Fall of Shot
The pattern made by falling artillery rounds (projectiles) onto a target area (i.e. the width and length of the area that the rounds land into) (see: *Probable Error and Zone*).

Field Artillery
The arm of Artillery that uses guns designed for mobile land operations and for the delivery of both direct and indirect surface-to-surface fire support.

Previously Australian (surface-to-surface) Artillery units were classified as ‘Field Artillery’ (e.g. 25 Pounder and 105mm guns) or ‘Medium Artillery’ (e.g. 5.5 Inch and 155 mm guns). The term ‘Field Artillery’ now refers to all surface-to-surface Artillery units, regardless of the calibre of the guns.

Field Artillery Back-up System (FABS)
A command post back-up system to an electronic computer system (see: *Field Artillery Computer Equipment (FACE)*). The items included Tabular Firing Tables, a calculator, Graphic Firing Tables and a Displacement Graph; the relevant information (e.g. bearing, range and angle of sight) is then calculated on a command post shooting form (CPSF) and passed onto the guns.

Each gun applies the given predicted range to its gun rule (which takes into account the gun’s muzzle velocity for each charge) to produce the necessary elevation for the gun to fire on.

Field Artillery Computer Equipment (FACE)
A large computer system which was fitted into the back of a Land Rover vehicle or within an armoured personnel carrier. It would produce firing data for the guns, record target information, calculate guns’ independent muzzle velocities and deduct survey data.

Field Gunnery Problem
Field artillery weapons must be deployed where they cannot be easily located by the enemy. Although artillery weapons can be employed in the direct fire role the field gunnery problem is principally one of indirect fire. The solution requires data which, when applied to the gun sights and ammunition, will cause the projectile to burst on the target, or at the height required above it.

The problem is solved by a number of basic steps. These are to:

* Determine the fixation and orientation of the guns.
* Determine the location of the target.
* Calculate map bearing, range and angle of sight.
* Convert map data to predicted data to compensate for any non-standard conditions.
* Issue orders to apply to the guns.

Final Protective Fire
A close defensive fire mission where the target is usually located on the approach route most likely to be used by the enemy. The final protective fire (FPF) forms the final barrier of fire assigned to protect the defended position.
**Fire Base**

A secure base within an area of operations to give the infantry a firm area from which to patrol and it also provides a platform from which artillery and mortar fire support can be employed to support the infantry. There are three types of bases:

* Fire Support Base: A secure area from which guns and/or mortars can operate in support of operations. They are normally a reasonably ‘permanent’ base (eg. in South Vietnam: Australia’s Fire Support Base “Horseshoe”).

* Fire Support Patrol Base: Bases containing guns and/or mortars that are established and occupied for a limited period of time in support of a particular operation (eg. in South Vietnam: Australia’s Fire Support Patrol Base “Coral”).

* Forward Operational Base: A firm ‘home base’ from which aggressive action into enemy-dominated territory can be developed. These bases are made-up of a number of combat units, along with the necessary support units and sub-units, and will normally contain an airfield capable of taking medium-lift transport aircraft. These bases also house the headquarters administration and maintenance areas (eg. in South Vietnam: Australia’s Forward Operational Base at Nui Dat).

**Fire Control**

(see: *Fire Discipline*)

**Fire Discipline**

The ‘language’ of fire control involving the observation post, the command post and the guns. It consists of words, phrases, rules and conventions which have specific meanings and result in some definite action at the guns.

The aim of Fire Discipline is to ensure that, in response to fire orders, the appropriate action is taken at the guns, strictly in accordance with the intention of the originator and with the minimum of delay.

**Fire for Effect**

The order for all of the relevant guns to engage a target. If more than one round is to be fired at a target the order will be coupled with the number of rounds that each gun is to fire (eg: ‘Six rounds, fire for effect’).

**Fire Mission**

A specific assignment given to a fire unit as part of a definite plan; it may involve one gun, three guns, a battery (six guns), two batteries, a regiment (18 guns), or more (eg. a division’s worth of guns).

The order ‘Fire Mission’ is given to alert a unit and to indicate that the following relevant information is a call for fire (eg. “Fire mission battery; (grid reference and map altitude of the target; the line observer-to-target)”).

**Fire Plan**

A plan to concentrate the fire of all the available fire support resources (eg. guns/mortars, etc) onto the relevant targets to best contribute to the success of a tactical plan (see: *Quick Fire Plan*).

**Fire Support**

The application of artillery fire upon targets as specified by a supported arm commander.
Fire Support Base  (see: Fire Bases)

Fire Support Coordination Centre
A formation responsible for planning and coordinating all forms of fire support.

Fire Support Coordination Line
A line established by the appropriate ground commander to ensure coordination of any fire not under his control but which may affect current tactical operations. The Fire Support Coordination Line normally follows well defined terrain features and establishment of the Line is coordinated with the appropriate tactical air commander and any other supporting elements.

