

## Terms

TERMS	ACRONYM	DEFINITIONS
<b>Above Ground Level Altitude</b>	<b>AGL</b>	Altitude expressed in feet measured above ground level.
<b>Air Traffic Control</b>	<b>ATC</b>	A service operated by appropriate authority to promote the safe, orderly and expeditious flow of air traffic.
<b>Air Traffic Control Specialist</b>	<b>ATCS</b>	A person authorized to provide air traffic control service.
<b>Altitude</b>	<b>ALT</b>	The height of a level, point or object measured in feet Above Ground Level (AGL) or from Mean Sea Level (MSL).
<b>Coordinated Universal Time</b>	<b>UTC</b>	Time is given in Coordinated Universal Time, the local standard time at the Prime Meridian at Greenwich, England. Local Standard Time is based on each 15° of longitude.
<b>Distance Measuring Equipment</b>	<b>DME</b>	Equipment (airborne and ground) used to measure, in nautical miles, the slant range distance of an aircraft from the DME navigational aid.
<b>Flight Level</b>	<b>FL</b>	A level of constant atmospheric pressure related to a reference datum of 29.92 inches of mercury. Each is stated in three digits that represent hundreds of feet. For example, flight level (FL) 250 represents a barometric altimeter indication of 25,000 feet; FL255, an indication of 25,500 feet.
<b>Navigational Aid</b>	<b>NAVAID</b>	Any visual or electronic device airborne or on the surface which provides point-to-point guidance information or position data to aircraft in flight.
<b>Mean Sea Level</b>	<b>MSL</b>	Altitude expressed in feet measured from mean sea level.
<b>Global Positioning System</b>	<b>GPS</b>	A space-based radio positioning, navigation, and time-transfer system. The system provides highly accurate position and velocity information, and precise time, on a continuous global basis, to an unlimited number of properly equipped users. The system is unaffected by weather, and provides a worldwide common grid reference system.
<b>Non-directional Beacon</b>	<b>NDB</b>	An L/MF or UHF radio beacon transmitting nondirectional signals whereby the pilot of an aircraft equipped with direction finding equipment can determine his bearing to or from the radio beacon and "home" on or track to or from the station.
<b>Tactical Air Navigation</b>	<b>TACAN</b>	An ultra-high frequency electronic rho-theta air navigation aid which provides suitably equipped aircraft a continuous indication of bearing and distance to the TACAN station.
<b>Very High Frequency Omni Directional Range Navigational Aid</b>	<b>VOR</b>	A ground-based electronic navigation aid transmitting very high frequency navigation signals, 360 degrees in azimuth, oriented from magnetic north. Used at the basis for navigation in the National Airspace System. The VOR periodically identifies itself by Morse Code and may have an additional voice identification feature. Voice features may be used by ATC or FSS for transmitting instructions/information

		to pilots.
<b>Very High Frequency Omni Directional Range/ Tactical Air Navigation Navigational Aid</b>	<b>VORTAC</b>	A navigation aid providing VOR azimuth, TACAN azimuth, and TACAN distance measuring equipment (DME) at one site.

## Phrases

---

Word/Phrase	Meaning
<b>ACKNOWLEDGE</b>	Let me know that you have received and understood my message.
<b>AFFIRMATIVE</b>	Yes.
<b>CORRECTION</b>	An error has been made in the transmission and the correct version follows.
<b>EXPEDITE</b>	Used by ATC when prompt compliance is required to avoid the development of an imminent situation.
<b>GO AHEAD</b>	Proceed with your message. Not to be used for any other purpose.
<b>HOW DO YOU HEAR ME?</b>	A question relating to the quality of the transmission or to determine how well the transmission is being received.
<b>IMMEDIATELY</b>	Used by ATC when compliance with an action is required to avoid an imminent situation.
<b>I SAY AGAIN</b>	The message will be repeated.
<b>NEGATIVE</b>	“No” or “Permission not granted” or “That is not correct.”
<b>OVER</b>	My transmission is ended; I expect a response.
<b>READ BACK</b>	Repeat my message back to me.
<b>ROGER</b>	I have received all of your last transmission. It should not be used to answer a question requiring a “yes” or “no” answer.
<b>SAY AGAIN</b>	Used to request a repeat of the last transmission. Usually specifies transmission or portion thereof not understood or received, e.g., “Say again all after ABRAM VOR.”
<b>STAND BY</b>	Means the controller or pilot must pause for a few seconds, usually to attend to other duties of higher priority. Also means to “wait” as in “stand by for clearance.” If a delay is lengthy, the caller should re-establish contact.
<b>UNABLE</b>	Indicates inability to comply with a specific instruction, request, or clearance.
<b>WILCO</b>	I have received your message, understand it, and will comply with it.
<b>WORDS TWICE</b>	1. As a request: “Communication is difficult. Please say every phrase twice.” 2. As information: “Since communications are difficult every phrase in this message will be spoken twice.”

