

AVIONICS GLOSSARY

ACARS Aircraft Communications Addressing and Reporting System

ACAS Airborne Collision Avoidance System

ACP Audio Control Panel

ACS Audio Control System

A/D Analog-to-Digital

ADAHRS Air Data and Attitude Heading Reference System

ADC Air Data Computer

ADF Automatic Direction Finder

ADI Attitude Director Indicator

ADIRS Air Data Inertial Reference System

ADIRU Air Data Inertial Reference Unit

ADM Air Data Module

ADS (1) Air Data System (2) Automatic Dependent Surveillance

ADS-A Automatic Dependent Surveillance–Address

ADS-B Automatic Dependent Surveillance–Broadcast

ADSEL Address Selective. A SSR system electronically arranged to address each transponder selectively. Only a particular transponder will respond, thus avoiding garbling. ADSEL uses a monopulse technique to provide more accurate bearing measurement.

ADSP Automatic Dependent Surveillance Panel

AEA Aircraft Electronics Association

AET Aircraft Electronics Technician (certified by NCATT)

AFCS Automatic Flight Control System

AFD Autopilot Flight Director

AFDC Autopilot Flight Director Computer

AFDS Autopilot Flight Director System

AFIS (1) Airborne Flight Information System (2) Automatic Flight Information Service

AGACS Automatic Ground-Air Communication System. It is also known as ATCSS or data-link.

AGATE Advanced General Aviation Transport Experiment

AGC Automatic Gain Control. AGC is used to maintain the output level of the receiver.

AHC Attitude Heading Computer

AHRS Attitude Heading Reference System

AIR DATA Those parameters that can be derived from knowledge of the air mass surrounding the aircraft.

AIRMETS Advisories of significant weather that describe conditions at intensities lower than those that trigger sigmets.

ALC Automatic Level Control. A circuit used to maintain the output of a transmitter regardless of variations in the attenuation of the system.

ALT (1) Altimeter (2) Altitude.

ALT HOLD Altitude Hold Mode

ALTS Altitude Select

AMLCD Active Matrix Liquid Crystal Display

AMO Aviation Maintenance Organization

ANC Acoustic Noise Cancellation

Annunciator A system designed to provide warning lights/ audio alerts to pilots to warn of off-normal conditions.

ANR Active Noise Reduction

ANT Antenna

A/P Autopilot. A computer-commanded system for controlling aircraft control surfaces.

APC Autopilot Computer

APS Autopilot System

ARINC Aeronautical Radio Inc.

ASD Aircraft Situation Display

ASDL Aeronautical Satellite Data-Link

ASR Airport Surveillance Radar

ASU Avionics Switching Unit

ASTM American Society for Testing & Materials

ATCRBS Air Traffic Control Radar Beacon System

ATCSS Air Traffic Control Signaling System. A system to provide information between the pilot and air traffic control using the VHF communications transceiver in conjunction with data-link equipment.

ATE Avionics Training Excellence Award, presented by the Aircraft Electronics Association.

ATI Instrument Size Unit of Measure (instrument hole, standard 3 1/8 inch instrument cutout is 3ATI)

ATT Attitude

Avionics Aviation electronics

Autopilot An automated flight control system designed to reduce pilot workload by controlling the aircraft along one or more axis.

AWG American Wire Gauge

B RNAV Basic Area Navigation

BARO Barometric

Baro-Corrected Altitude Pressure altitude-corrected local barometric pressure.

BCRS Back Course

BDI Bearing Distance Indicator

BGAN Broadband Global Area Network

Boomset A lightweight version of a headset used in low-noise cockpits, such as jets.

CAI Caution Annunciator Indicator

Calibrated Airspeed Corrected for instrument errors and errors due to position or location of the pressure source. At standard sea-level conditions, CAS is equal to true airspeed (TAS).

Carrier An AC signal that can be modulated by changing the amplitude, frequency or pulse of the signal.

CASA Civil Aviation Safety Authority (Australia)

CAT I Operational Performance Category I. An ILS facility providing operation down to a 60-meter (200 feet) decision height and with runway visual range not less than 800 meters (2,600 feet) and a high probability of approach success.

