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NATIONAL TRANSPORTATION SAFETY BOARD

WASHINGTON, D.C.

EXCERPTS FROM THE PILOT/CONTROLLER GLOSSARY

PILOT/CONTROLLER GLOSSARY

This Glossary was compiled to promote a common understanding of the terms used in the Air Traffic Control system. It includes those terms which are intended for pilot/controller communications. Those terms most frequently used in pilot/controller communications are printed in ***bold italics***. The definitions are primarily defined in an operational sense applicable to both users and operators of the National Airspace System. Use of the Glossary will preclude any misunderstandings concerning the system's design, function, and purpose.

Because of the international nature of flying, terms used in the *Lexicon,* published by the International Civil Aviation Organization (ICAO), are included when they differ from FAA definitions. These terms are followed by "[ICAO]". For the reader's convenience, there are also cross references to related terms in other parts of the Glossary and to other documents, such as the Federal Aviation Regulations (FAR's) and the Airman's Information Manual (AIM).

This Glossary will be revised, as necessary, to maintain a common understanding of the system.

A

AAI—(See ARRIVAL AIRCRAFT INTERVAL).

AAR—(See AIRPORT ACCEPTANCE RATE).

ABBREVIATED IFR FLIGHT PLANS—An authorization by ATC requiring pilots to submit only that information needed for the purpose of ATC. It includes only a small portion of the usual IFR flight plan information. In certain instances, this may be only aircraft identification, location, and pilot request. Other information may be requested if needed by ATC for separation/control purposes. It is frequently used by aircraft which are airborne and desire an instrument approach or by aircraft which are on the ground and desire a climb to VFR-on-top.

(See VFR-ON-TOP). (Refer to AIM).

ABEAM—An aircraft is "abeam" a fix, point, or object when that fix, point, or object is approximately 90 degrees to the right or left of the aircraft track. Abeam indicates a general position rather than a precise point.

ABORT—To terminate a preplanned aircraft maneuver; e.g., an aborted takeoff.

ACC [ICAO]—(See AREA CONTROL CENTER).

ACCELERATE-STOP DISTANCE AVAILABLE—The runway plus stopway length declared available and suitable for the acceleration and deceleration of an airplane aborting a takeoff

ACCELERATE-STOP DISTANCE AVAILABLE [ICAO]—The length of the take-off run available plus the length of the stopway if provided.

ACDO—(See AIR CARRIER DISTRICT OFFICE).

ACKNOWLEDGE—Let me know that you have received my message.

(See ICAO term ACKNOWLEDGE).

ACKNOWLEDGE [ICAO]—Let me know that you have received and understood this message.

ACLS—(See AUTOMATIC CARRIER LANDING SYSTEM).

ACLT—(See ACTUAL CALCULATED LANDING TIME).

ACROBATIC FLIGHT—An intentional maneuver involving an abrupt change in an aircraft's attitude, an abnormal attitude, or abnormal acceleration not necessary for normal flight.

(Refer to Part 91). (See ICAO term ACROBATIC FLIGHT).

ACROBATIC FLIGHT [ICAO]—Manoeuvres intentionally performed by an aircraft involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed.

ACTIVE RUNWAY—(See RUNWAY IN USE/ACTIVE RUNWAY/DUTY RUNWAY).

ACTUAL CALCULATED LANDING TIME—ACLT is a flight's frozen calculated landing time. An actual time determined at freeze calculated landing time (FCLT) or meter list display interval (MLDI) for the adapted vertex for each arrival aircraft based upon runway configuration, airport acceptance rate, airport arrival delay period, and other metered arrival aircraft. This time is either the vertex time of arrival (VTA) of the aircraft or the tentative calculated landing time (TCLT)/ACLT of the previous aircraft plus the arrival aircraft interval (AAI), whichever is later. This time will not be updated in response to the aircraft's progress.

ADDITIONAL SERVICES—Advisory information provided by ATC which includes but is not limited to the following:

1. Traffic advisories.
2. Vectors, when requested by the pilot, to assist aircraft receiving traffic advisories to avoid observed traffic.
3. Altitude deviation information of 300 feet or more from an assigned altitude as observed on a verified (reading correctly) automatic altitude readout (Mode C).
4. Advisories that traffic is no longer a factor.
5. Weather and chaff information.
6. Weather assistance.
7. Bird activity information.
8. Holding pattern surveillance. Additional services are provided to the extent possible contingent only upon the controller's capability to fit them into the performance of higher priority duties and on the basis of limitations of the radar, volume of traffic, frequency congestion, and controller workload. The controller has complete discretion for determining if he is able to provide or continue to provide a service in a particular case. The controller's reason not to provide or continue to provide a service in a particular case is not subject to question by the pilot and need not be made known to him.

