

## C

### Calculation of Firing Data

The battery command post (BCP) calculates the map bearing, range and angle of sight between the gun and the target and applies corrections to compensate for non-standard conditions to produce predicted data. The predicted data is then placed onto the sights of the guns and to the projectile's fuze. The corrections applied to the map data are:

- \* Altitude Corrections.
- \* Correction of the Moment.
- \* Drift Corrections.
- \* Corrections for Rotation of the Earth.
- \* Non-Standard Projectile Correction.
- \* Muzzle Velocity Corrections.
- \* Distribution Corrections.
- \* Corrections to Fuze Settings.

### Calibration

The process whereby the muzzle velocity (the speed the projectile departs the barrel) is determined. This can be by observation of firing, by instruments (eg. an electronic velocity analyser), by measurement of barrel wear or from the number of equivalent full charges fired.

### Calibre

The diameter of the bore of the barrel excluding the depth of the grooves (rifling). Barrel lengths are generally expressed in terms of multiples of the calibre.

### Call for Fire

The call for Artillery fire to engage a target is made-up of a number of elements and in order to quicken the relevant drills, to minimise delay and to ensure that any mistakes or omissions are readily detected all fire-related orders are given in a set sequence (all orders from the battery command post to the guns are also given in a set sequence for the same reasons). The basic elements for a call for fire from the observer are:

- \* The observer's identification.
- \* A warning order.
- \* The location of the target (including the relevant direction) (see: *Direction*).
- \* A description of the target.
- \* The required method of engagement.
- \* The method of fire and control.

### Cancel At My Command

(see: *At My Command*)

### Captain-General

The title held by the Monarch. In 1951 King George VI expressed a desire to have the Artillery title of Colonel-in-Chief changed to Captain-General. In 1962 Her Majesty, Queen Elizabeth II became the Captain-General of the Royal Regiment of Australian Artillery (in the Australian

Army the title is unique to the Gunners). The title originates from 1736, when the rank of Captain-General was replaced by that of Field Marshal.

Carriage	The assembly of wheels, trails, recoil gear and elevating/traverse mechanisms on which the ordnance is supported and aligned (also known as the 'Basic Structure').
Carrier Shell	A projectile where its 'body' acts merely as a 'vehicle' to carry the payload to the target (eg. smoke, illumination). There are two types of carrier shell – bursting and base ejection.
Cartridge	<p>The propellant explosive contained in a (charge) bag or in a metal case. Cartridges may be classified as 'quick firing' (QF) or 'breech loading' (BL). Quick firing cartridges are usually made of brass and their functions are to provide obturation (when the gun is fired), carry the propelling charge and, fixed into the cartridge's base, a primer. There are three types of cartridges:</p> <ul style="list-style-type: none"><li>* Fixed: The case and projectile are permanently 'mated' and loaded into the gun as one piece.</li><li>* Semi-Fixed: The case is fitted to the projectile before loading; the case contains a number of charge (propellant) bags and any unnecessary bags can be removed before loading.</li><li>* Separate: The projectile is first loaded into the gun and then the cartridge case is loaded.</li></ul> <p>Breech loading charges (separated ammunition) are contained in a fabric bag and are loaded into the gun's breech after the projectile has been loaded and 'rammed home' into the chamber; a primer is then placed into the gun's firing mechanism.</p>
Cease Firing	The order given by the GPO to bring the guns out of action. Before giving the order to the guns the GPO is to ensure that the order 'Report Guns Empty' has been given to the guns and completed (see: <i>Empty Guns</i> ).
Cease Loading	An order to stop guns from being loaded; all other actions are continued in accordance with the orders received (ie. guns may still apply previously given orders such as bearings and elevations). Guns that are already loaded may fire but are not re-loaded. The order is cancelled with the order 'Cancel cease loading'.
Centre of Arc	The bearing on which all guns in a unit (eg. a battery or a troop) are commonly aligned when coming into action (ie. deployed). All engagements are then fired from the left or the right of this bearing.
Chamber	The non-rifled, tapered portion at the inside-rear of the of the barrel that receives the cartridge/charge.
Charge	The amount of propellant ordered for a particular engagement (depending on the range to the target). The amount is adjustable for semi-fixed and separate

ammunition.