CAT I Enhanced An ILS approach to lower-than-standard Category I and, in some cases, to Category II minimums, based on guidance-to-touchdown provided by a Category III-capable head-up guidance system, per FAA Order 8400.13.

CAT II Operational Performance Category II. An ILS facility providing operation down to a 30-meter (100 feet) decision height and with runway visual range not less than 400 meters (1,200 feet) and a high probability of approach success.

CAT IIIa Operational Performance Category IIIa. An ILS facility providing operation with no decision height limit to and along the surface of the runway with external visual reference during final phase of landing and with a runway visual range of not less than 200 meters (700 feet).

CAT IIIb Operational Performance Category IIIb. An ILS facility providing operation with no decision height limit to and along the surface of the runway without reliance on external visual reference; and subsequently taxiing with external visual range of not less than 50 meters (150 feet).

CAT IIIc Operational Performance Category IIIc. An ILS facility providing operation with no decision height limit to and along the surface of the runway and taxiways without reliance on external visual reference.

CODEC Coder/Decoder

CDI Course Deviation Indicator

CFIT Controlled Flight Into Terrain

Com or Comm Communications Receiver

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Compass Locator A low-power radio beacon, used in conjunction with ILS. A compass locator has a two-letter identification and a range of at least 15 miles.

Cone of Confusion An inverted conical shaped area extending vertically above a VOR ground facility that is void of the bearing signal.

Contour Contour or iso-contour refers to a weather radar display presentation that blanks the echo returns in the center of a storm cell. The area blanked out is called contour and corresponds to the return levels that exceed a predetermined threshold.

CNS Communications, Navigation, Surveillance

CNS/ATM Communications, Navigation, Surveillance / Air Traffic Management

CPDLC Controller-Pilot Data-Link Communications

CRS Certified Repair Station

CRT Cathode Ray Tube

CTAF Common Traffic Advisory Frequency

CV/DFDR Cockpit Voice and Digital Flight Data Recorder

CVR Cockpit Voice Recorder

CWS Control Wheel Steering

DA Drift Angle. The angle between heading and track. It is due to the effect of wind currents. Sometimes called the crab angle.

Data-Link A system that allows exchange of digital data over an RF link. ATCSS is a data-link system used by the air traffic control system. ACARS is a data-link system used by airline command, control and management system, using VHF communication frequencies.

DER Designated Engineering Representative

DG Directional Gyro

DGPS Differential Global Positioning System

DH Decision Height

DME Distance Measuring Equipment. A system that provides distance information from a ground station to an aircraft.

DNC Direct Noise Cancelling

DO-160 RTCA Document 160, "Environmental Conditions and Test Procedures for Airborne Equipment," issued 12/04/89.

DO-178 RTCA Document 178, "Software Considerations in Airborne Systems and Equipment Certification," issued 03/22/85.

DP Departure Procedures

DSP Digital Signal Processing, used with some ANR headsets.

DUAT Direct User Access Terminal

Duplex A communications operation that uses the simultaneous operation of the transmit and receive equipment at two locations.

EADI Electronic Attitude Director Indicator

EASA European Aviation Safety Agency

Echo The portion of the radiated energy reflected back to the antenna from the target (WXR).

EFB Electronic Flight Bag

EFD Electronic Flight Display

EFIS Electronic Flight Instrument System

EGPWS Enhanced Ground Proximity Warning System

EGT Exhaust Gas Temperature

EHSI Electronic Horizontal Situation Indicator

EICAS Engine Indication Crew Alerting System

E-LSA Experimental Light-Sport Aircraft. Ultralights and unregistered aircraft that fit the description of LSA; kit-built aircraft that do not meet the experimental amateur-built rules; or aircraft originally built as a Special-LSA (S-LSA).

ELT Emergency Locator Transmitter

ENC Electronic Noise Cancelling

ENR Electronic Noise Reduction

FADEC Full Authority Digital Engine Control

FBO Fixed Base Operator

FDRS Flight Data Recorder System

FDU Flux Detector Unit

FF Fuel Flow

FIS-B Flight Information Services–Broadcast

FITS FAA Industry Training Standard

Flight Director An enhanced attitude direction indicator equipped with course prompter bars (F/D or FD).