(See TRAFFIC ADVISORIES). (Refer to AIM).

ADF—(See AUTOMATIC DIRECTION FINDER).

ADIZ—(See AIR DEFENSE IDENTIFICATION ZONE).

ADLY—(See ARRIVAL DELAY).

ADMINISTRATOR—The Federal Aviation Administrator or any person to whom he has delegated his authority in the matter concerned.

ADVISE INTENTIONS—Tell me what you plan to do.

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H

HAA—(See HEIGHT ABOVE AIRPORT).

HAL—(See HEIGHT ABOVE LANDING).

HANDOFF—An action taken to transfer the radar identification of an aircraft from one controller to another if the aircraft will enter the receiving controller's airspace and radio communications with the aircraft will be transferred.

HAT—(See HEIGHT ABOVE TOUCHDOWN).

HAVE NUMBERS—Used by pilots to inform ATC that they have received runway, wind, and altimeter information only.

HAZARDOUS INFLIGHT WEATHER ADVISORY SERVICE—Continuous recorded hazardous inflight weather forecasts broadcasted to airborne pilots over selected VOR outlets defined as an HIWAS BROADCAST AREA.

HAZARDOUS WEATHER INFORMATION—Summary of significant meteorological information (SIGMET/WS), convective significant meteorological information (convective SIGMET/WST), urgent pilot weather reports (urgent PIREP/UUA), center weather advisories (CWA), airmen's meteorological information (AIRMET/WA) and any other weather such as isolated thunderstorms that are rapidly developing and increasing in intensity, or low ceilings and visibilities that are becoming widespread which is considered significant and are not included in a current hazardous weather advisory.

HEAVY (AIRCRAFT)—(See AIRCRAFT CLASSES).

HEIGHT ABOVE AIRPORT—The height of the Minimum Descent Altitude above the published airport elevation. This is published in conjunction with circling minimums.
(See MINIMUM DESCENT ALTITUDE).

HEIGHT ABOVE LANDING—The height above a designated helicopter landing area used for helicopter instrument approach procedures.
(Refer to Part 97).

HEIGHT ABOVE TOUCHDOWN—The height of the Decision Height or Minimum Descent Altitude above the highest runway elevation in the touchdown zone (first 3,000 feet of the runway). HAT is published on instrument approach charts in conjunction with all straight-in minimums.
(See DECISION HEIGHT). (See MINIMUM DESCENT ALTITUDE).

HELICOPTER—Rotorcraft that, for its horizontal motion, depends principally on its engine-driven rotors.
(See ICAO term HELICOPTER).

HELICOPTER [ICAO]—A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes.

HELIPAD—A small, designated area, usually with a prepared surface, on a heliport, airport, landing/takeoff area, apron/ramp, or movement area used for takeoff, landing, or parking of helicopters.

HELIPORT—An area of land, water, or structure used or intended to be used for the landing and takeoff of helicopters and includes its buildings and facilities if any.

HERTZ—The standard radio equivalent of frequency in cycles per second of an electromagnetic wave. Kilohertz (kHz) is a frequency of one thousand cycles per second. Megahertz (mHz) is a frequency of one million cycles per second.

HF—(See HIGH FREQUENCY).

HF COMMUNICATIONS—(See HIGH FREQUENCY COMMUNICATIONS).

HIGH FREQUENCY—The frequency band between 3 and 30 mHz.
(See HIGH FREQUENCY COMMUNICATIONS).

HIGH FREQUENCY COMMUNICATIONS—High radio frequencies (HF) between 3 and 30 mHz used for air-to-ground voice communication in overseas operations.

HIGH SPEED EXIT—(See HIGH SPEED TAXIWAY).

HIGH SPEED TAXIWAY—A long radius taxiway designed and provided with lighting or marking to define the path of aircraft, traveling at high speed (up to 60 knots), from the runway center to a point on the center of a taxiway. Also referred to as long radius exit or turn-off taxiway. The high speed taxiway is designed to expedite aircraft turning off the runway after landing, thus reducing runway occupancy time.

HIGH SPEED TURNOFF—(See HIGH SPEED TAXIWAY).

HIWAS—(See HAZARDOUS INFLIGHT WEATHER ADVISORY SERVICE).

