part of the outer surface of a bullet that comes into direct contact with the interior surface of the barrel.**Bullet creep** - the movement of a bullet out of the cartridge case due to the recoil of the firearm and the inertia of the bullet.Also called bullet starting.Also known as popping.**Bullet,frangible** - a projectile designed to disintegrate upon impact on a hard surface in order to minimize ricochet or spatter.**Bullet jacket** - usually a metallic cover over the core.**Bullet,lead** - a standard lead bullet having a harder metal jacket over the nose formed from a lead alloy,also known as metal-point bullet.This non spherical projectiles is for use in a rifled barrel.**Bullet recovery system** - any method that will allow the undamaged recovery of a fired bullet.Water tanks and cotton boxes are most commonly in use.**Bullet wipe** - a dark ring-shaped mark made up of lead,carbon,oil and dirt brushed from a bullet as it enters the skin and found around the entry wound.The discolored area on the immediate periphery of a bullet hole,caused by bullet lubricant,lead,smoke bore debris or possibly,jacket material.Sometimes called burnishing or leaded edge.**Burr striations** - a roughness or rough edge especially one left on metal in casting or cutting.A tool or device that raises a burr.**Butt** - in handguns,the buttom part of the grip frame.In long guns,it is the rear of shoulder end of the stock.Caliber - the approximate diameter of the circle formed by the tops of the lands of a rifled barrel.**Cannelure** - a circumferential groove generally of a knurled or plain appearance in a bullet or the head of a rimless cartridge case.**Carbine** - a rifle of short length and lightweight originally designed for mounted troops.**Cartridge** - is also called a round, packages the bullet,propellant (usually smokeless powder or gun powder) and primer into a single unit within a containing metallic case that is precisely made to fit within the firing chamber of the firearm.**Cartridge case head** - the base of the cartridge case which contains the primer.**Cartridge,centerfire** - any cartridge that has its primer central to the axis in the head of the case.**Cartridge,rimfire** - a flange-headed cartridge containing the priming mixture inside the rim cavity.**Center of impact** - the points of impact of the projectiles being dispersed about a single point.**Chamber** - the rear part of the barrel bore that has been formed to accept a specific cartridge.Revolver cylinders are multi-chambered.**Chamber mark** - individual microscopic marks placed upon a cartridge case by the chamber wall as a result of any or all of the following 1. chambering 2. expansion during firing 3. extraction. **Choke** - (shotgun) the constriction of the barrel of a shotgun to reduce the spread of shot as it leaves the gun to increase its effective range.**Clip** - a separate cartridge container used to rapidly reload the magazine of a firearm.Also called  stripper.**Coefficient of form** - a numerical term indicating the general profile of a projectile.**Combination gun** - a multiple-barreled firearm designed to handle different  sizes or types of ammunition.**Concentric fractures** - patterns of cracks in glass pierced by a missile like a bullet which runs between the radial fractures and which originate on the side of the glass from which the impact came.**Copper-clad steel** - a composite structure of copper and steel used for the manufacture of certain bullet jackets.Metallic element with the chemical symbol Cu and atomic number 29 that commonly comprises "cartridge brass" that is typically 70% copper and 30% zinc (Zn)**Centerfire** - is a cartridge with a primer located in the center of the cartridge case head.Unlike rimfire cartridges,the primer is a separate and replaceable component.**Chamber** - is that portion of the barrel or firing cylinder in which the cartridge is inserted prior to being fired.**Clay pigeon shooting** - (clay target shooting) formally known as inanimate bird shooting is the art of shooting at special flying targets known as clay pigeons or clay targets with a shotgun or any type of firearm.**Cylinder** - rotating chambered breech of a revolver. Damascus barrel - an obsolete barrel-making process.The barrel is formed by twisting or braiding together steel and iron wires or bars.The resulting cable is then wound around a mandrel and forged into a barrel tube.This type of barrel is also called a laminated barrel.**Decant** - the process of pouring off the supernatant during separation from a pellet after a mixture has been centrifuged or left to settle.**Derringer** - the generic term applied to many variations of pocket size pistols either percussion or cartridge made by manufacturers other that Henry Derringer up to present time.**Discharge** - to cause a firearm to fire.**Disconnector** - a device to prevent a semi-automatic firearm from firing full automatic.Some pump action shotguns also have disconnectors.**Distance determination** - the process of determining the distance from the firearm, usually the muzzle, to the target based upon pattern of gunpowder or gunshot residues deposited upon that target.Where multiple projectiles such as shot have been fired,the spread of those projectiles is also indicative of distance.**Double action** - a gun action where the pulling of trigger to fire a round recocks the gun so that the next round is ready to be fired.