

## **GLOSSARY**

### **A - ALPHA**

**AA** – Air America

**AF** – Air Field or Air Force

**AAA** - Anti-Aircraft Artillery, e.g. Russian ZSU-23

**AAAF** – Allied Army Airborne Forces, the title given the unified command of airborne forces in the European Theater of Operations.

**AAM** - Air-to-Air Missile

**AAR** - Air-to-Air Refuelling

**AAT** – Army Assault Team – a team of US Army soldiers assigned to protect the CCT, during a combat operation. Typically included as part of the Pathfinder Aircraft airdrop.

**AATC** – Airhead Air Traffic Control – The air component control agency in a combat zone, where military air traffic is concentrated in support of a combat operation.

**ABCCC** – Airborne Battlefield Command and Control Center. A flying command post.

**ACM** - Air Combat Manoeuvring

**ACMI** - Air Combat Manoeuvring Instrumentation - a designated piece of airspace for an exercise, e.g. Nellis Ranges

**Active** - As opposed to passive - a radar radiating or in 'active' mode as opposed to standby or passive mode

**ACT** – World War II term for Airfield Control Teams. Combat Control Teams became ACTs after they departed the Airhead and began operating drop zones and landing zones. Today's CCT act in both capacities.

**ADIZ** - Air Defence Initialization Zone

**AEW** - Airborne Early Warning

**AEW&C** - Airborne Early Warning & Control (see AWACS)

**AF** – Air Field

**AFB** - Air Force Base

**AFM** – Air Force Manual

**AFRC** - Air Force Reserve Command

**AFRES** – Air Force Reserves

**AFSC** – Air Force Specialty Code. An alpha numeric identifier assigned to an Air Force job description. For example, P27250 is a parachute qualified air traffic control operator or Combat Controller. That was later changed to a DoD common identifier 1C2.

**AIM** - Air Intercept Missile, e.g. AIM-7, AIM-9 etc.

**AIRA** – US Embassy Office of the Air Attache'

**Air Commando** – Today, a member of the Air Force Special Operations Command (AFSOC). See Commando for a more indepth definition and discussion.

**Airhead** – The airspace above and around a military objective. An airhead – in air traffic control terms – can be compared to a Federal Aviation Administration (FAA-defined) Control Zone; i.e., the airspace controlled by an air traffic control facility. Also defined as an isolated area within which airborne troops are reinforced and resupplied by airplanes that land on airfields or landing strips. Also any isolated area held by airborne troops in hostile territory.

**Airhead, Air Traffic Control (AATC)** - See Airhead.

**ALCC** – Airlift Command Center

**ALCE** – Airlift Control Element

**ALCM** - Air Launched Cruise Missile

**AMRAAM** - Advanced Medium Range Air-to-Air Missile, i.e. AIM-120

**ANG** - Air National Guard

**AOC** – Air operations center

**AOR** – Area of responsibility, area of operation or area of operational responsibility

**APOS** – Aerial Port Operations Squadron, also **APS** – Aerial Port Squadron, also **MAPS** – Mobile Aerial Port Squadron

**APU** - Auxiliary Power Unit - a small jet engine in larger aircraft that provides power to the aircraft on the ground, plus power to restart an engine in flight

**ARM** - Anti-Radiation Missile

**ARMA** – US Embassy - Office of the Army Attache’

**ASM** - Air-to-Surface Missile

**ASRAAM** - Advanced Short Range Air-to-Air Missile

**ATC** - Air Traffic Control

**A-Team** - During the Secret War in Laos, the American Ambassador - working with his military advisors - established three Royal Lao Air Force (RLAF) groups that operated the AT-28 Trojan Attack aircraft; all operated within the boundaries of Laos. The three groups operated AT-28's with RLAF markings. The A-Team was American Advisors, the B-Team was Thai mercenaries and the C-Team was Lao Pilots. The Lao pilots were trained by USAF instructors at Detachment 1, 56th Special Operations Wing, at Udorn AFB, Thailand. Det. 1 shared highly restricted ramp space with Air America and Continental Air Services - both CIA funded air contractors.

- Also the US Army Special Forces basic operational team or **ODA** – Operational Detachment A-Team. A Special Forces company consists of six ODAs (Operational Detachments Alpha) or "A-teams." The number of ODAs can vary from company to company, with each ODA specializing in an infiltration skill or a particular mission-set (e.g. Military Freefall (HALO), combat diving, mountain warfare, maritime operations, or urban operations).