Check Firing	An order to stop a gun from firing; all other actions are continued in accordance with the orders received (ie. guns may still apply given orders such as load, bearings and elevations). The order is cancelled with the order 'Cancel check firing'.
Check Map	The GPO's essential 'tool' in conducting independent checks of data produced by the command post personnel and computers. The map records the location of friendly forces (including the observation posts), any 'no-fire' positions, registration points and limits, and possible crest clearance problem areas (see: <i>Crest Clearance</i> ).
Checking Parallelism	Guns are checked when coming into action (ie. when occupying a position) as soon as possible after the Centre of Arc has been recorded, at 'first light', before 'last light', before engaging a fire plan, after a mistake in line has occurred (but cannot be detected by other means) and following a change of grid involving orientation (see: <i>Parallelism</i> ).
Chief Instructor	The senior ranking instructor (a lieutenant colonel) at the School of Artillery (see: <i>Commanding Officer/Chief Instructor</i> ).
Clinometer	An instrument used to lay a gun in elevation. Once a quadrant elevation angle (the angle of sight plus the tangent elevation) is applied, to the clinometer scale, the gun's barrel is elevated until the bubble is level (see: <i>Gun Rule, Quadrant Elevation and Tangent Elevation</i> ).
Close Support	The action of the supporting force against targets or objectives which are sufficiently near the supported force to require detailed integration or co-ordination of the supporting action with the fire, movement or other actions of the supported force (see: <i>Supporting Fire</i> ).
Close Supporting Fire	Fire placed on enemy troops, weapons or positions which, because of their proximity, present the most immediate and serious threat to the supported unit.
Colonels Commandant	<p>Each region within Australia has a Royal Regiment of Australian Artillery (RAA) Colonel Commandant. They are former serving Gunner officers who, during the duration of their appointment, hold the honorary rank of colonel (those who retired at a senior rank retain that rank). The duties of the colonel commandant include:</p> <ul style="list-style-type: none"><li>* Fostering <i>esprit de corps</i>, the general welfare of the Regiment and its standing in the community.</li><li>* Giving advice and assistance to the Honorary Head of Corps (HOC) and the Representative Colonel Commandant on (Artillery) Regimental matters, such as customs, history, traditions and memorials.</li><li>* Acting as the point-of-contact between the RAA Regimental Committee and the various RAA organizations and associations that exist within</li></ul>

their appointed area.

- \* Participating as a member of the RAA Regimental Committee and advising on the management of the RAA Regimental Fund.
- \* Visiting RAA units within their appointed area and represent the Regiment at appropriate occasions, in accordance with the Regiment's intentions.
- \* Assisting the Representative Colonel Commandant in relation to any other matters of Regimental concern.

The senior Colonel Commandant is appointed as the Representative Colonel Commandant (see: *Representative Colonel Commandant* and *Honorary Head of Corps*).

Combat Service Support Battery

A combat services support battery, within an air land regiment, that provides integral combat service support in order to support the defence of deployed forces, and critical assets from air and surface-to-surface missions.

Command

The authority vested in an individual for the direction, coordination and control of a military forces' organization (eg. a division, a regiment, a battalion, a battery, squadron or company, a platoon, a detachment or a section).

Command Post

An Artillery (battery) command post (CP) is the place that receives the relevant orders from the observer (ie. the battery commander, forward observer, forward observer's assistant, or any other person so qualified or authorized) for the engagement of a target. The CP then predicts the necessary data (eg. the bearing, range/elevation, angle of sight and ammunition charge) for the guns to engage the relevant target. The post also calculates the necessary information for the recording of targets. The battery command post consists of a number of operator command post (OPCP) personnel, a sergeant, a bombardier and a number of gunners, and a number of gunner signallers. The regimental command post, which is controlled by the unit's adjutant, coordinates the battery command posts for targets which are to be engaged by more than one battery.

Command Post Duty Officer

An officer (ie. a gun position section commander), a warrant officer (ie. battery sergeant-major or battery guide) or senior NCO (ie. the OSCP sergeant) who temporarily relieves the gun position officer (GPO) and takes command of the gun line's command post (mainly during periods of the night).

Command Post Officer

A gun regiment's adjutant is the command post officer within a regiment's command post, however, the command post officer within a gun battery's command post is referred to as the gun position officer - GPO (see: *Gun Position Officer*).

Command Post Safety Officer

(see: *Gun Position Safety Officer*)

Command Post Shooting Form	A form used in the command post, by the operators command post (OPCPs), to predict the firing data (ie. bearing, range, and angle of sight) to be given to the guns to engage a target. This method is used when not using a computer system (see: <i>FABS</i> ).
Commander, Royal Artillery	The appointment relates to the senior Artillery officer who commands all of the Gunner elements within the division. Whilst, in reality, it is a British Army term it was also used for the senior Royal Australian Artillery officer within Australian Army divisions.
Commanding Officer	The senior officer within a unit. The commanding officer (CO) of an Artillery regiment does not deploy with his regiment during operations; the CO serves with the brigade headquarters. The CO is responsible for advising the brigade commander with regard to the employment of artillery fire support and he also assumes command of the brigade during the brigade commander's absence.
Commanding Officer/Chief Instructor	The Commanding Officer of the School of Artillery (lieutenant colonel), who is also the School's top ranking instructor.
Commencement of Rifling	The point within the barrel's bore at which the grooves first reach maximum depth and mark the end of the shot seating (see: <i>Rifling</i> and <i>Shot Seating</i> ).
Complete Equipment Schedule	A Complete Equipment Schedule (CES) is all the necessary items carried with an equipment to ensure that it can operate competently. A gun's CES includes items such as spanners, screwdrivers, fuze setters, a rammer, sight testing devices, aiming posts, and an elevation quadrant.
Composite Charge	A multiple charge in which the propellant in at least one portion differs in size and/or shape and/or composition from that in the remaining portions (eg. some of the charge bags within a 105mm cartridge case contain different propellant shapes; some are tubular – each piece has a singular hole through its length, whilst others are multi-tubular – each piece has a series of holes through its length; this gives the piece greater burning surfaces).
Computerised Meteorological System	An automated system for obtaining the meteorological data (eg. wind speed, wind direction, air temperature) to be entered into the command post computer to assist in determining predicted data for the guns to fire on.
Concentration of Fire	Density of fire is proportional to the number of guns simultaneously engaging the targets and their rate of fire. Coverage of the target area is largely dependent upon the number of guns. Therefore, to achieve maximum effectiveness, every effort must be made to quickly concentrate the fire of the required number of guns to cover the target and to order a rate of fire which will give the required density on the target. One round fire for effect from a regiment (three gun batteries) is potentially