**Drawback effect** - the presence of blood in the barrel of a firearm that has been drawn awkward due to the effect created by discharged gasses.This is seen frequently in close-range contact gunshot injuries.**Driving edge,fired bullet** - the driving edge of a fired bullet with a right twist is the left edge of the groove impression or the right edge of the land impression.The driving edge of a fired bullet with left twist is the right edge of the groove impression or the left edge of the hand impression.**Ejection** - the act of expelling a cartridge or cartridge cases from a firearm.**Ejection pattern** - the charting of where a particular firearm ejects fired cartridge cases.**Ejector** - a portion of a firearms mechanism that ejects or expels cartridges or cartridge cases from a firearm.**Ejector marks** - tool marks provided upon a cartridge or cartridge case on the head,generally at or near the rim from contact with the ejector.**Extractor** - a mechanism for withdrawing a cartridge or cartridge case from the chamber of a firearm.**Extraction mark** - tool mark produced upon a cartridge or cartridge case from contact with the extractor.These are always found on or just ahead of the rim.**Firearm identification** - a discipline of forensic science that has as its primarily concern determining whether a bullet,cartridge case or other ammunition component was fired by a particular firearm.**Firing pin** - that part of a firearm mechanism that strikes the primer of a cartridge to initiate ignition.Sometimes called  hammer nose or striker.**Firing pin drag marks** - the tool mark produced when a  projecting firing pin comes into contact with a cartridge case or shot-shell during the extraction and ejection cycle.**Firing pin impression** - the indentation in the primer of a centerfire cartridge case or in the rim of a rimfire cartridge case caused when it struck by the firing pin.**Flash hole** - vent leading from the primer pocket to the body of the cartridge case.**Fouling** - the residual deposits remaining in the bore of a firearm after firing.Fouling can change the character of the identifiable striations imparted to the projectile from one shot to another.**Fragment** - a piece of solid metal resulting from an exploding or exploded bomb or a piece of projectile from a firearm.**Gauge** - the interior diameter of the barrel of a shotgun expressed by the number or spherical lead bullets fitting it that are required to make a pound.Thus a 12 gauge in the diameter of a round lead ball using 1/12 of a pound.**Gas cutting** - an erosive effect in a firearm caused by the high velocity,high temperature propellant gases.                  - The erosion that occurs from the hot gases on the bearing surface and base of a fired bullet.**General rifling characteristics** - the number,width and direction  of twist of the rifling grooves in a barrel of a given caliber firearm.**Granules** - the individual particles of propellant powder.**Griess test** - a chemical test for the detection of nitrates.It is used by firearms examiners to develop patterns of gunpowder residues (nitrates) around bullet holes.**Grips** - a pair of pieces designed to fit the frame of a weapon providing a form fit gripping,usually plastic or wood.**Groove diameter** - the major diameter in a barrel that is the diameter of a circle circumscribed by the bottom of the grooves in a rifled barrel.**Grooves** - spiral cuts along the bore of a firearm that cause a projectile to spin as it travels through the barrel providing stability in flight.**Gun cotton (nitrocellulose)** - the principal ingredient of a single base and double base gunpowders. Also known as cellulose hexanitrate.**Gunpowder** - any various powder used in firearms as a propellant charge.                     An explosive consisting of a powdered mixture of saltpeter,sulfur,and charcoal.**Gunpowder patterns** - the spatial distribution of gunpowder  residues deposited upon a surface.                                 - the test firing of a firearm for a muzzle to target distance determination. **Gunpowder residue** - unburned gunpowder,partially burned gunpowder,and smoke from completely burned gunpowder.Gunpowder residues are the largest part  of gunshot residues.**Gunshot residue** - the total residues resulting from the discharge of a firearm.It includes both gunpowder and primer residues plus metallic residues from projectiles,fouling etc.**Gyroscopic stability** - the ability of a fired bullet to remain stable in flight due to its spin.Firearm - an assembly of a barrel and action from which a projectile is propelled by products of combustion.**Flash suppressor** - also known as a flash guard,flash eliminator,flash hider, or flash cone, is  a device attached to the muzzle of a rifle or other gun that reduces the chances that the shooter will be blinded in dark conditions.**Frame or stock** -  The frame is the basic structure of the gun to which the other major parts are attached.The stock is for rifles and shotguns.Handguns do not have a stock but rather what is called a grip.**Game** - is any animal hunted for food or not normally domesticated.**Griess test** - is a chemical analysis test which detects the presence of organic nitrate compounds.Half-cock - the position of the hammer of a firearm when about half retracted and held by the sear so that it can not be operated by a normal pull of the trigger.