Fire Support Patrol Base  (see: Fire Bases)

Fire Support Team
A body which forms part of a Regimental Tactical Group that is resourced and qualified to provide control of artillery support, mortar fire, close air support and close combat attack.

Fire Unit
The smallest artillery organization, consisting of one or more weapon systems, and capable of being employed to execute a fire mission (mainly used in air defence units).

Firing Pin
The piece within the breech mechanism that strikes the primer when the gun is fired. This action detonates the primer which, in turn, sets-off the propellant charge. The charges explode turning into gas, which then pushes the projectile up the barrel's bore (see: Propellant).

Firing Tables
Gunnery Tabular Firing Tables contain a series of mathematical tables listing data for obtaining the necessary elevation and bearing that is to be applied to the gun’s sighting system to effectively engage the target. The tables include:
* Complementary ranges (non-rigidity).
* Temperature and air density corrections.
* Wind components.
* Propellant temperature.
* Corrections for muzzle velocity.
* Corrections for the rotation of the earth.
* Fuze setting and fuze setting corrections.
* Probable error for deflection, and for height of burst, time to burst and range to burst for fuzes.
* Angle of descent.
* Vertex height.

First Line Ammunition  (see: Line Ammunition)

Fitted for Radio
A vehicle which is internally set-up to carry a radio system.

Fitted with Radio
A vehicle which has a radio system set-up within it.

Fixation
The locating of a given point on the earth’s surface by map grid references or coordinates with sufficient accuracy for gunnery purposes (see: Battery Grid, Regimental Grid and Theatre Grid).
Fixed Ammunition: The projectile and the cartridge case are ‘manufactured’ together and the ammunition is loaded into the gun as one piece; the propelling charge cannot be altered (eg. 40 mm (Bofor) Light Anti-Aircraft Gun ammunition).

Flash Spotting: A method of locating hostile artillery by cross observation of the flash produced by the propellant charges on firing. Positions may be located by cross-referencing two or more flash spotting locations.

Forming-up Place: A location at which sections of a unit will meet-up and join together, before moving off as a complete unit to another area.

Forward Air Controller: An officer who, from a forward position, directs the action of combat aircraft engaged in close air support of ground forces (all Artillery forward observers are qualified as Forward Air Controllers (FAC)).

Forward Area Air Defence Command and Control: Forward Area Air Defence Command and Control (FAADC) supports air defence, and counter rocket and mortar weapon systems engagement operations by tracking friendly and enemy aircraft, cruise missiles, un-manned aerial systems, mortar and rocket rounds as identified by radar systems.

Forward Edge of the Battle Area: The foremost limits of a series of areas in which ground combat units are deployed, excluding the areas in which the covering or screening forces are operating, designated to coordinate fire support, the positioning of forces, or the manoeuvre of units.

Forward Operational Base: (see: Fire Bases)

Forward Observation Officer: (see: Forward Observer)

Forward Observation Party: A Gunnery sub-unit that is attached to another Arm’s unit (normally an Infantry rifle company) to call-in Artillery supporting fire when required. The party is made-up of a forward observer, a junior NCO assistant (see: Forward Observer’s Assistant) and gunner signallers.

Now known as a Joint Forces Team (JFT).

Forward Observer: A forward observer (formally referred to as a Forward Observation Officer) is a Gunnery officer that is attached to another Arm’s unit (normally an Infantry rifle company) to call-in artillery supporting fire when required. He is authorized to order supporting fire from his battery, however, unless authorized in advance by the battery commander, the adjutant or the commanding officer, he must request fire support from the regiment’s other gun batteries. The forward observer is also responsible for advising the commander, of the unit to which he is attached, on all matters relating to fire support.

Now known as a Joint Forces Team (JFT) Commander.
Forward Observer's Assistant

An Artillery junior NCO within a forward observation party. His duties including checking the forward observer’s (FO) details, relating to a call for fire support (the “independent check”), before the officer calls-in the fire. The Assistant is fully trained in calling-in supporting fire and, when the situation dictates, may carry-out the duties of the FO.

Fragmentation

The breaking-up of the casing of a high explosive projectile to provide fragments, or splinters, travelling at lethal speeds (inaccurately referred to as ‘shrapnel’).

Fuze

A device to actuate the contents of a projectile, either along its trajectory (ie. airburst), on impact (percussion), or after penetration of the target (delay).

Fuze Length

(see: Time Fuze)

Fuze Setter

A device for setting a time fuze to the relevant time for it to detonate over the target (see: Time Fuze).

Fuze Setting

The setting applied to a fuze for its time of detonation (eg. super quick, delay or a time fuze).

* A super quick fuze activates the moment it hits the target.
* A fuze set to ‘delay’ will activate 0.5 of a second after it hits the target.
* A time fuze will activate at the pre-determined time applied to the fuze’s mechanism (see: Time Fuze).