FLIR Forward-Looking Infrared

FLTA Forward Looking Terrain Avoidance

FMS Flight Management System

FREQ Frequency

FYDS Flight Director / Yaw Damper System

GCAS Ground Collision Avoidance System

GDOP Geometric Dilution of Precision. A term referring to error introduced in a GPS calculation due to the positioning of the satellites and the receiver.

GGS Global Positioning System Ground Station

GHz Gigahertz (billion hertz)

Glidepath The approach path used by an aircraft during an instrument landing or the portion of the glideslope that intersects the localizer. The glidepath does not provide guidance completely to a touch-down point on the runway.

Glideslope The vertical guidance portion of an ILS system.

GLNS GPS Landing and Navigation System

AVIONICS GLOSSARY

GLNU GPS Landing and Navigation Unit

GLONASS Global Navigation Satellite System

GLS GPS Landing System

GLU GPS Landing Unit

GND Ground

GNSS Global Navigation Satellite System

Goniometer A device that combines the two signals from two loop antennas. The goniometer (or resolver) contains two fixed coils and one rotating coil. The rotating coil is connected to the ADF bearing indicator needle to indicate the relative bearing from the aircraft to the NDB station. The mechanical position of the rotor represents the bearing of the station, and the position is electrically transmitted to the RMI.

GPS (1) Global Positioning System (See NAVSTAR) (2) Global Positioning Satellite

GPWC Ground Proximity Warning Computer

GPWS Ground Proximity Warning System

Gray Code Special binary code used to transmit altitude data between framing pulses of a transponder reply. A cyclic code having only one digit change at a time. Used in Mode C to transmit aircraft barometric altitude. Also known as Gilham code.

GWS Graphical Weather Services

Gyroscope A rotating device that will maintain its original plane of rotation, no matter which direction the gyroscope mount is turned.

HDG Heading

HDG SEL Heading Select

HDOP Horizontal Dilution of Precision

Heading The direction of an aircraft path with respect to magnetic or true north.

Headset A tool used in the cockpit to improve communications and reduce hearing loss.

HF High Frequency. The portion of the radio spectrum from 3 to 30 MHz. HF communications systems operate in the 2 to 30 MHz portion of the spectrum.

HHLD Heading Hold

HSD High-Speed Data

HSI Horizontal Situation Indicator. An indicator that displays bearing, glideslope, distance, radio source, course and heading information.

HSL Heading Select

HUD Head-Up Display

Hz Hertz (cycles per second)

IAS Indicated Airspeed. The speed indicated by a differential pressure airspeed indicator that measures the actual pressure differential in the pitot-static head. It is the actual instrument indication for a given flight condition.

ID Identifier

Ident The action of the transponder transmitting an extra pulse along with its identification code (at the request of a controller).

IDS (1) Integrated Display System (2) Information Display System

IFE In-Flight Entertainment

IFR Instrument Flight Rules

ILS Instrument Landing System. The system provides lateral, along-course and vertical guidance to aircraft attempting a landing.

IMC Instrument Meteorological Conditions

in. hg. Inches of Mercury

IND Indicator

Indicated Altitude The altitude above mean sea level (uncorrected for temperature).

Intercom System An electronic device designed to allow headset communication along with transmissions from com, nav and entertainment sources.

ISA International Standard Atmosphere

ISP Integrated Switching Panel

IVSI Instantaneous Vertical Speed Indicator

kHz Kilohertz (1000 cycles per second)

LAAS Local Area Augmentation System

LADGPS Local Area Differential GPS

LCD Liquid Crystal Display

LDGPS Local Area Differential Global Positioning Satellite

LMM Locator Middle Marker. An NDB co-located at the same site as the 75 MHz middle-marker beacon.

LOC Localizer. The lateral guidance portion of an ILS system.

Lock-On The condition that exists when the DME receives reply pulses to at least 50 percent of the interrogations. Valid distance information is then available.

LOM Locator Outer Marker. An NDB co-located at the same site as the 75 MHz outer-marker beacon.

LORAN Long-Range Navigation. A system using a ground facility composed of a master station and a slave station. The airborne receiver computes the position of the aircraft by using two or more received master-slave pairs of signals.