**AWACS** - Airborne Warning and Control System (see AEW&C) - Aircraft (usually Boeing E-3) equipped with a powerful radar and on-board command and control center to direct the friendly forces

**AWADS** – Adverse Weather Aerial Delivery System. An aircraft radar system that is used for formation flight and the accurate aerial delivery of personnel, equipment and supplies in marginal weather conditions.

## **B - BRAVO**

**BCT** – The brigade combat team (BCT) is the basic deployable unit of maneuver in the US Army. A brigade combat team consists of one combat arms branch maneuver brigade, and its attached support and fire units. Brigade combat teams are generally commanded by a colonel (O-6), in some rare instances they will be commanded by a brigadier general. A brigade combat team carries with it support units necessary to

sustain its operations separate from its parent division. BCTs include organic artillery, support formerly received from the division artillery (DIVARTY).

- Beginning in 2006, the U.S. Army was on converting its brigades into the new Brigade Combat Team (BCT) format. In this program, divisions that generally have not deployed individual brigades due to lack of integral support have been restructured, giving them the ability to deploy one or more independent BCTs anywhere in the world. These BCTs will be able to stand on their own just like a mini-division; however, the soldiers assigned to a BCT will stay at their assignment for 3 years. This is intended to bolster readiness and improve unit cohesion.

**BDA** - Bomb Damage Assessment

**Benini Heritage Center** – Named CMSgt Alicide S. "Bull" Benini, the first airman named as a US Air Force Combat Controller, in 1953. The Benini Heritage Center is located at the Combat Control School, Pope AFB, North Carolina. It exhibits artifacts associated with CCT history. The Benini Center is a motivational tool for combat control students and is used as a recruiting tool.

**Bird** - Jargon term used to describe an aircraft or a satellite

**Black** - A term used to refer to a secret program that has not been acknowledged, e.g. 'Aurora', 'Astra', TR-3 etc. Also used as state of a runway. If the runway is Black, then it's not useable due to a crash or mishap etc.

**Black-out** - In a high Gravity turn, an aviator's blood is sucked out of the brain, into the lower body. Can cause unconsciousness. Also "G-lock". Usually prevented by the G-suits worn by pilots. The opposite to the more dangerous "Red-out" (see below)

**Block** - Denotes a build run or modification run of a particular aircraft that may have slight differences in avionics or weapons, e.g. F-16C Block 50. Also used to describe an altitude range, e.g. "established in the Block FL230 to 250", meaning the airspace between altitude 23,000 and 25,000ft.

**B-Team** - During the Secret War in Laos, the American Ambassador - working with his military advisors - established three groups that operated the AT-28 Trojan Attack aircraft; all operated within the boundaries of Laos. The three groups operated AT-28's with the Royal Lao Air Force (RLAF) markings. The A-Team was American Advisors, the B-Team was Thai mercenaries and the C-Team was Lao Pilots. The Lao pilots were trained by USAF instructors at Detachment 1, 56th Special Operations Wing, at Udorn AFB, Thailand. Det. 1 shared highly restricted ramp space with Air America and Continental Air Services - both CIA funded air contractors.

- Also a US Army Special Forces Operational Detachment Bravo - An A-Team cannot deploy or operate without the support of the B Team. The B-Team consists of 11 personnel and is the headquarters element of the Special Forces company. It is the **command and control element** of the A-Teams within the company. The B-Team establishes and operates the AOB, or Advanced Operational Base. The B-Team can and does - Plan and conduct SF operations separately or as part of a larger force; Train and prepare SF A-Teams for deployment; Infiltrate and exfiltrate operational areas by air, land, or sea; Conduct operations in remote areas and hostile environments for extended periods of time with minimal external direction or support; Develop, organize, equip, train, and advise or direct indigenous combat forces up to regimental size in Special Operations (SO); Train, advise, and assist other U.S. and allied forces and agencies.

**BVR** - Beyond Visual Range

## **C - CHARLIE**

**C2** - Command & Control

**C3** - Command, Control & Communications

**C3I** - Command, Control, Communications & Intelligence

**CAC** - Conventional Approach Control – A non-radar method of air traffic control used for vectoring aircraft into a landing zone. CAS typically uses a combination of navigational aids, dead reckoning and timing to vector an aircraft on approach to safe landing.