	much more effective than three rounds fire for effect from a single battery.
Continuous Fire	The guns fire as quickly as possible (consistent with accuracy and the guns' rate of fire) until further orders are issued. The order may be coupled with a timed interval between the firing of rounds; eg, 'Continuous Fire – 30 seconds'.
Control	An authority, which may be less than a full command, exercised over the activities of a subordinate or other organization (normally for a particular activity and for a set period of time).
Controlled Variable Time Fuze	A Controlled Variable Time (CVT) fuze is an artillery fuze equipped with a system that emits radio signals as the projectile approaches the target. The echo, or return pulse, from the target causes the fuze to automatically detonate the projectile at a set altitude over the target. The altitude that the fuze detonates above the target is pre-set, however, the timing can be 'controlled' by pre-setting a different relevant timing (see: <i>Mechanical Time Fuze</i> ).
Converge	The guns' lines of sight to the target are converged (ie. the fall of shot from all the guns is directed to a single point).
Correction of the Moment	Information applied to both the bearing and range from the gun line to the target and consists of those corrections which are common to all guns of the unit and for which the values remain true for only a limited period of time. The Correction includes: <ul style="list-style-type: none"> <li>a. non-standard meteorological conditions for air density, air temperature, and wind speed and direction; and</li> <li>b. non-standard charge temperature.</li> </ul> (see: <i>Meteorological Data</i> ).
Counter Battery	The suppression of enemy batteries either by destruction or neutralisation (formally called 'Counter-Bombardment').
Counter-Battery Fire	Fire directed by the artillery or mortars to neutralize enemy artillery/mortar fire. Also referred to as counter bombardment.
Counter Bombardment	(see: <i>Counter Battery</i> )
Cradle	A part of the gun that supports the ordnance and recoil mechanism. On some guns the recoil system is fitted within the cradle or alternatively carried on a sleigh.
Craftsman	The Royal Australian Electrical and Mechanical Engineers (RAEME) equivalent to the rank of private. It is also a term used to describe members of the Corps.
Crater Analysis	Inspection of a crater made by an artillery or mortar projectile to determine the bearing and angle of sight

from which the projectile came and to obtain fragments to allow the determination of the calibre. It is an all arms responsibility but a part of artillery intelligence work.

#### Crater Analysis Report

A report made after inspecting a crater made by an artillery or mortar projectile. Any fragments of the projectile/bomb that can be collected are labelled with the relevant information, including:

- \* The time and date at which the projectile was known to have been fired.
- \* The location at which the fragments were found.
- \* The direction from which the projectile came (and the method used to deduce this information).
- \* The name and unit of the person making the report.

#### Crest Clearance

All officers responsible for the reconnaissance of gun positions are to ensure that all the guns are able to fire over any crests to achieve the line to shoot down to, in low angle, the targets. The GPO is to ensure that all the guns do not fire at an elevation that the projectiles will hit an occupied crest.

#### Cross-Level

An adjustment made to the gun's sight to compensate for any lack of level of the gun due to the ground upon which it is positioned. If the gun's trunnions are not level, the gun, as it elevates, will also move in azimuth, so upsetting the pointing of the barrel to the target. The cross-levelling gear on the sight will bring the sight upright independently of the level of the trunnions and this will automatically compensate for the movement of the gun's barrel.

#### Curved Trajectory

The path of the projectile when it has left the muzzle (see: *Trajectory*) is determined by the following factors:

- \* The muzzle velocity.
- \* The direction of the line of departure.
- \* Gravity.
- \* Resistance of the air.
- \* The weight and shape of the projectile.
- \* The spin of the projectile.
- \* The rotation of the earth.

#### Cut-off Gear

An automatic adjustment in the control valves of a gun's buffer which shortens the recoil movement as the gun elevates. Cut-off gear is usually found with howitzers and fitted so that the barrel is allowed the maximum length of recoil when the gun is fired in the horizontal position. However, as the barrel is elevated, to fire in higher angles, the recoil length then gets progressively shorter, thereby preventing the breech from striking the ground (see: *Buffer and Recoil System*).