LORAN-A Operates at 1850, 1900 and 1950 kHz. LORAN-C operates at 100 kHz. LORAN-A was replaced by LORAN-C in 1980.

LORAN-C Long-Range Navigation System

LRU Line Replaceable Unit

LSA Light-Sport Aircraft. Small, simple, low-performance, low-energy aircraft limited to 1,320 pounds maximum takeoff weight; one or two occupants; single engine; maximum stall speed of 45 knots; maximum airspeed in level flight of 120 knots; fixed landing gear; and fixed propeller. Includes airplanes, gliders, gyroplanes, balloons, airships, weight-shift-control and powered parachutes.

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Lubber Line A fixed line placed on an indicator to indicate the front-to-rear axis of the aircraft.

MAP Missed Approach Point

Marker Beacon A transmitter operating at 75 MHz that provides identification of a particular position along an airway or on the approach to an instrument runway. The marker beacon is continuously tone-modulated by a 400-Hz, a 1,300-Hz or a 3,000-Hz tone. Marker beacons along an instrument runway provide along-course (range) guidance and designate when an aircraft should be at a certain altitude if the aircraft is following the glidepath.

MB Marker Beacon

MCBF Mean Cycles Between Failures

MDA Minimum Descent Altitude

MEL Minimum Equipment List. The list of equipment the FAA requires onboard and working on an aircraft before flying.

MF Medium Frequency. The portion of the radio spectrum from 300 kHz to 3 MHz.

MF Multi-Function Display

MFDS Multi-Function Display System

MHz Megahertz (million cycles per second)

MIC Microphone. Also refers to the output signal of the microphone.

MILSPEC Military Specifications

MKR (1) Marker (2) Marker Beacon

MLS Microwave Landing System

MOA Military Operations Area

Mode A The pulse format for an identification code interrogation of an ATC RBS transponder.

Mode B An optional mode for transponder interrogation.

Mode C The pulse format for an altitude information interrogation of an ATC RBS transponder.

Mode D An unassigned, optional transponder mode.

Mode S (1) Mode Select (a transponder format to allow discrete interrogation and data-link capability) (2) Selective interrogation mode of SSR

Moving-Map Display An electronic display that provides course and position information, frequently superimposed over ground features, including nav sources, airports and roads for improved flying situational awareness.

MRO Maintenance Repair and Overhaul

MSG Message

MSP Mode S Specific Protocol

MSSS Mode S Specific Services

MTBF Mean Time Between Failures. A performance figure calculated by dividing the total unit flying hours (airborne) accrued in a period of time by the number of unit failures that occurred during the same time. Where total unit hours are available, this may be used in lieu of total unit flying hours.

MTTF Mean Time To Failure. A performance figure calculated by dividing the summation of times to failure for a sample of failed items by the number of failed items in the sample. The same item failing N times constitutes N failed items in the sample. This is different from mean time between failures since no allowance is given to items that have not failed.

Muting The process of either automatically or manually reducing the volume of a source. Typically found on music inputs for the pilot and co-pilot (automatic on receipt of transmissions) and on marker-beacon receivers (manual following station passage).

NACO National Aeronautical Chart Office

Nautical Mile (nmi) Equivalent to 6,076.1 feet, or approximately 1.15 statute miles.

NAS National Airspace System

Nav Navigation or Navigation Receiver

Navaid Navigational Aid

Nav/Com A combination navigation and communications receiver.

Navigation Datacard A medium holding the customized navigation database.

NAVSTAR The NAVSTAR global positioning system (GPS) is a system using 24 satellites, all reporting precise time signals, along with location keys. Eight satellites are in each of three 63-degree inclined plane circular orbits at 11,000 nmi in altitude. The system is used for navigation and determining exact position.

NCATT National Center for Aircraft Technician Training

ND Navigation Display. An EFIS presentation substituting for the horizontal situation indicator (HSI).

NDB Non-Directional Radio Beacon. A ground station designed specifically for ADF use that operates in the 190-to-550-kHz range. Transmits a continuous carrier with either 400 or 1020 Hz modulation (keyed) to provide identification.

