

Glossary

(of aviation terms used in the story)

ACARS - Aircraft Communications Addressing and Reporting System. A datalink system for transmission of short data messages between aircraft and ground stations via radio or satellite; developed by ARINC.

AGL - Above ground level. Altitude above the ground.

AIRFOIL - The shape of a wing seen in cross-section. An airfoil-shaped body (e.g., wing) moving through a fluid produces an aerodynamic force called LIFT.

AIRSPEED - The speed of the aircraft relative to the air mass in which it is flying.

ALTIMETER - An aneroid-barometric instrument used to measure an aircraft's ALTITUDE.

ALTITUDE - The aircraft's height about the ground (AGL) or height above mean sea level (MSL).

ARINC - Aeronautical Radio Incorporated, a provider of data-link communications (now a wholly owned subsidiary of Collins Aerospace).

ATC - Air Traffic Control. In the United States, the FAA provides this service to airspace users to deliver safe, orderly, and efficient movement of air traffic.

ATIS - Automatic Terminal Information Service, "A-TIS." A continuous broadcast of current airport information, including weather conditions and landing runway.

ATTITUDE - The nose-up/nose-down pitch and bank angles of an aircraft in relation to the horizon. *Attitude* should not be confused with *altitude*.

ATTITUDE INDICATOR - Instrument that displays the aircraft's pitch and roll movements in relationship to the horizon. Also called the artificial horizon.

CEILING - The height above the ground of the lowest layer of obscuring clouds (broken or overcast).

CENTER - Air Route Traffic Control Center (ARTCC).

CONTRAIL - A trailing stream of condensed water vapor created in cold air by the heat of jet engines.

CRASH PAD - A residence away from home shared by a group of airline employees to reduce cost.

CRM - Crew Resource Management. Using cognitive and interpersonal skills to manage flight operations safely and efficiently.

DECISION ALTITUDE - The altitude at which a decision must be made by the pilot to continue an instrument approach or execute a missed approach.

DME - Distance Measuring Equipment, a navigation signal to determine distance from a ground station.

DRAG - The force exerted on an aircraft resisting its motion in flight. Drag can be increased by extending flaps, speed brakes and/or the landing gear.

FIVE-BY - Five-by-five. In radio jargon, affirms that a radioed transmission has been received loud and clear.

FLAP - A movable, hinged AIRFOIL set in the trailing edge of an aircraft wing, designed to increase LIFT and DRAG, used by aircraft on takeoff and landing.

FLARE - Pitching the nose of an aircraft up to reduce the rate of vertical speed at touchdown.

FLIGHT LEVEL - An altitude level, stated in digits that represent hundreds of feet, e.g. "flight level 250" represents an altimeter indication of 25,000 feet MSL.

FLIGHT PLAN - Specified information relating to the intended flight of an aircraft, filed with ATC.

FMC - Flight Management Computer. Specialized computer that automates in-flight tasks, primarily for navigation and in-flight execution of the flight plan.

FOM - Flight Operations Manual. Contains company policies, standard operating procedures and training requirements in compliance with federal regulations.

GLIDESLOPE - A tightly focused, directional radio beam transmitted from the approach end of a runway to define the angle of descent; the vertical component of an instrument landing system (ILS).

GROSS WEIGHT - The total weight of an aircraft when loaded, including fuel, cargo, and passengers.

GROUND CONTROL - Air traffic control of aircraft ground movements at an airport.

GROUNDSPEED - The actual speed of an aircraft over the ground; the combination of AIRSPEED and wind speed relative to the aircraft's direction of flight.

ILS - Instrument Landing System. Radio-based system with lateral and vertical beams, allowing equipped aircraft to find a runway and land in IMC conditions.

IMC - Instrument Meteorological conditions; flying in clouds with little or no forward visibility.

KNOT - One nautical mile = 1.15 statute miles (6,080'). Unit of speed for aircraft. 100 kts (100 nautical miles per hour) = 115 mph (miles per hour).

LIFT - The force generated on the upper surface of a moving AIRFOIL causing the aircraft to rise.

LOCALIZER - The azimuth beam of the instrument landing system (ILS), aligned with the runway.

LNAV - Lateral Navigation. Pertaining to aircraft course guidance, the lateral route navigated in flight.

MSL - Mean Sea Level. Average height of the surface of the sea, a global reference for aircraft altitudes, as opposed to AGL—the height of the aircraft above the ground directly beneath it.

PILOT IN COMMAND (PIC) - The pilot responsible for the operation and safety of an aircraft in flight.

PITCH - One of the three axes in flight, this specifies the up-and-down pitching movement of the nose.

PITOT TUBE - A tube that measures the dynamic air pressure in flight to determine air speed.

RAMP - Ground level at airport, paved surface around hangars and the terminal where aircraft park.

ROLL - Aircraft motion about a line drawn from nose to tail through the center of the fuselage.

RUDDER - The movable part of the vertical stabilizer (tail fin) that causes the aircraft to YAW left and right.

SINK RATE - The vertical speed at which an aircraft loses altitude, in glide or powered descent.

SQUAWK - A four-digit number assigned by ATC and set in the transponder by a pilot to identify the aircraft to air traffic controllers.

STALL - A condition caused by raising the nose until the flow of air over the wing breaks away from the top surface, causing the aircraft to drop abruptly.

TAIL FIN - The vertical stabilizer tail surface.

THRUST - The propulsive force produced in reaction to the gases expelled rearward from a jet engine.

TRANSPONDER - A radio device that responds to ground-based interrogations to provide more accurate and reliable position information than possible with primary radar alone; also used to provide air traffic control with an aircraft's altitude.

VIS - Visibility. The distance at which an object or light can be clearly discerned, affected by viewing angle, presence of fog, cloud, haze and precipitation.

VOR - VHF OmniRange. A ground navigation station transmitting very high-frequency (VHF) signals 360° in azimuth. The signal identified by Morse Code and may have voice identification feature.

VVI - Vertical Velocity Indicator. An instrument that displays the rate of climb or descent in feet-per-minute (fpm). Also VSI (Vertical Speed Indicator).

W/B - Weight and Balance. Related to the loading and center of gravity (CG) of an aircraft; data essential to ensure stability and remain within the performance capabilities of the aircraft in every phase of flight.

YOKE - A flight control mechanism consisting of a wheel mounted on a vertical column hinged at the bottom. Rotating the wheel left/right causes motion in the roll axis while pushing or pulling on the column causes pitching (nose up/nose down) motion.