HIWAS AREA—(See HAZARDOUS INFLIGHT WEATHER ADVISORY SERVICE).

HIWAS BROADCAST AREA—A geographical area of responsibility including one or more HIWAS outlet areas assigned to an AFSS/FSS for hazardous weather advisory broadcasting.

HIWAS OUTLET AREA—An area defined as a 150 NM radius of a HIWAS outlet, expanded as necessary to provide coverage.

INERTIAL NAVIGATION SYSTEM—An RNAV system which is a form of self-contained navigation.
(See Area Navigation/RNAV.).

INFLIGHT REFUELING—(See AERIAL REFUELING).

INFLIGHT WEATHER ADVISORY—(See WEATHER ADVISORY).

INFORMATION REQUEST—A request originated by an FSS for information concerning an overdue VFR aircraft.

INITIAL APPROACH FIX—The fixes depicted on instrument approach procedure charts that identify the beginning of the initial approach segment(s).
(See FIX). (See SEGMENTS OF AN INSTRUMENT APPROACH PROCEDURE).

INITIAL APPROACH SEGMENT—(See SEGMENTS OF AN INSTRUMENT APPROACH PROCEDURE).

INITIAL APPROACH SEGMENT [ICAO]—That segment of an instrument approach procedure between the initial approach fix and the intermediate approach fix or, where applicable, the final approach fix or point.

INLAND NAVIGATION FACILITY—A navigation aid on a North American Route at which the common route and/or the noncommon route begins or ends.

INNER MARKER—A marker beacon used with an ILS (CAT II) precision approach located between the middle marker and the end of the ILS runway, transmitting a radiation pattern keyed at six dots per second and indicating to the pilot, both aurally and visually, that he is at the designated decision height (DH), normally 100 feet above the touchdown zone elevation, on the ILS CAT II approach. It also marks progress during a CAT III approach.
(See INSTRUMENT LANDING SYSTEM). (Refer to AIM).

INNER MARKER BEACON—(See INNER MARKER).

INREQ—(See INFORMATION REQUEST).

INS—(See INERTIAL NAVIGATION SYSTEM).

INSTRUMENT APPROACH—(See INSTRUMENT APPROACH PROCEDURE).

INSTRUMENT APPROACH PROCEDURE—A series of predetermined maneuvers for the orderly transfer of an aircraft under instrument flight conditions from the beginning of the initial approach to a landing or to a point from which a landing may be made visually. It is prescribed and approved for a specific airport by competent authority.
(See SEGMENTS OF AN INSTRUMENT APPROACH PROCEDURE). (Refer to Part 91). (See AIM).

1. U.S. civil standard instrument approach procedures are approved by the FAA as prescribed under Part 97 and are available for public use.
2. U.S. military standard instrument approach procedures are approved and published by the Department of Defense.
3. Special instrument approach procedures are approved by the FAA for individual operators but are not published in Part 97 for public use.

(See ICAO term INSTRUMENT APPROACH PROCEDURE).

INSTRUMENT APPROACH PROCEDURE [ICAO]—A series of predetermined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en route obstacle clearance criteria apply.

INSTRUMENT APPROACH PROCEDURES CHARTS—(See AERONAUTICAL CHART).

INSTRUMENT FLIGHT RULES—Rules governing the procedures for conducting instrument flight. Also a term used by pilots and controllers to indicate type of flight plan.
(See VISUAL FLIGHT RULES). (See INSTRUMENT METEOROLOGICAL CONDITIONS). (See VISUAL METEOROLOGICAL CONDITIONS). (Refer to AIM). (See ICAO term INSTRUMENT FLIGHT RULES).

INSTRUMENT FLIGHT RULES [ICAO]—A set of rules governing the conduct of flight under instrument meteorological conditions.

INSTRUMENT LANDING SYSTEM—A precision instrument approach system which normally consists of the following electronic components and visual aids:

1. Localizer.
(See LOCALIZER).
2. Glideslope.
(See GLIDESLOPE).
3. Outer Marker.
(See OUTER MARKER).
4. Middle Marker.
(See MIDDLE MARKER).
5. Approach Lights.
(See AIRPORT LIGHTING).

(Refer to Part 91). (See AIM).

INSTRUMENT METEOROLOGICAL CONDITIONS—Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling less than the minima specified for visual meteorological conditions.
(See VISUAL METEOROLOGICAL CONDITIONS). (See INSTRUMENT FLIGHT RULES). (See VISUAL FLIGHT RULES).