Nearest Function of GPS and LORAN units to find the nearest airport, navaid, intersection, etc., used to reduce pilot stress in abnormal situations.

Nexcom Next Generation Communications

NFF No Fault Found

Nexrad Next Generation Radar

NGATS Next Generation Air Transportation System

NM or NMI Nautical Mile

Noise Undesired random electromagnetic disturbances or spurious signals that are not part of the transmitted or received signal.

NPA Non-Precision Approach

OAT Outside Air Temperature. The uncorrected reading of the outside temperature gauge.

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OBS Omnibearing Selector. A panel instrument that contains the controls and circuits to select an omni bearing and determine the to/from indication.

OEM Original Equipment Manufacturer

OM Outer Marker

Omnibearing The bearing indicated by a navigational receiver on transmissions from an omnidirectional radio range (VOR).

OrbComm Low earth orbit satellite system used for weather-data transmissions, among other things.

P-Code The GPS precision code.

Paired Channels DME channels are paired with a VORTAC or ILS frequency and are automatically selected when the VORTAC or ILS frequency is selected. Most navigation controls have this feature.

PAPI Precision Approach Path Indicators

PAR Precision Approach Radar. X-band radar that scans a limited area and is part of the ground-controlled approach system.

PD Profile Descent

PDOP Position Dilution of Precision. A GPS term for error introduced into the GPS calculations.

Performance Index A relative number used to compare the performance of different radar systems. It is calculated from transmitter peak power, antenna gain, pulse width, prf, antenna beam width and the receiver noise figure.

PFD (1) Primary Flight Director (2) Primary Flight Display. An EFIS presentation substituting for the ADI.

Phase Modulation A signal in which the phase varies (with respect to the original signal) with the amplitude of the modulatory signal, while the amplitude of the carrier wave remains constant. Similar to a modified frequency modulated signal.

Pitot Pressure The sum of the static and dynamic pressures, and is the total force per unit area exerted by the air on the surface of a body in motion.

Pitot Tube A forward-facing probe attached to the outside of the aircraft to sense the relative pressure of the aircraft moving through the atmosphere. Named for Henri Pitot who first used this method of measuring fluid-flow pressure.

PMA (1) Parts Manufacturing Approval (2) Permanent Magnet Alternator

PMG Permanent Magnet Generator

PND Primary Navigation Display

PNR Passive Noise Reduction

POS Position

PRAIM Predictive Receiver Autonomous Integrity Monitoring

Pressure Altitude The altitude measured above standard pressure level. Based on the relationship of pressure and altitude with respect to a standard atmosphere.

PSR Primary Surveillance Radar. The part of the ATC system that determines the range and azimuth of an aircraft in a controlled airspace.

PTT Push To Talk. Also refers to the switching signal that enables the transmitter.

Rabbit Tracks (1) Rabbit Tracks, or running rabbits, refer to the distinctive display produced by another (alien radar) radar system transmission. (2) The small dots left on the display of handheld GPS units that show the previously flown course.

Radar Radio Detecting and Ranging. A system that measures distance and bearing to an object.

Radar Mile The time interval (approximately 12.359 microseconds) required for radio waves to travel one nautical mile and return (total of 2 nm).

Radial A line of direction going out from a VOR station measured as a bearing with respect to magnetic north.

Radome The protective cover on the aircraft nose that fits over the weather radar system antenna. The radome is transparent at radar frequencies.

RAI Radio Altimeter Indicator

RAIM Receiver Autonomous Integrity Monitoring

RALT Radio Altimeter

RCVR Receiver

RDMI Radio Distance Magnetic Indicator

RDP Radar Data Processing (system)

RDR Radar

REF Reference

Reflectivity Factor (Z) This is a measurement of the ability of a target to reflect the energy from a radar beam.

REL Relative

Relative Bearing The bearing of a ground station relative to the direction the aircraft nose points, or the direction of an aircraft to or from an NDB.

Resolution Advisory A display indication given to the pilot recommending a maneuver to increase vertical separation relative to an intruding aircraft. A resolution advisory also is classified as corrective or preventive.

RF Radio Frequency. A general term for the range of frequencies above 150 kHz to the infrared region (1012 Hz).