**CAOC** - Combined Air Operations Center

**CALSU** – Combat Air Lift Support Unit

**CARP** or Computed Air Release Point- Accuracy is the capability of an airdrop system to deposit the load at a predetermined spot on the ground in the drop zone from an aircraft over the drop zone. Accuracy does not include the problems associated with getting to a particular drop zone or identifying a drop zone as the correct drop zone. The most important element that detracts from accuracy is the effect of wind drift during descent. A computed air release point (CARP) method is utilized in determining the point at which the airdrop loads should be released in order to impact on the desired point. Wind velocity and direction at the drop zone are determined, relayed to the delivery aircraft, and used to compute the proper release point. A shortcoming of this method is that it does not consider wind velocity and direction changes with altitude. These shortcomings can seriously impact the accuracy of high altitude drops because of the possibility of changing wind conditions.

- One way to overcome the resultant inaccuracies from wind conditions is to increase the rates of descent for the supplies and the equipment being dropped. This increased rate of descent tends to reduce the effect of various wind conditions that can exist in a particular area. This theory should hold true, and the same degree of accuracy should exist, at any given altitude provided the pilot has the proper sighting instruments for determining his release point. The increased rate of descent requires more stringent energy absorption at impact. Recently, newer methods are being developed to allow real-time measurement of winds at different altitudes along the trajectory to allow a more accurate CARP calculation.

**CAP** - Combat Air Patrol

**CAS** – Close Air Support – typically directed by a forward air controller.

- Also Continental Air Service in Laos.
- Also Classified American Source when referring to the CIA owned or leased assets.

**CBI** – China, India, Burma, designated as a WWII theater of operations.

**CCA** – Combat Control Association, a fraternal and social association consisting of combat controllers, honorary combat controllers and associate members.

**CCS** – Combat Control School

**CCSA** – Combat Control School Association, a historical organization with a board of directors and elected officers. The purpose of the CCSA is the collection and preservation of CCT history.

**CDS** – Container Delivery System. A standard airdrop bundle most often used for the resupply of ground combat forces. A typical CDS bundle is approximately 4' x 4' and loaded with four 55-gallon drums (for example). A typical C-130 CDS drop consists of 32 CDS bundles, each fitted with a G-12, 64' diameter parachute.

**Century Series** - Collective term applied to the series of fighters built in the 1950's and 60's, i.e. F-100, F-101, F-102, F-103\*, F-104, F-105, F-106, F-107\*, F-108\*, and F-111. Not generally applied to the F-110 (MiG-21), F-113G (MiG-23), or F-117 (\* = Prototype only)

**Chaff** - Strips of tin or aluminium foil dumped by aircraft in an attempt to avoid a radar homing missile. The foil reflects radar waves and is designed to confuse the radar seeker on the missile

**Chalk Number** – In the early days of troop carrying aircraft operations, numbers were hand printed on the nose of the aircraft using chalk. The numbers ranged from one to the sequence number of the last aircraft. Then, airborne troops were manifested for flight on Chalk Number 5, for example. The number identified the aircraft's sequence in the stream of mission aircraft.

**CIA** – Central Intelligence Agency

**CINCPAC** – Commander in Chief, Pacific Command

**CIWS** - Close In Weapons System, e.g. Phalanx, Goalkeeper, Metal Storm - usually ship based, but has future applications on larger aircraft

**COIN** - Counter Insurgency

**COMALF** – Commander Airlift Forces

**Commando** – a. A small fighting force specially trained for making quick destructive raids against enemy-held areas.

b. A member of such a force.

c. A small, elite military raiding and assault unit or soldier. Although the word was coined in the Boer War (1899–1902), the role is as old as battles themselves. In 1940, when the British organized a number of such units, the term came into wide use. Made up of hand-picked volunteers, specifically trained for dangerous work, these units were employed in missions throughout World War II, including the raid on Field Marshal Rommel's headquarters (1941). The U.S. Army's Ranger battalions were also popularly called commandos. After World War II the British army's commandos were disbanded, but the British Royal Marine Commandos were employed in the Korean war and the Suez operation, and the elite Special Air Service (SAS) has engaged in extensive action against the Irish Republican Army and other nonstate-sponsored commandos. The United States has active commando, or Special Operations, units, including the Air Force Special Tactics Squadrons, Navy Seals and the Army's Rangers, Green Berets (Special Forces), and Delta Force (SFOD). Some of these forces were used in the Vietnam War, the Persian Gulf War, Afghanistan (2001), and numerous counterinsurgency operations. Soviet commandos (*Spetsnaz*) fought in the Afghanistan War. Israel and Vietnam have particularly proficient commando units. Commandos today often

use special weapons, such as satellite communications, silenced small arms, exotic explosives, and delicate sensors.