INSTRUMENT RUNWAY—A runway equipped with electronic and visual navigation aids for which a precision or nonprecision approach procedure having straight-in landing minimums has been approved.

RADAR TRAFFIC INFORMATION SERVICE—(See TRAFFIC ADVISORIES).

RADAR VECTORING [ICAO]—Provision of navigational guidance to aircraft in the form of specific headings, based on the use of radar.

RADAR WEATHER ECHO INTENSITY LEVELS—Existing radar systems cannot detect turbulence. However, there is a direct correlation between the degree of turbulence and other weather features associated with thunderstorms and the radar weather echo intensity. The National Weather Service has categorized radar weather echo intensity for precipitation into six levels. These levels are sometimes expressed during communications as "VIP LEVEL" 1 through 6 (derived from the component of the radar that produces the information-Video Integrator and Processor). The following list gives the "VIP LEVELS" in relation to the precipitation intensity within a thunderstorm:

Level 1. WEAK
Level 2. MODERATE
Level 3. STRONG
Level 4. VERY STRONG
Level 5. INTENSE
Level 6. EXTREME

(See AC00–45).

RADIAL—A magnetic bearing extending from a VOR/VORTAC/TACAN navigation facility.

RADIO—

1. A device used for communication.
2. Used to refer to a flight service station; e.g., "Seattle Radio" is used to call Seattle FSS.

RADIO ALTIMETER—Aircraft equipment which makes use of the reflection of radio waves from the ground to determine the height of the aircraft above the surface.

RADIO BEACON—(See NONDIRECTIONAL BEACON).

RADIO DETECTION AND RANGING—(See RADAR).

RADIO MAGNETIC INDICATOR—An aircraft navigational instrument coupled with a gyro compass or similar compass that indicates the direction of a selected NAVAID and indicates bearing with respect to the heading of the aircraft.

RAMP—(See APRON).

RANDOM ALTITUDE—An altitude inappropriate for direction of flight and/or not in accordance with paragraph 4–60.

RANDOM ROUTE—Any route not established or charted/published or not otherwise available to all users.

RC—(See ROAD RECONNAISSANCE).

RCAG—(See REMOTE COMMUNICATIONS AIR/GROUND FACILITY).

RCC—(See RESCUE COORDINATION CENTER).

RCO—(See REMOTE COMMUNICATIONS OUTLET).

RCR—(See RUNWAY CONDITION READING).

READ BACK—Repeat my message back to me.

RECEIVING CONTROLLER—A controller/facility receiving control of an aircraft from another controller/facility.

RECEIVING FACILITY—(See RECEIVING CONTROLLER).

REDUCE SPEED TO (SPEED)—(See SPEED ADJUSTMENT).

REIL—(See RUNWAY END IDENTIFIER LIGHTS).

RELEASE TIME—A departure time restriction issued to a pilot by ATC (either directly or through an authorized relay) when necessary to separate a departing aircraft from other traffic.

(See ICAO term RELEASE TIME).

RELEASE TIME [ICAO]—Time prior to which an aircraft should be given further clearance or prior to which it should not proceed in case of radio failure.

REMOTE COMMUNICATIONS AIR/GROUND FACILITY—An unmanned VHF/UHF transmitter/receiver facility which is used to expand ARTCC air/ground communications coverage and to facilitate direct contact between pilots and controllers. RCAG facilities are sometimes not equipped with emergency frequencies 121.5 mHz and 243.0 mHz.

(Refer to AIM).

REMOTE COMMUNICATIONS OUTLET—An unmanned communications facility remotely controlled by air traffic personnel. RCO's serve FSS's. RTR's serve terminal ATC facilities. An RCO or RTR may be UHF or VHF and will extend the communication range of the air traffic facility. There are several classes of RCO's and RTR's. The class is determined by the number of transmitters or receivers. Classes A through G are used primarily for air/ground purposes. RCO and RTR class O facilities are nonprotected outlets subject to undetected and prolonged outages. RCO (O's) and RTR (O's) were established for the express purpose of providing ground-to-ground communications between air traffic control specialists and pilots located at a satellite airport for delivering en route clearances, issuing departure authorizations, and acknowledging instrument flight rules cancellations or departure/landing times. As a secondary function, they may be used for advisory purposes whenever the aircraft is below the coverage of the primary air/ground frequency.

REMOTE TRANSMITTER/RECEIVER—(See REMOTE COMMUNICATIONS OUTLET).