RFI Radio Frequency Interference

RHSM Reduced Horizontal Separation Minima

RLG Ring Laser Gyro

RLY Relay

RMI Radio Magnetic Indicator

R-NAV Area Navigation

RNG Range

RNP Required Navigation Performance

ROC Rate of Climb

ROD Rate of Descent

RPM Revolutions Per Minute

RTE Route

RTCA Radio Technical Committee on Aeronautics

RSTP Repair Station Training Program

Runway Incursion The act of inadvertently crossing the runway holding point without ATC clearance.

RVR Runway Visual Range

RVSM Reduced Vertical Separation Minimum

Rx Receiver

SA Selective Availability (Refers to government detuning of GPS signal for national defense purposes.)

SAT Static Air Temperature is the total air temperature corrected for the Mach effect. Increases in airspeed cause probe temperature to rise presenting erroneous information. SAT is the outside air temperature if the aircraft could be brought to a stop before measuring temperatures.

Satcom Satellite Communications

Satnav Satellite Navigation

SD Secure Digital

Search In this mode, the DME scans from 0 mile to the outer range for a reply pulse pair after transmitting an interrogation pulse pair.

Sensitivity Level Command An instruction given to the TCAS equipment for control of its threat volume.

SID Standard Instrument Departure

Sidetone The reproduction of sounds in a headset (or speaker) from the transmitter of the same communications set. This allows a person to hear his/her own voice when transmitting.

SIGMETS Significant Meteorological Advisories

Simplex A communications operation that uses only a single channel for transmit and receive operations. Communications can take place in only one direction at a time.

SIU Satellite Interface Unit

Skybound Datawriter A Jeppesen product designed to allow pilots to update the database of selected aviation GPS receivers and MFDs for reduced cost.

Skywave A radio wave reflected by the ionosphere. The reflected radio wave may propagate along the layer of the ionosphere or be reflected at some angle.

S-LSA Special Light-Sport Aircraft. An aircraft that may be used for personal use and for compensation while conducting flight training, rental or towing.

SL Sensitivity Level

Slant Range The line-of-sight distance from the aircraft to a DME ground station.

SMS (1) Short Messaging Service (2) Safety Management System

SNR Signal-to-Noise Ratio

SPKR Speaker

Split or Split Mode Feature of new audio panels that allows concurrent pilot and co-pilot transmissions on two radios with two antennas at the same time.

Spoking Refers to a display presentation that radiates outward from the display origin like the spokes on a wagon wheel.

SQ or Sqi Squelch

Squall Line A squall line is a line of thunderstorms and developing thunderstorms.

Squawk Reply to interrogation signal (XPD).

Squelch A control and/or circuit that reduces the gain in response of a receiver. The squelch is used to eliminate the output noise of the receiver when a signal is not being received.

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Squitter (1) The random pulse pairs generated by the ground station as a filler signal. (2) The transmission of a specified reply format at a minimum rate without the need to be interrogated. (Filler pulses transmitted between interrogations) [XPD]. (3) Spontaneous transmission generated once per second by transponders.

SSCV/DR Solid-State Cockpit Voice/Data Recorder

SSCVR Solid-State Cockpit Voice Recorder

SSFDR Solid-State Flight Data Recorder

SSR Secondary Surveillance Radar. A radar-type system that requires a transponder to transmit a reply signal.

Standard Atmosphere Represents the mean or average properties of the atmosphere. At sea level, static pressure is 29.92 In Hg and temperature is +15° C.

Standby Mode A DME mode that applies power to the DME RT but the unit does not transmit.

STAR Standard Terminal Arrival Routes

STARS Standard Terminal Automation Replacement System

Static Ports Flush-mounted openings in the skin of the aircraft fuselage used to sense static pressure.

Static Pressure Ambient atmospheric pressure or static-pressure is the force per unit area exerted by the air on the surface of a body at rest relative to the air.

Static Source Error Correction (SSEC) A correction applied to static source pressure measurements to partly or completely correct for pressure errors that are caused by airflow changes. It is computed as a function of Mach and altitude based on measured errors for a particular static system.

STC Supplemental Type Certificate

STOL Short Takeoff and Landing

STP Standard Temperature and Pressure

SUA Special Use Airspace

Super-Heterodyne Receiver A receiver through which the incoming RF signal is mixed to produce a lower intermediate frequency.