## Pronunciation

---

PHONETIC ALPHABET			PHONETIC ALPHABET (CONT'D)		
Character	Word	Pronunciation	Character	Word	Pronunciation
<b>A</b>	Alfa	<b>AL-FAH</b>	<b>N</b>	November	<b>NO-VEM-BER</b>
<b>B</b>	Bravo	<b>BRAH-VOH</b>	<b>O</b>	Oscar	<b>OSS-CAH</b>
<b>C</b>	Charlie	<b>CHAR-LEE</b>	<b>P</b>	Papa	<b>PAH-PAH</b>
<b>D</b>	Delta	<b>DELL-TAH</b>	<b>Q</b>	Quebec	<b>KEH-BECK</b>
<b>E</b>	Echo	<b>ECK-OH</b>	<b>R</b>	Romeo	<b>ROW-ME-OH</b>
<b>F</b>	Foxtrot	<b>FOKS-TROT</b>	<b>S</b>	Sierra	<b>SEE-AIR-AH</b>
<b>G</b>	Golf	<b>GOLF</b>	<b>T</b>	Tango	<b>TANG-GO</b>
<b>H</b>	Hotel	<b>HOH-TELL</b>	<b>U</b>	Uniform	<b>YOU-NEE-FORM</b>
<b>I</b>	India	<b>IN-DEE-AH</b>	<b>V</b>	Victor	<b>VIK-TAH</b>
<b>J</b>	Juliect	<b>JEW-LEE ETT</b>	<b>W</b>	Whiskey	<b>WISS-KEY</b>
<b>K</b>	Kilo	<b>KEY-LOH</b>	<b>X</b>	X-ray	<b>ECK-SRAY</b>
<b>L</b>	Lima	<b>LEE-MAH</b>	<b>Y</b>	Yankee	<b>YAN-GKEY</b>
<b>M</b>	Mike	<b>MIKE</b>	<b>Z</b>	Zulu	<b>ZOO-LOO</b>

NUMBERS			NUMBERS (CONT'D)		
<b>0</b>	Zero	<b>ZE-RO</b>	<b>5</b>	Five	<b>FIFE</b>
<b>1</b>	One	<b>WUN</b>	<b>6</b>	Six	<b>SIX</b>
<b>2</b>	Two	<b>TOO</b>	<b>7</b>	Seven	<b>SEV-EN</b>
<b>3</b>	Three	<b>TREE</b>	<b>8</b>	Eight	<b>AIT</b>
<b>4</b>	Four	<b>FOW-ER</b>	<b>9</b>	Nine	<b>NIN-ER</b>

## APPENDIX A: FAA HISTORY

---

- ⊙ The Air Commerce Act of 1926 charged the Commerce Secretary with certain functions and responsibilities critical to aviation.
  - The Commerce Secretary created an Aeronautics Branch within the Commerce Department to:
    - Promote air commerce.
    - Issue and enforce air traffic rules.
    - License pilots.
    - Designate and establish airways.
    - Certify aircraft airworthiness.
    - Operate and maintain NAVAIDs.
- ⊙ In 1930, local airport operators began to establish regulations and issue radio advisories to aircraft in the vicinity of airports in an attempt to prevent collisions. This action by airport operators was one of the first steps toward providing air traffic control.
- ⊙ In 1934, the Aeronautics Branch was renamed the Bureau of Air Commerce.
- ⊙ The Civil Aeronautics Act was passed in 1938 and established an independent agency called the Civil Aeronautics Authority which consisted of the following:
  - Administrator of the Civil Aeronautics Authority
    - Responsible for executing the authority's orders
  - Board for Economic Regulations and Safety Rules
    - Five members who regulated airline fares and determined the routes that air carriers would serve
  - Air Safety Board
    - Three members who investigated aircraft accidents and recommended safety improvements