**CRO** – Combat Rescue Officer

**CSAR** – Combat Search and Rescue

**C-Team** - During the Secret War in Laos, the American Ambassador - working with his military advisors - established three groups that operated the AT-28 Trojan Attack aircraft; all operated within the boundaries of Laos. The three groups operated AT-28's with the Royal Lao Air Force (RLAF) markings. The A-Team was American Advisors, the B-Team was Thai mercenaries and the C-Team was Lao Pilots. The Lao pilots were trained by USAF instructors at Detachment 1, 56th Special Operations Wing, at Udorn AFB, Thailand. Det. 1 shared highly restricted ramp space with Air America and Continental Air Services - both CIA funded air contractors.

- Also C-TEAM US ARMY Special Forces - A C-team is one of the operational detachments of the Special Forces. It is a pure command and control unit with operations, training, signals and logistic support responsibilities. Its basic organization follows the same lines with a Lieutenant Colonel (O-5) for commander and a Command Sergeant Major (E-9) for the senior NCO. There are an additional 20-30 SF personnel who fill key positions in Operations, Logistics, Intelligence, Communications and Medical. A Special Forces battalion usually consists of 3 companies.

**CV** - Attack aircraft carrier - Conventionally powered

**CVN** - Attack aircraft carrier - Nuclear powered

## **D - DELTA**

**DARPA** - Defense Advanced Research Projects Agency

**DCA** - Defensive Counter Air

**DEFCON** - The DEFense readiness CONdition (DEFCON) is a measure of the activation and readiness level of the US Armed Forces. It describes progressive postures for use between the Joint Chiefs of Staff and the commanders of unified commands. DEFCONs are matched to the situations of military severity. Standard peacetime protocol is DEFCON 5, descending in increasingly severe situations. DEFCON 1 represents expectation of actual imminent attack, and is not known to have ever been declared.

- **DEFCON 5** is the condition used to designate normal peacetime military readiness. An upgrade in military preparedness is typically made by the Joint Chiefs of Staff and announced by the US Secretary of Defense.
- **DEFCON 4** refers to normal, increased intelligence and the heightening of national security measures.
- **DEFCON 3** refers to an increase to force readiness above normal. Radio call signs used by American forces change to currently classified call signs.
- **DEFCON 2** refers to a further increase in force readiness just below maximum readiness. The most notable time it was declared was during the Cuban Missile Crisis, although the declaration was limited to Strategic Air Command. It is not certain how many times this level of readiness has been reached.

- **DEFCON 1** refers to maximum readiness. It is not certain whether this has ever been used, but it is reserved for imminent or ongoing attack on US military forces or US territory by a foreign military power.

**DZ** – Drop Zone, designated area for the airdropping of personnel, equipment and supplies.

## **E - ECHO**

**ECCM** - Electronic Counter-Countermeasures - powerful electronics that can 'burn through' conventional ECM systems

**ECM** - Electronic Countermeasures - electronics designed to decoy or deceive enemy radar or missile threats

**ELINT** - Electronic INTelligence - the interception and collection of enemy electronic and radar emissions

**ESM** - Electronic Support Measures - similar to ECM

**EOS** – The Eye of the Storm, refers to the Airhead Air Traffic Control in a combat operation.

**EW** - Electronic Warfare

**EZ** – Extraction Zone is an isolated area designated for the delivery of Ground Proximity Extraction System (GPES) or Low Altitude Parachute Extraction System (LAPES) loads.

## **F - FOXTROT**

**FAC** – Forward Air Controller provides direction for the deliver of airborne weapons.

**FAG** – Forward Air Guide provides guidance for the delivery of airborne weapons.

**FAE** - Fuel Air Explosives - a powerful conventional bomb that explodes a canister or bag of potent fuel vapor just above the ground. One of the most powerful and destructive weapons, second only to the Nuclear Bomb, with similar effects. It can devastate everything within a mile radius, and kill everything up to a five mile radius by sucking up all oxygen. FAE were used in the Gulf War to clear large bunker and trench areas

**FBW** - Fly By Wire - the electronic flight control system of a modern aircraft as opposed to conventional cable operated controls - usually used on aircraft that are inherently unstable, and combined with a digital automatic flight control system, e.g. F-16, F-22

**Flares** - Cubes of burning magnesium dumped by aircraft in an attempt to avoid an infrared homing missile. The flare burns immensely hot and is designed to confuse the infrared seeker on the missile

**FLIR** - Forward Looking InfraRed - used to spot ground targets through cloud or smoke, or at night, mainly by attack helos and special ops aircraft

**FOV** - field of view

**FRAG or FRAGGED** – Abbreviation of fragmentary order. Combat Operations Orders are typically long, drawn out documents that define everything about a specific operation. For example the Bombing Campaign of North Vietnam contained volumes of instructions; more than anyone would ever want to know about the basic operation and rules of engagement (ROE). Ninety percent of the Combat Operations Order remained unchanged for months on end. The major exception was the assigned daily operations. The FRAGMENTARY ORDERS or FRAGS, typically assigned specific missions to designated units. Thus a Frag Order is the operational plan for a specific day.