Suppressor Pulse A pulse used to disable L-band avionics during the transmitting period of another piece of L-band airborne equipment. It prevents the other avionics onboard the aircraft from being damaged or interfered with by the transmission and any noise associated with that transmission.

SVS Synthetic Vision System

TA Traffic Advisory (TCAS)

TACAN Tactical Air Navigation System, which provides azimuth and distance information to an aircraft from a fixed ground station (as opposed to DME distance information).

Tach Tachometer

TAD Terrain Awareness Display

TAF Terminal Area Forecast (ICAO)

Target An aircraft within the surveillance range of TCAS.

TAS True Airspeed

TAT (1) Total Air Temperature. The air temperature including heat rise due to compressibility. (2) True Air Temperature.

TAU TAU is the minimum time a flight crew needs to discern a collision threat and take evasive action. It represents the performance envelope (speed and path of aircraft) divided by the closure rate of any intruder aircraft (TCAS).

TAWS Terrain Awareness Warning System

TBO Time Between Overhauls

TC Transport Canada

TCCA Transport Canada Civil Aviation

TCA (1) Terminal Control Area (2) Throttle Control Assembly

TCAS Traffic Alert Collision Avoidance System

TCAS I A baseline system that provides a warning (TA) to the flight crew of the presence of another aircraft (potential collision threat) within the surveillance area. No avoidance maneuver is suggested.

TCAS II A collision avoidance system providing traffic information (within 30 nmi) to the flight crew, in addition to the resolution advisories for vertical maneuvers only. A TCAS II-equipped aircraft will coordinate with TCAS II-equipped intruder aircraft to provide complementary maneuvers.

TCF Terrain Clearance Floor

TCN TACAN

TCU (1) TACAN Control Unit (2) Telephone Conversion Unit

TDOP Time Dilution of Precision. A term used to describe the error introduced by variances in the calculated time.

TDR Transponder

Temperature Probe A sensor protruding into the airstream to sense air temperature. Requires correction to get static air temperature.

TERPS (1) Terminal En Route Procedures (2) Terminal Instrument Procedures

TFR Temporary Flight Restrictions

TFT Thin Film Transistor

TGT Target

THDG True Heading

Threat A target that has satisfied the threat detection logic, and thus requires a traffic or resolution advisory (TCAS).

TIAS True Indicated Airspeed

TIS Traffic Information Service

TK Track Angle

TKE Track Angle Error

To/From Indicator Indicates whether the omnibearing selected is the course to or from the VOR ground station.

Touchdown The point at which the predetermined glidepath intercepts the runway.

TPR Transponder

T/R (1) Transceiver (see RT) (2) Transmitter Receiver

Track (1) The actual path, over the ground, traveled by an aircraft (navigation). (2) In this mode, the DME transmits a reduced pulse pair rate after acquiring lock-on (DME). (3) Estimated position and velocity of a single aircraft based on correlated surveillance data reports (TCAS).

TRACON Terminal Radar Approach Control

Traffic Advisory Information given to the pilot pertaining to the position of another aircraft in the immediate vicinity. The information contains no suggested maneuvers. (Traffic advisory airspace is 1,200 feet above and below the aircraft and approximately 45 seconds distant with respect to closure speed of the aircraft.) [TCAS]

TRANS Transition

Transceiver A receiver and transmitter combined in a single unit. Same as RT.

Transponder Avionics equipment that returns an identifying coded signal.

TRK Track

TRP Mode S Transponder

True Airspeed The true velocity of the aircraft through the surrounding air mass.

True Altitude The exact distance above mean sea level (corrected for temperature).

True Bearing The bearing of a ground station with respect to true north.

True North The direction of the north pole from the observer.

TSA Transportation Security Administration

TSO Technical Standard Order. Every unit built with a TSO nameplate must meet TSO requirements. TSO operating temperature extremes are not the same as the manufacturing burn-in limits.

TTR TCAS II Receiver/Transmitter

TTS Time To Station. An indication that displays the amount of time for an aircraft to reach a selected DME ground station while traveling at a constant speed.