**Hammer** - a component part of the firing mechanism  that gives impulse  to the firing pin or primer.**Handguard** - a wooden,plastic,or metal type of forend/forearm that generally encircles the forward portion of the barrel to protect the hands from heat when firing.**Handgun** - a firearm designed to be held and fired with one hand.**Head,(cartridge case head)** - the base of the cartridge case that contains the primer.**Headspace** - the distance from the face of the closed breech of a firearm to the surface in the chamber on which the cartridge case bears.**Headspace Gage** - an instrument  for measuring the distance from the breech face of a firearm to the portion of the chamber against which the cartridge bears.**Headstamp** -  numeral, letters, and symbols or combinations thereof stamped into the head of a cartridge case or shot-shell to identify the manufacturer,caliber,gauge,or give additional information.**Heel** - the part of a rifle or shotgun stock at the top of the butt end.       - The rear portion of the bullet or its base.**Hinge frame** - any of a large array of pistols,revolvers,shotguns,and rifles whose frames are hinge to facilitate loading and ejection.Generally the barrel pivots downward.**Holster stock** - a holster,usually made of wood that attaches to the rear of the pistol grip of certain handguns and serves as a shoulder stock.**Hydrochloric acid** - a chemical reagent used in the sodium rhodizonate test for lead and other primer residues.IBIS (integrated ballistics information system) - a database used for acquiring,storing ,and analyzing images of bullets and cartridge casings. Jacket - cylinder of steel covering and strengthening the breech end of a gun;the envelope enclosing the lead core.Kinetics - a dynamic process involving motion.Lacquer - a sealant used by some ammunition manufacturers to seal the primer and/or bullet in the cartridge case.It is used as a waterproofing agent.**Land** - the raised portion between the grooves in  a rifled bore.**Land and groove impressions (right and left turn)** - the negative impressions on the surface of a bullet caused by the rifling in the barrel from which it was fired.**Lead** - element with the chemical symbol (Pb) and atomic number 82.Used in the fabrication of bullet and shot for its formability and lubrication properties.**Leading** - The accumulation of lead in the bore of a firearm from the passage of lead shot or bullets.Also called metal fouling.**Lever action** - is a type of firearm action which uses a lever located around the trigger guard area (often including the trigger guard itself) to load fresh cartridges into the chamber of the barrel when the lever is worked.**Luger** - a German semi-automatic pistol widely used in Europe as a military sidearm,manufactured in various calibers most commonly 7.65 mm and 9 mm.**Machine gun** - Bipod or tripod mounted or handheld automatic weapon whose ammunition is fed from a magazine or a belt.**Magazine** - is an ammunition storage and feeding device within or attached to a repeating firearm.**Magazine clip** - a container for cartridges that has a spring and follower to feed the cartridges into the chamber of a firearm.**Mannlicher type bolt** - a bolt-action rifle that was designed for the receiver bridge;has a gap at the top to allow passage of the bolt handle.**Mercury bath** - a process using mercury for the removal of lead residue from a barrel.**Metal fouling** - metallic bullet material left in the bore after firing.**Microscopic marks** - striae or patterns on minute lines or grooves in an object.In firearm and toolmark identification,these marks are characteristics of the object that produced them and are the basis for identification.**Misfire** - failure of the primer mixture to ignite.**Mushroom** - used to describe the expansion of a projectile upon impacting a target.**Musket** - is a muzzle-loading,smooth-bore long gun fired from the shoulder.**Muzzle** - is the end of the barrel from which the projectile will exit.Obliteration/Obliterated - most often used to refer to serial numbers of firearms that are no longer readable.**Obturation** - the act of sealing or preventing the escape of propellant gasses from the breech of a gun.**Orient** - the aligning of two bullets that were fired from the same barrel on the comparison microscope so that the land and groove impressions on those  bullets which were produced by the same lands and grooves in the barrel are opposite each other.Sometimes called phasing or indexing.Parabellum - a Latin term meaning "for war" used as a cartridge designation.**Pattern** - the distribution of a series of shots fired from one gun or a battery of guns under conditions as nearly identical as possible to that which occured at the crime scene.**Pellet** - common name for the smooth,spherical projectiles loaded into shot-shells, also referred to as shot.Also a non spherical projectile used in airguns.**Percussion cap** - a small metal cap with a priming mix that is placed on the nipple of a percussion lock.**Philadelphia derringer** - is a small percussion handgun designed by Henry Derringer and a a popular concealed carry handgun of the era.**Pinfire** - is an obsolete type of metallic cartridge in which the priming compound is ignited by striking a small pin which protrudes radially from hust above the base of the cartridge.