VHF OMNIDIRECTIONAL RANGE/TACTICAL AIR NAVIGATION—(See VORTAC).

VIDEO MAP—An electronically displayed map on the radar display that may depict data such as airports, heliports, runway centerline extensions, hospital emergency landing areas, NAVAID's and fixes, reporting points, airway/route centerlines, boundaries, handoff points, special use tracks, obstructions, prominent geographic features, map alignment indicators, range accuracy marks, minimum vectoring altitudes.

VISIBILITY—The ability, as determined by atmospheric conditions and expressed in units of distance, to see and identify prominent unlighted objects by day and prominent lighted objects by night. Visibility is reported as statute miles, hundreds of feet or meters.

(Refer to Part 91). (See AIM).

1. Flight Visibility. The average forward horizontal distance, from the cockpit of an aircraft in flight, at which prominent unlighted objects may be seen and identified by day and prominent lighted objects may be seen and identified by night.
2. Ground Visibility. Prevailing horizontal visibility near the earth's surface as reported by the United States National Weather Service or an accredited observer.
3. Prevailing Visibility. The greatest horizontal visibility equaled or exceeded throughout at least half the horizon circle which need not necessarily be continuous.
4. Runway Visibility Value (RVV). The visibility determined for a particular runway by a transmissometer. A meter provides a continuous indication of the visibility (reported in miles or fractions of miles) for the runway. RVV is used in lieu of prevailing visibility in determining minimums for a particular runway.
5. Runway Visual Range (RVR). An instrumentally derived value, based on standard calibrations, that represents the horizontal distance a pilot will see down the runway from the approach end. It is based on the sighting of either high intensity runway lights or on the visual contrast of other targets whichever yields the greater visual range. RVR, in contrast to prevailing or runway visibility, is based on what a pilot in a moving aircraft should see looking down the runway. RVR is horizontal visual range, not slant visual range. It is based on the measurement of a transmissometer made near the touchdown point of the instrument runway and is reported in hundreds of feet. RVR is used in lieu of RVV and/or prevailing visibility in determining minimums for a particular runway.
   a. Touchdown RVR. The RVR visibility readout values obtained from RVR equipment serving the runway touchdown zone.
   b. Mid-RVR. The RVR readout values obtained from RVR equipment located midfield of the runway.
   c. Rollout RVR. The RVR readout values obtained from RVR equipment located nearest the rollout end of the runway.

(See ICAO term VISIBILITY). (See ICAO term FLIGHT VISIBILITY). (See ICAO term GROUND VISIBILITY). (See ICAO term RUNWAY VISUAL RANGE).

VISIBILITY [ICAO]—The ability, as determined by atmospheric conditions and expressed in units of distance, to see and identify prominent unlighted objects by day and prominent lighted objects by night.

Flight Visibility.—The visibility forward from the cockpit of an aircraft in flight.

Ground Visibility.—The visibility at an aerodrome as reported by an accredited observer.

Runway Visual Range [RVR].—The range over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line.

VISUAL APPROACH—1An approach conducted on an instrument flight rules (IFR) flight plan which authorizes the pilot to proceed visually and clear of clouds to the airport. The pilot must, at all times, have either the airport or the preceding aircraft in sight. This approach must be authorized and under the control of the appropriate air traffic control facility. Reported weather at the airport must be ceiling at or above 1,000 feet and visibility of 3 miles or greater.

(See ICAO term VISUAL APPROACH).

VISUAL APPROACH [ICAO]—An approach by an IFR flight when either part or all of an instrument approach procedure is not completed and the approach is executed in visual reference to terrain.

VISUAL APPROACH SLOPE INDICATOR—(See AIRPORT LIGHTING).

VISUAL DESCENT POINT—A defined point on the final approach course of a nonprecision straight-in approach procedure from which normal descent from the MDA to the runway touchdown point may be commenced, provided the approach threshold of that runway, or approach lights, or other markings identifiable with the approach end of that runway are clearly visible to the pilot.

VISUAL FLIGHT RULES—Rules that govern the procedures for conducting flight under visual conditions. The term "VFR" is also used in the United States to indicate weather conditions that are equal to or greater than minimum VFR requirements. In addition, it is used by pilots and controllers to indicate type of flight plan.

(See INSTRUMENT FLIGHT RULES). (See INSTRUMENT METEOROLOGICAL CONDITIONS). (See VISUAL METEOROLOGICAL CONDITIONS). (Refer to Part 91). (Refer to AIM).