TVE Total Vertical Error

TWDL (1) Terminal Weather Data-Link (2) Two-Way Data-Link

TWDR Terminal Doppler Weather Radar

TWIP Terminal Weather Information for Pilots

TWR Turbulence Weather Radar

TX Transmit (see XMIT)

UART Universal Asynchronous Receiver/Transmitter

UHF Ultra-High Frequency. The portion of the radio spectrum from 300 MHz to 3 GHz.

ULB Underwater Locator Beacon

Ultralight A vehicle that is manned by one occupant for recreation or sport purposes.

Unpaired Channel A DME channel without a corresponding VOR or ILS frequency.

Uplink The radio transmission path upward from the earth to the aircraft.

USB Universal Serial Bus

UTC Universal Coordinated Time

VASI Visual Approach Slope Indicator

VDL VHF Data-Link

VDR VHF Digital Radio

Vertical Speed The rate of change of pressure altitude, usually calibrated in hundreds of feet per minute.

VFO Variable Frequency Oscillator

VFR Visual Flight Rules

VG/DG Vertical Gyro/Directional Gyro

VGA Video Graphics Array

VHF Very High Frequency. The portion of the radio spectrum from 30 to 300 MHz.

V/L VOR / Localizer

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VMC (1) Visual Meteorological Conditions (2) Minimum Control Speed with Critical Engine Out

V/NAV Vertical Navigation

VNE Never Exceed Speed

VNO Maximum Structural Cruising Speed

VNR VHF Navigation Receiver

VOR VHF Omnidirectional Radio Range. A system that provides bearing information to an aircraft.

VOR/DME A system in which a VOR and DME station are co-located.

VOR/MB VOR/Marker Beacon

VORTAC A system in which a VOR and a TACAN station are co-located.

VOX Voice Transmission

VPATH Vertical Path

VREF Reference Velocity

V/S Vertical Speed

VS Vertical Speed Indicator

VSL Advisory Vertical Speed Limit Advisory. May be preventive or corrective (TCAS).

VSM Vertical Separation Minimum

VSO Stalling Speed in the Landing Configuration

VSWR Voltage-Standing Wave Ratio. The ratio of the amplitude of the voltage (or electric field) at a voltage maximum to that of an adjacent voltage minimum. VSWR is a measurement of the mismatch between the load and the transmission line.

V/TRK Vertical Track

VX Speed for Best Angle of Climb

VY Speed for Best Rate of Climb

WAAS Wide Area Augmentation System (method of differential GPS)

WADGNSS Wide Area Differential Global Navigation Satellite System

Waypoint A position along a route of flight.

WD Wind Direction

Whisper-Shout A sequence of ATC RBS interrogations and suppressions of varying power levels transmitted by TCAS equipment to reduce severity of synchronous interference and multipath problems.

WINDMG Wind Magnitude

WINDR Wind Direction

Wing Leveler Rudimentary autopilot that maintains the wings of the plane level.

WMA WXR Antenna Pedestal and WXR Waveguide Adapter

WMI WXR Indicator Mount

WMS Wide-Area Master Station

WMSC Weather Message Switching Center

WMSCR Weather Message Switching Center Replacement

WPT Waypoint

WRT WXR Receiver/Transmitter

WX Weather

WXR Weather Radar System

WYPT Waypoint Altitude

X-Channel A DME channel. There are 126 X-Channels for DME operation. For the first 63 channels, the ground-to-air frequency is 63 MHz below the air-to-ground frequency. For the second 63-X channels, the ground-to-air frequency is 63 MHz above the air-to-ground frequency.

XCVR Transceiver

XFR Transfer

XMIT Transmit

XMTR Transmitter

XPDR ATC Transponder (also XPDR, XPNDR, TPR)

XPDR Transponder

XTK Crosstrack (crosstrack error)

Yagi Antenna An antenna with its maximum radiation parallel to the long axis of its array, consisting of a driven dipole, a parasitic dipole reflector, and one parasitic dipole director or more.

YD Yaw Damper

Z-Marker A marker beacon, sometimes referred to as a station locator, that provides positive identification to the pilot when the aircraft is passing directly over a low-frequency navigation aid.

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