

# Understanding Air France 447: Glossary

**Ab Initio** - A Latin term meaning “from the beginning” whereby an airline often hires a pilot with minimal qualifications and provides the training necessary to serve as a flight officer.

**ACARS** - Aircraft Communications Addressing and Reporting System. A messaging system used to deliver messages between the aircraft and ground stations, and in some cases ATC.

**ADIRS** - Air Data Inertial Reference Systems Three systems comprised of the Air Data and Inertial reference components.

**ADS-C** - Automatic Dependent Surveillance - Contract. An automatic position reporting system widely used in oceanic areas where radar is not available.

**ADR** - Air Data Reference. Three systems that provide altitude and airspeed data.

**AOA** - Angle of attack. The angle between the wing and the relative wind (the apparent wind resulting from the forward motion of the airplane)

**ARCC** - Aeronautical Rescue Coordination Centre

**ATC** - Air Traffic Control

**BEA** - Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile (Office of Investigations and Analysis for the safety of civil aviation)

**CG** - Center of Gravity

**CPDLC** - Controller Pilot Data Link Communications. A system for sending and receiving text messages between the aircraft and ATC that ensures the accuracy of the transmitted data. It is widely used in, though not limited to, oceanic areas where VHF radio coverage is not available.

**CRM** - Crew Resource Management (formerly Cockpit Resource Management). A human factors approach to more effectively managing of the flight, which makes optimum use of all available resources - equipment, procedures and people - to promote safety and enhance the efficiency of operations.

**CVR** - Cockpit Voice Recorder. This recorder provides a multi-channel recording of radio, interphone, and other communications from each pilot station, and cockpit area microphone audio, for use in accident investigations. Maximum storage capacity is between 30 minutes and 2 hours.

**DFDR** - Digital Flight Data Recorder. This recorder constantly records several thousand aircraft parameters for use in accident investigations.

**DGAC** - Direction Generale de l'Aviation civile (French Director General of Civil Aviation)

**EASA** - European Aviation Safety Agency. The Agency promotes the highest common standards of safety and environmental protection in civil aviation in Europe and worldwide. It is the centerpiece of a new regulatory system which provides for a single European market in the aviation industry.

**ECAM** - Electronic Centralized Aircraft Monitor. This system provides display and monitoring of aircraft systems. It uses the two center display screens on the instrument panel, and includes alerts, non-normal checklists, and other information.

**ECP** - Recurrent training in simulators

**ELT** - Emergency Locator Transmitter. A transmitter that sends an emergency location signal (trackable by satellite and search and rescue personnel). ELTs are typically triggered automatically by impact forces.

**FCPC** - Flight Control Primary Computer (PRIM)

Flight Director - A display, on the A330 consisting of a horizontal and a vertical command bars on the primary flight display (PFD). The command bars are generated by the flight management computer and provide pitch and roll guidance to the pilot to follow identical to the commands the autopilot follows when it is on. The FD and autopilot are usually both on in flight.

FO - First Officer

FPV - Flight Path Vector. A display on the PFD that shows the lateral and horizontal trajectory of the airplane independent of attitude.

GPWS - Ground Proximity Warning System

HF Radio - High Frequency radio. A radio spectrum (shortwave) that allows for long distance radio communications. It is widely used in oceanic areas where VHF radio coverage is not available. It is highly subject to interference and poor transmission quality.

ICAO - International Civil Aviation Organization. Promotes understanding and security through cooperative aviation regulation.

IR - Inertial Reference. Three systems that provide attitude, heading, position, and other inertial based data

Mach - In reference to a scale where Mach 1.0 equals the speed of sound.

$N_1$  - The speed of the fan stage of the engine, expressed in percent, though 100% is not the upper limit. It is the primary thrust setting parameter.

ND - Navigation Display. On the A330 this display includes a moving map display, weather radar, TCAS, terrain, and additional navigation data.

PIC - Pilot in Command

PF - Pilot Flying

PFD - Primary Flight Display. On the A330 this one display includes attitude, airspeed, heading, altitude, vertical speed, autoflight mode annunciations, and some additional information.

PNF - Pilot not Flying.

SAR - Search and Resecue.

SELCAL - Selective Calling. A system that allows the radio operator to transmit an aircraft's unique SELCAL code. When the radio receiver recognizes its code, it sounds a call signal in the cockpit alerting the crew to contact the radio operator for a message.

THS - Trimmable Horizontal Stabilizer. aka: stab

TOGA - Takeoff/Go Around: A thrust setting and the full forward thrust lever position. If selected in flight with the flaps are out, it also commands the autopilot/flight director system to provide go-around guidance.

ULB - Underwater Locator Beacon

VHF Radio - Very High Frequency radio. The common radio band used aeronautical radio transmission. The transmissions are usually of good quality, but are limited to line-of-sight transmissions, and are therefore unusable for long distance communications.