## APPENDIX A: FAA HISTORY cont'd

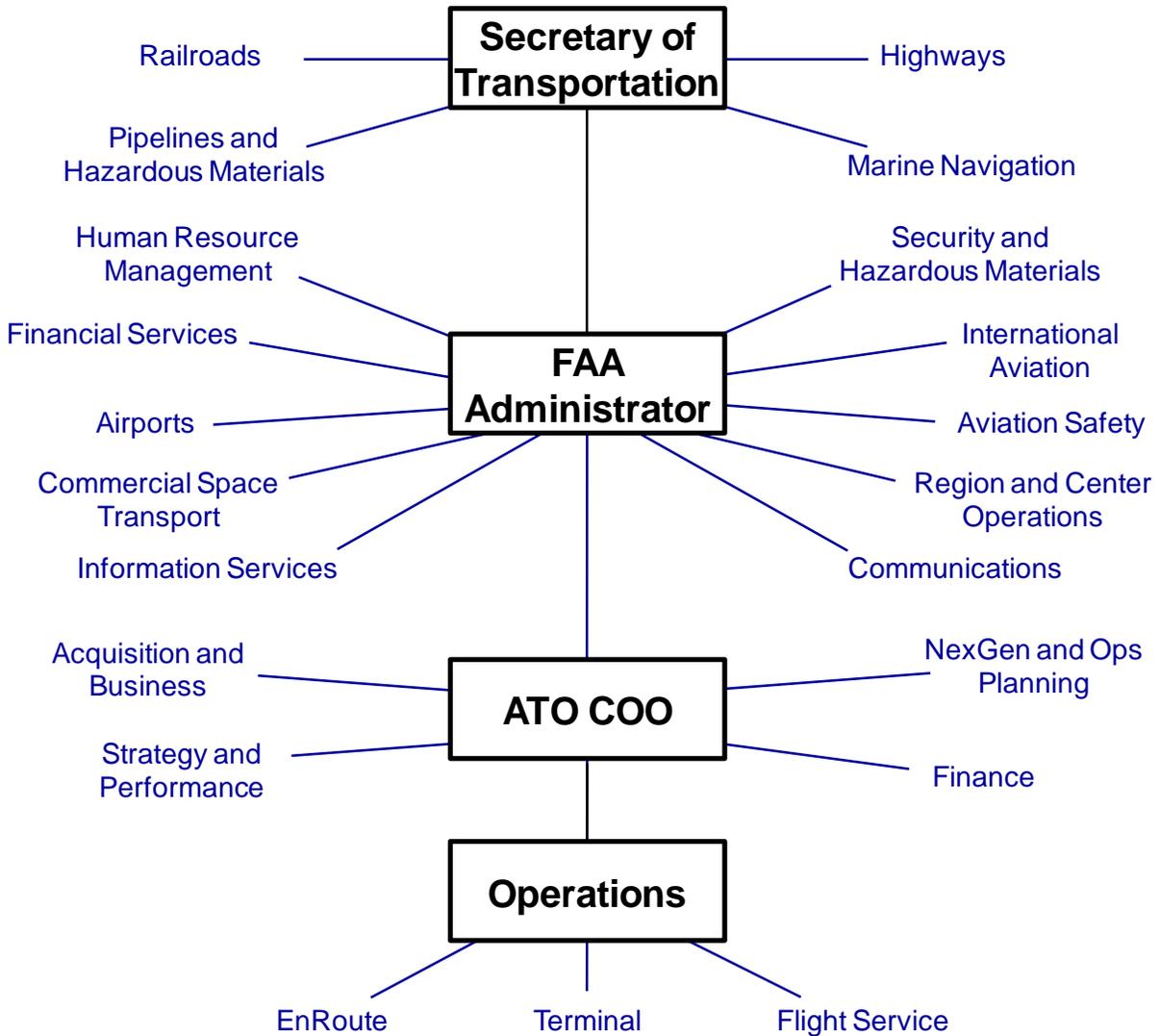
---

- ⊙ In 1939, the Civil Aeronautics Authority was reorganized.
  - The Air Safety Board was abolished and its duties were transferred to the Board for Economic Regulation and Safety Rulemaking.
  - Board for Economic Regulation and Safety Rulemaking was renamed the Civil Aeronautics Board (CAB).
    - Transferred CAB and administrator to the Commerce Department
      - The CAA administrator reported directly to the Secretary of Commerce.
      - The CAB remained independent (except for administrative support).
  - The collective functions of the Administrator were designated to the Civil Aeronautics Administration (CAA).
- ⊙ In 1941, the airport advisories being provided by local operators became the responsibility of the CAA. This service was given to the CAA to standardize airport traffic control procedures and expand air traffic service to additional airports.

**NOTE:** The Bureau of Air Commerce was the forerunner of the CAA, and the CAA was the forerunner of the FAA.

- ⊙ The Federal Aviation Act of 1958
  - Several factors led to the passage of the Federal Aviation Act of 1958. The most important factor was the growing need for a single air navigation and Air Traffic Control system equipped with modern facilities to serve the vastly increasing demands of both civil and military aviation.
  - This act:
    - Created an independent Federal Aviation Agency (FAA).
    - Transferred the CAB's safety/rulemaking functions to the FAA.
    - Provided for the FAA Administrator to report directly to the President.
- ⊙ The Department of Transportation Act of 1966
  - Placed the FAA under the DOT.
  - Changed the name of the FAA from the Federal Aviation Agency to the Federal Aviation Administration.
  - Created a single department rather than separate, competing systems.

**APPENDIX B: ORGANIZATIONAL FLOWCHART**



## APPENDIX C: GLOSSARY

The following is a list of commonly used words, phrases, and acronyms. For a more comprehensive list, refer to the Pilot/Controller Glossary in FAA Order JO 7110.65.