**FUBAR** – Fouled up beyond all recognition. A military slang word for something that is really fouled up. Modified here to its socially acceptable version.

## **G - GOLF**

**g** - The force of gravity, e.g. 9g = 9 x the force of gravity, about the limit of human endurance

**GAM** - GPS Aided Munition, a GPS guidance tail kit that can be fitted to standard Mk-82 bombs, developed for the B-2

**GCA** – Ground Controlled Approach. A radar operator directs an aircraft to final approach to landing or an air drop.

**GCI** - Ground Control Intercept. The pilot has little autonomy, but is guided by Ground Control. Mostly used by Russian and Chinese forces, but also still used by western forces

**GIG** - Global Information Grid

**Gorilla** - Jargon terminology for a large strike package of many aircraft

**GPES** – Ground Proximity Extraction System (pronounced jeeps). GPES was a precursor to LAPES, the Low Altitude Parachute Extraction System. GPES utilized the aircraft carrier arresting system technique to extract a heavy load from an aircraft flying less than fifteen feet above the ground. The GPES ground system was installed by Combat Controllers.

**GPS** - Global Positioning System - a worldwide system whereby the user can determine their position to within 1 meter by using signals from navigation satellites orbiting the earth

**Grey** - Term used for a program that may have been revealed, but its true capabilities are not commonly known, e.g. SR-71, B-2, F-22

**GWOT** – Global War on Terrorism

## **H - HOTEL**

**HAHO** – High-altitude, high-opening, a parachute deployment method used for long-range movement under canopy. In HAHO, the parachutist exits the aircraft at very high altitudes and opens immediately, flying the highly maneuverable parachute for several miles, before landing. Often used for border crossings.

**HALO** – High altitude low opening, a parachute deployment method where the parachutists exits the aircraft at very high altitudes, then free falls to an opening altitude around 2,500 feet above the earth's surface.

**Helo** - Alternate word for helicopter

**HOTAS** - Hands On Throttle And Stick - where the throttle is located on the control column, usually a side stick control column as on F-16

**HUD** - Head Up Display - where flight control and navigation information is projected onto a glass panel or onto the windscreen directly in the pilots' line of forward vision

**HVAA** - High-Value Airborne Asset

## **I - INDIA**

**IADS** - Integrated Air Defence System - an air defence system where many different systems are integrated so that commanders may get a 'big picture' and information verification. Would include early warning sites, AEW&C and major ship borne systems (e.g. Aegis cruisers-USN), SAM sites and fighter aircraft

**IAS** – Indicated Air Speed. Aircraft speed typically measured in knots per hour. A nautical mile is 1,852 meters, or 1.852 kilometers. In the English measurement system, a nautical mile is 1.1508 miles, or 6,076 feet.

**IFF** - Identification Friend or Foe - a transponder fitted to all aircraft that allows it to be identified and tracked by ATC and friendly forces

**ILS** - Instrument Landing System

**INS** - Inertial Navigation System - a navigation system that guides an aircraft based upon its position relative to a pre-determined point, usually its home base. The INS is aligned just before launch at a point on the taxiway (called the 'hammerhead') of which the coordinates are known.

**IOC** - Initial Operational Capability - when an aircraft or unit is declared operational, but not necessarily ready to go to war if required

**IP** - Initial Point - the last navigation way point for a strike aircraft before beginning a bomb run. Usually

the weapons officer has control of the aircraft from the I.P. to the target

## **IR – InfraRed**

**IRST** – Infra Red Search and Track, e.g. as fitted to Su-27, MiG-29 and Typhoon - a passive system that allows the pilot to track an aircraft by its heat signature from up to 50nm away

## **J - JULIET**

**JDAM** - Joint Direct Air Munition - a Global Positioning System (GPS) guided bomb

**JEFX** - Joint Expeditionary Force Experiment (or Exercise)

**Joint-STARS** - Also called J-STARS - Joint Surveillance Target Attack Radar System - Boeing E-8C used to monitor a ground battle with SLAR real time displays - can be linked with JTIDS