**Pistol** - (automatic,semi-automatic,single-shot) a small firearm having a stock that fits in the hand and contains a short barrel.A firearm designed to be fired with one hand and with a chamber that is integral to the barrel.**Pistol Whipping** - is the act of using a handgun as a blunt weapon,wielding it as if it were a club.**Pitch,rifling** - the angle at which the rifling is cut in relationship to the axis of the bore.It is usually stated as the number of inches required for one revolution.Also known as rate of twist.**Primer** - the ignition component of the cartridge;any igniter that is used to initiate the burning of a propellant.**Primer cratering** - the extrusion of the primer into the firing pin hole,this phenomenon can produce identifiable marks.Also known as primer flowback.**Primer/Fuse** - any igniter that is used to initiate the burning of a propellant.**Proof mark** - a stamp applied at or near the breech of a firearm after it has passed a proof test.**Proof test** - the firing of a deliberate overload to test the strength of a firearm barrel and/or action.**Proof load** - a cartridge loaded to specified pressure higher than service loads to test firearms barrels during manufacture but before assembly,sometimes called blue pill.**Propellant** - the chemical composition which when ignited by a primer,generates gas.The gas propels the projectile.Also called powder,gunpowder,powder,or smokeless.**Propellant gases** - the gases created by the burning powder that force the projectile from the gun.**Pump-action** - is a rifle or shotgun in which the hand-grip can be pump back and forth in order to eject a spent round of ammunition and to chamber a fresh one.Rate of trust - the distance required for the rifling to complete one revolution.**Recoi**l - the backward movement of thrust  of a gun caused by the pressure of the propellant gases in the process of pushing the projectile forward through the bore.**Recoil operation** - an operating principle of automatic and semi-automatic firearms.When the weapon is fired,the barrel and breechblock initially recoil together.After traveling a short distance,the barrel and breechblock unlock and the breechblock continues to travel to the rear,extracting and ejecting the expended cartridge.**Reference collections** - a collection of various types of firearms and ammunition used by the firearms examiner for the purpose of test firing weapons for identification of ammunition and firearms.**Reload** - a cartridge that has been reassembled with a new primer powder,projectile,or other components.Also,to place fresh ammunition into the firearm.**Revolver** - a type of pistol with a revolving cylinder in the breech chamber to hold several cartridges so that the revolver may be fired in succession without reloading.**Ricochet** - the deflection of a projectile after impact.**Rifle** - a firearm having rifling in the bore and designed to be fired from the shoulder.**Rifle slug** - a single projectile with spiral grooves and hollow base intended for use in shotguns.The theory of the grooves is that after leaving the gun barrels muzzle,the slug will rotate and this reach its target much more accurately.**Rifling** - is the process of making helical grooves in the barrel of a gun or firearm which imparts a spin to a projectile around its long axis.**Rim** - the flanged portion of the head of a rimfire cartridge,certain types of centerfire rifles and revolver cartridges and shot-shells.The flanged portion is usually larger in diameter than the cartridge or shot-shells body diameter and provides a projecting lip for the extractor to engage.In rimfire cartridge,the rim provides a cavity into which the priming mixture is placed.**Rimfire** - is a type of firearm cartridge.It is called a rimfire because instead of the firing pin of a gun striking the primer cap at the center of the base of the cartridge to ignite it,the pin strikes the base's rim.Sabot - a device that ensures the correct positioning of a bullet or shell in the barrel of a gun.          - a device,"shoe" which enables a sub-caliber projectile to be fired in a larger caliber barrel.**Safety** - a type of device that locks a weapon to prevent accidental discharge.**Seating lines** - the circumferential striae parallel to the axis of the projectile generated on the surface of the bullet by the cartridge case.**Semi-automatic/Self-loading firearm** - is a weapon which perform all steps necessary to prepare the weapon to fire again after firing assuming cartridges remain in the weapons feed device or magazine.                                                               - a firearm that uses the forces of combustion to extract and eject a cartridge and to chamber a new cartridge from the ammunition source with each pull of the trigger.**Shot** - a spherical pellet used in loading shot-shells or cartridges.**Shot spread** - the diameter of a shot pattern.**Shotgun** - a smooth-bore shoulder firearm designed to fire shot-shells containing numerous pellets or sometimes a single projectile.**Shot-shell** - a cartridge containing projectile designed to be fired in a shotgun.The cartridge body maybe metal,plastic,or paper.**Signatures** - in forensic ballistics,represents the location of each feature and mark on an image from the bullet or cartridge case.The acquired signatures can then be correlated with the IBIS correlation engine.These signatures which are mathematical representations of the images are sent along with compressed images and demographics to a server for correlation.