TERMS	ACRONY M	DEFINITIONS
<b>Above Ground Level Altitude</b>	<b>AGL</b>	Altitude expressed in feet measured above ground level.
<b>Airport Elevation (Field Elevation)</b>		The highest point of an airport's usable runways measured in feet from mean sea level.
<b>Airport Surveillance Radar</b>	<b>ASR</b>	Approach control radar used to detect and display an aircraft's position in the terminal area. ASR provides range and azimuth information but does not provide elevation data. Coverage of the ASR can extend up to 60 miles.
<b>Airspeed</b>		The speed of an aircraft relative to its surrounding air mass. The unqualified term "airspeed" means one of the following: <ul style="list-style-type: none"> <li>a. Indicated Airspeed (IAS) - The speed shown on the aircraft airspeed indicator. This is the speed used in pilot/controller communications under the general term "airspeed."</li> <li>b. True Airspeed (TAS) - The airspeed of an aircraft relative to undisturbed air. Used primarily in flight planning and en route portion of flight. When used in pilot/controller communications, it is referred to as "true airspeed" and not shortened to "airspeed."</li> </ul>
<b>Air Traffic</b>	<b>AT</b>	Aircraft operating in the air or on an airport surface, exclusive of loading ramps and parking areas.
<b>Air Traffic Clearance</b>		An authorization by air traffic control for the purpose of preventing collision between known aircraft, for an aircraft to proceed under specified traffic conditions within controlled airspace. The pilot-in-command of an aircraft may not deviate from the provisions of a Visual Flight Rules (VFR) or Instrument Flight Rules (IFR) air traffic clearance except in an emergency or unless an amended clearance has been obtained.
<b>Air Traffic Control</b>	<b>ATC</b>	A service operated by appropriate authority to promote the safe, orderly and expeditious flow of air traffic.
<b>Air Traffic Control Specialist</b>	<b>ATCS</b>	A person authorized to provide air traffic control service.