**JSF** - Joint Strike Fighter - The F-35 is descended from the X-35, the product of the JSF program. Its development is being principally funded by the United States, with the United Kingdom, and other partner governments providing additional funding. It is being designed and built by an aerospace industry team led by Lockheed Martin with Northrop Grumman and BAE Systems as major partners. Demonstrator aircraft flew in 2000, with the first flight on 15 December 2006. The JSF program was created to replace various aircraft while keeping development, production, and operating costs down. This was pursued by building three variants of one aircraft, sharing 80% of their parts:

- F-35A, conventional takeoff and landing (CTOL) variant.
- F-35B, short-takeoff and vertical-landing (STOVL) variant.
- F-35C, carrier-based (CV) variant.

**JSOW** - Joint Stand Off Weapon - a stealthy tactical cruise missile with GPS/INS guidance. Can be fitted with a radar homing warhead and loiter waiting for enemy radars to switch on. First used in Kosovo by USN F/A-18s

**JTIDS** - Joint Tactical Information Distribution System - a datalink between tactical fighter and bomber aircraft, AEW&C, Joint-STARS, and ground controllers that gives an overall tactical display of an air battle. Commonly known as Link-16 in Europe

**JTRS** - Joint Tactical Radio System

**JUSMAG** – Joint US Military Assistance Group

## **K - KILO**

**Klick** - Slang for kilometer. One kilometer equals: 1 000 meters, or 621 statute miles, or 1 094 yards

**Knife fight** - Common term for a close in dogfight between two aircraft

## **L - LIMA**

**LAPES** – Low Altitude Parachute Extraction System, a parachute is used to extract a heavy load from an aircraft while flying at an altitude less than fifteen feet above a clear zone.

**Lantirn** - "Low Altitude Navigation and Targeting Infrared for Night". A system of two pods carried by US F-14s, F-15s and F-16s that combines TFR and a laser designator for accurate low level flying and bombing at night and in bad weather

**Legs** - Jargon term meaning the range or duration of an aircraft

**LGB** - Laser Guided Bomb

**LO** - Low Observable, i.e. Stealth

**LZ** - Landing Zone - mainly used for helos and tactical transport aircraft. Typically an unmanned area suitable for the landing of assault aircraft delivering personnel, equipment and supplies.

## **M - MIKE**

**Mach 1** - The speed of sound - about 660 knots (760mph) at sea level, and about 580 knots (670mph) at 36,000 feet - varies as square root of air temperature

**Mach number** - The ratio of true airspeed in relation to the speed of sound, e.g. Mach 0.8 = 80% the speed of sound, or 530 knots at sea level, and 465 knots at 36,000 feet

**MAS** – Military Airlift Squadron

**MAW** – Military Airlift Wing

**MEDEVAC** - MEDical EVACuation, as in "medevac helos"

**MIDS** - Multifunction Information Distribution System

**MTOW** - Maximum Take Off Weight

**MTT** – Mobile Training Team, typically one or more military instructors deployed to train US and allied forces.

## **N – NOVEMBER**

**NAVAIDS** – Navigational Aid for aircraft. May be visual or electronic.

**NORDO** – NO RADIO - typically used to identify an aircraft that is not in radio communications with the air traffic control facility.

**NVA** – North Vietnamese Army

**NVG** - Night vision goggles. Used by ground troops and pilots to enhance vision at night

## **O - OSCAR**

**OCA** - Offensive Counter Air

**OCU** - Operational Conversion Unit - where prospective combat pilots get to fly front line aircraft before being declared fully operational on that aircraft type

**ODA** – Operational Detachment – A Team. The basic Special Forces fighting unit or operational team.

**OTH** – Over the Hoizon

**OTHR** - Over The Horizon Radar

## **P - PAPA**

**Passive** - Non-emitting sensor or detection device, either something like an active radar in standby mode, or a passive device such as IRST

**Payload** - Weapon and/or cargo capacity of an aircraft

**Package** - Common term for a group of combat aircraft

**Paddle** - Jargon for the action of turning off a TFR radar - mainly F-111 and Tornado related. On the F-111, the TFR is disengaged by pulling on a small trigger-like paddle on the control column

**Pathet Lao** - The Pathet Lao were the Laotian equivalent of the Viet Minh and the Viet Cong of Vietnam. Eventually, the term became the generic name for Laotian communists.