**Silencer** - a tubular device attached to the muzzle of a firearm to reduce the sound of the report.**Single-action** - a type of revolver that needs to be cocked before each shot by pulling back the hammer.Requires the firing mechanism (hammer or firing pin) to be cocked before pressure on the trigger will release the mechanism.**Skeet shooting** - is a recreational and competitive activity where the participants,using shotguns attempt to break clay discs automatically flung in the air from two fixed stations at high speed from a variety of angles.**Skid marks (slippage marks)** - rifling marks formed on the bearing surface of bullets as they enter the rifling of the barrel before rotation of the bullets starts.Skid marks are typically produced by revolvers and have the appearance of a widening of the land impression at their beginning point.**Slippage** - mark on the surface of a fired bullet made when the bullet slides along the tops of the lands on the riflings.Slippage marks appear when the rifling is worn or when a sub-caliber bullet is fired.**Slug** - is a heavy lead projectile that may have pre-cut rifling intended for use in a shotgun and often used for hunting large game.        - a term applied to a single projectile for shot-shells.**Smokeless powder** - propellant composed of nitrocellulose (single-base powders) or nitrocellulose plus nitroglycerine (double-base powders) Smokeless powders contain additives that increase shell life and enhance performance.They are made in variety of shapes (rods,perforated rods,spheres,disks,perforated disks,and flakes.**Smooth-bore** - is one in which the gun barrel or bore is without a rifling.**Sporting clays** - is a form of clay pigeon shooting often describe as a golf with a shotgun because a typical course includes from 10 to 15 different shooting stations laid out over natural terrain.**Stabilizer** - additive to smokeless powder that reacts with acidic breakdown products of nitrocellulose and nitroglycerine.Diphenylamine and ethyl centralite are common stabilizers.**Stippling** - disposition of fragments of gunshot powder residue into the skin as the result of a gunshot wound of relatively close range.**Striae** - in firearms/toolsmarks - these are lines or grooves in an object that are characteristics of the object that produced them and are the basis for an identification.**Sulfur** - a non-metallic yellow element.A constituent of blackpowder,burns easily when in powder form.Tattooing - a characteristic pattern in the skin caused by particles of unburned and partially burned powder from a gun blast at very close range.Also called stippling.**Test bullet** - a bullet fired into a bullet recovery system in a laboratory for comparison or analysis.**Test cartridge case** - a cartridge case obtained while test-firing a firearm in a laboratory that is to be used  for comparison or analysis.**Test firing** - the term used to designate the actual firing of a firearm in a laboratory to obtain representative bullet and cartridge case for comparison or analysis.Also used to test the functionality of a firearm.**TNT (trinitrotoluene)** - a high explosive used as a component of some priming mixture.**Tracer bullet** - a bullet that contains a pyrotechnic component ignited by the powder charge burn,leaving a visible trail of the flight path.**Trailing edge** - the edge of a land or groove impression in a fired bullet that is opposite to the driving edge of that same land or groove impression.Also called the "following edge" when used in conjunction with the term leading edge.**Trajectory** - the path of a projectile after leaving the muzzle of a firearm.**Trap shooting** - is a shotgun shooting activity in which the gunner shoots at clay target discs launch single or doubly from one location but at various angle into the range field.**Trigger guard** - a protective device consisting of a curved framework surrounding the trigger.**Trigger pull** - amount of force applied to the trigger of a firearm to cause it to discharge.**Trigger pull gauge** - the mechanism used to release the firing pin of a firearm by applying pressure using a finger.                           - instrument used to measure the needed amount of force to be applied to the trigger of a firearm to cause it to fire.**Twist of rifling** - inclination of the spiral grooves to the axis of the bore of a weapon;it is expressed as the  number of calibers of length in which the rifling makes one complete turn.Velocity - the speed of a projectile at a given point along its trajectory.Wad, base - a cylindrical component that is assembled into the head end of a shot-shell.**Wad, shot protector** - various designs of shot cups made of plastic and designed to reduce pellet deformation during barrel travel.**Walker test** - the original chemical test for the detection of the spatial distribution of nitrates in gunpowder residue.Yaw - the angle between the longitudinal axis of a projectile and a line tangent to the trajectory at the center of gravity of the projectile.**Yaw angle** - angle between the axis of a bullet  and its trajectory.Zwilling - European term for a double-barreled shoulder arm with one rifled barrel and one smooth-bored barrel. 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