**Pickle** - When a pilot or bombardier presses the trigger button to release bombs or missiles

**PGM** - Precision Guided Munition - collective term for GPS or laser guided weapons

**PJ** – Parachute Jumper – Commonly used acronym applied Pararescueman. The term evolved from the USAF standard crew position identifier entered into the aircraft's log – prior to each flight - to identify a parachutist. **JP** – is the standard identifier used to signify the position of Jumpmaster.

**PT** – Physical Training

**Q - QUBEC**

**R - ROMEO**

**Radar Altimeter** - a small radar mounted on the underside of an aircraft that constantly measures the altitude above ground

**RAM** - Radar Absorbing Material - a special paint, carbon fibre, plastic, or iron ferrite coating that is applied to parts of an aircraft to reduce its radar cross-section

**RCS** - Radar Cross-Section - a term used to describe the size of a radar return

**Recce** – Reconnaissance

**Red-out** - In a negative gravity maneuver, a pilots blood is pulled into his upper body. This may result in his/her vision being distorted due to blood vessels in the eye expanding

**RFI** - Radio Frequency Interferometer - A small sensor on most modern military aircraft that can determine an air defense threat by measuring another plane's radar frequency

**RLAF** – Royal Lao Air Force

**RTAFB** – Royal Thai Air Force Base

**ROE** - Rules Of Engagement

**RON** – Remain over night.

**RPV** - Remotely Piloted Vehicle, e.g. Predator UAV

**RWR** - Radar Warning Receiver - a device that warns a pilot he is being tracked by radar

**RVR** – Runway Visual Range - The estimated or measured visual range, or the distance, a pilot would be able to see on an airfield.

## **S - SIERRA**

**SAM** - Surface-to-Air Missile

**SAR** - Search And Rescue

**SEAD** - Suppression of Enemy Air Defences - the tactics of targeting and attacking enemy radar and SAM position. Aircraft used include F-16CJ, EA-6B, Tornado ICR, F/A-18 EC

**SF/SFG** – Special Forces or Special Forces Group

**SCARWAF** - Special Category Army Reassigned With Air Force

**SITREP** – Situation Report

**SKE** - Station Keeping Equipment

**Sigint** - SIGnals INTelligence - the interception and collection of enemy communications transmissions

**SLAR** - Side Looking Airborne Radar - used by aircraft such as the E-8 Joint-STARS to map ground targets and land layout

**Sidewinder** - AIM-9 IR guided short range AAM

**Smart** - Common term used to describe weapons that are guided, e.g. LGBs, JDAMs and GAMs

**SOCOM** – Special Operations Command also US SOCOM

**SOS** – Special Operations Squadron

- Also the distress signal most often used by ships in an emergency. Morse code: . . . - - - . . .

**SOW** – Special Operations Wing

**Sparrow** - AIM-7 radar guided medium range AAM

**STO** – Special Tactics Officer A combat control team officer

**STS or SPECIAL TACTICS SQUADRON** – An operations squadron, part of the 720th Special Tactics Group, Hurlburt Field, Florida. Each STS consisting of combat operators and support personnel. Combat operators include four different career fields. They are listed below.

1. **Combat Control** - The combat controllers' mission is to deploy undetected into combat and hostile environments to establish assault zones or airfields, while simultaneously conducting air traffic control, air strikes, command and control, direct action, counter-terrorism, foreign internal defense, humanitarian assistance and special reconnaissance.

2. **Pararescue** - Pararescue Airmen, known as PJs, participate in search and rescue, combat search and rescue, recovery support for NASA and conduct other operations as appropriate. They primarily function as personnel recovery specialists, with emergency medical capabilities in humanitarian and combat environments. They deploy into restricted environments to authenticate, extract, treat, stabilize and evacuate injured personnel, while acting in an enemy-evading, recovery role.

3. **Special operations weathermen** - Special operations weathermen are meteorologists with advanced tactical training to operate in hostile or denied territory. They collect localized weather information, assist with mission planning, provide intelligence and generate accurate, mission-tailored target and route forecasts in support of special operations.

4. **Tactical Air Control Party Airmen** - Special Operations Enlisted Tactical Air Controllers (ETACs) are assigned to Special Operations Force units. The 17th Air Operations Support Squadron (ASOS) provides terminal attack and liaison services to the 75th Ranger Regiment and its 1st, 2nd, 3rd and Regimental Special Troops Battalions, and the 1st, 3rd, 5th, 7th and 10th Special Forces Groups. The 17th ASOS has 61 special operations forces Tactical Air Control Party (TACP) Airmen and support personnel. In October 2008, the squadron joined the ranks of more than 900 special tactics combat controllers, pararescuemen, special operations weathermen and support personnel.

**Stealth** - Common term applied to low observable (LO) technology and doctrine, that makes an object near invisible to radar, infrared or visual detection

## **T - TANGO**

**T-7A** – Common reserve parachute

**T-10** – Common main static line parachute.

**TAC** – Tactical Air Command

**TACAMO** - TAke Charge And Move Out - Boeing E-6 airborne command post - US Navy only

**TACAN** - TACTical Aid to Navigation - a ground based military UHF navigation aid

**TACP** – Tactical Air Control Party.

**TALO** – Tactical Air Liaison Officer

**TAW** – Tactical Airlift Wing, also TAS Tactical Airlift Squadron

**Take** - Common term for the results of photo recon, Elint or Sigint missions

**TCT** - Time critical targeting

**TCW** – Troop Carrier Wing, also TCS Troop Carrier Squadron

**TDY** – Temporary Duty assignment.

**Teen Series** - Collective term used for the series of US fighters built in the 1970's and 80's, i.e. F-14, F-15, F-16, YF-17\*, F/A-18, F-19\*\*, F-20\*. (\* = Prototype aircraft only, \*\* = unacknowledged black aircraft)

**TFR** - Terrain Following Radar - a radar fitted to an aircraft that interfaces with the flight controls to keep it at a pre-determined height above the ground for low-level high-speed flight, i.e. Tornado, F-111, F-15E

**TIALD** - Thermal Imaging And Laser Designator - as used by UK forces on Harrier, Jaguar and Tornado aircraft

**Toss** - A modern method of delivering a PGM bomb or missile on target without having to overfly the target. The aircraft approaches the target at low level, then pulls up at high speed and releases the weapon in the pull-up, which then flies a ballistic trajectory to the target while the aircraft turns away

**TOW** - Tube launched Optically tracked Wire guided anti-armor missile carried by Apache and other attack helos

**Track** - A common term for an AAR refuelling orbit, usually racetrack shaped and about 25 long by 10 miles wide, but can be as large as 200 by 30 miles, and different shape. Also used by AWACS for the path of an aircraft in ACM

**TTNT** - Tactical Targeting Networking Technology

**TTP** – Tactics, techniques and procedures or operational standards.

## **U - UNIFORM**

**UAV** - Unmanned Aerial Vehicle, remote controlled, e.g. Predator

**UCAV** - Unmanned Combat Aerial Vehicle - Armed UAV, e.g. Predator equipped with two hellfire missiles

**USAAF** – United States Army Air Force

**USAID** – US Agency for International Development

**UTM** - The Universal Transverse Mercator coordinate system is a grid-based method of specifying locations on the surface of the Earth. It is used to identify locations on the earth, but differs from the traditional method of latitude and longitude in several respects. The UTM system is not a single map projection. The system instead employs a series of sixty zones, each of which is based on a specifically defined secant transverse Mercator projection.

## **V - VICTOR**

**VFR** – Visual Flight Rules

**VLO** - Very Low Observable, i.e. advanced stealth

**VSI** - Vertical speed indicator

**VSTOL** - Vertical or Short Take-Off and Landing, e.g. Harrier, V-22 Osprey

## **W - WHISKEY**

**Weasel** - Common term applied to some SEAD aircraft and tactics

**White** - A term used to refer to a program that has been acknowledged and its capabilities are known, e.g. F-15, F-16

**WSO** - Weapons Systems Operator - back seater on F-15E and Tornado, or right seater on F-111 - also called 'Wizzo'

**WWII** – World War Two.

## **X - X-RAY**

**XCAS** - On-Call Close Air Support (CAS)

## **Y – YANKEE**

## **Z – ZULU**

**ZULU Time** – Common military identifier used to designate Greenwich Mean Time or GMT. Typically written as 1600Z, for example – with the meaning of 4PM Greenwich time.

- GMT is a term originally referring to mean solar time at the Royal Observatory in Greenwich,

London, England . It is now sometimes used to refer to Universal Coordinated Time (UTC) when this is viewed as a time zone although strictly UTC is an atomic time scale which only approximates GMT in the old sense. It is also used to refer to Universal Time (UT), which is the astronomical concept that directly replaced the original GMT. In the UK, GMT is the official time only during winter; during summer British Summer Time is used.