<b>Air Traffic Service Routes</b>	<b>ATS Routes</b>	A generic term that includes “VOR Federal airways,” “colored Federal airways,” “jet routes,” and “RNAV routes.” The term “ATS route” does not replace these more familiar route names, but serves only as an overall title when listing the types of routes that comprise the United States route structure.
<b>Airway</b>		A Class E airspace area established in the form of a corridor, the centerline of which is defined by radio navigational aids.
<b>Alert Area</b>		A type of Special Use Airspace which may contain high volume of pilot training activities or an unusual type of aerial activity, neither of which is hazardous to aircraft. Alert Areas are depicted on aeronautical charts for the information of nonparticipating pilots. All activities within an Alert Area are conducted in accordance with Federal Aviation Regulations, and pilots of participating aircraft as well as pilots transiting the area are equally responsible for collision avoidance.
<b>Altimeter Setting</b>	<b>ALSTG</b>	The barometric pressure reading used to adjust a pressure altimeter for variations in existing atmospheric pressure or to the standard altimeter setting (29.92).
<b>Altitude</b>		The height of a level, point or object measured in feet Above Ground Level (AGL) or from Mean Sea Level (MSL).
<b>Controlled Firing Area</b>	<b>CFA</b>	A type of Special Use Airspace wherein activities are conducted under conditions so controlled as to eliminate hazards to nonparticipating aircraft and to ensure the safety of persons and property on the ground.
<b>Coordinated Universal Time</b>	<b>UTC</b>	Time is given in Coordinated Universal Time, the local standard time at the Prime Meridian at Greenwich, England. Local Standard Time is based on each 15° of longitude.
<b>Data Block (Alphanumeric Display)</b>		Letters and numerals used to show identification, altitude, beacon code, and other information concerning a target on a radar display.
<b>Distance Measuring Equipment</b>	<b>DME</b>	Equipment (airborne and ground) used to measure, in nautical miles, the slant range distance of an aircraft from the DME navigational aid.
<b>Fix</b>		A geographical position determined by visual reference to the surface, by reference to one or more radio NAVAIDs, by celestial plotting, or by another navigational device.
<b>Flight Check</b>	<b>FLC</b>	A call sign prefix used by FAA aircraft engaged in flight inspection/certification of navigational aids and flight procedures. The word “recorded” may be added as a suffix; e.g., “Flight Check 320 recorded” to indicate that an automated flight inspection is in progress in terminal areas.
<b>Flight Level</b>	<b>FL</b>	A level of constant atmospheric pressure related to a reference datum of 29.92 inches of mercury. Each is stated in three digits that represent hundreds of feet. For example, flight level (FL) 250 represents a barometric altimeter indication of 25,000 feet; FL255, an indication of 25,500 feet.
<b>Flight Plan</b>	<b>FP</b>	Specified information relating to the intended flight of an aircraft that is filed orally or in writing with an FSS or an ATC facility.

<b>Flow Control</b>		Measures designed to adjust the flow of traffic into a given airspace, along a given route, or bound for a given aerodrome (airport) so as to ensure the most effective utilization of the airspace.
<b>General Aviation</b>	<b>GA</b>	That portion of civil aviation which encompasses all facets of aviation except air carriers holding a certificate of public convenience and necessity from the Civil Aeronautics Board and large aircraft commercial operators.
<b>Global Positioning System</b>	<b>GPS</b>	A space-based radio positioning, navigation, and time-transfer system. The system provides highly accurate position and velocity information, and precise time, on a continuous global basis, to an unlimited number of properly equipped users. The system is unaffected by weather, and provides a worldwide common grid reference system.
<b>Handoff</b>		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.
<b>Hold Procedure</b>		A predetermined maneuver which keeps aircraft within a specified airspace while awaiting further clearance from air traffic control. Also used during ground operations to keep aircraft within a specified area or at a specified point while awaiting further clearance from air traffic control.
<b>IFR Conditions</b>		Weather conditions below the minimum for flight under visual flight rules. Generally, IFR weather conditions exist when the ceiling is below 1,000 feet AGL or the visibility is below 3 statute miles.
<b>IFR/VFR Aircraft</b>		The pilot using Instrument Flight Rules (IFR) relies on instruments for navigation during poor weather conditions and is provided ATC separation. The Visual Flight Rules (VFR) pilot relies on his/her own vision for separation and may or may not use instruments for navigation.
<b>Initial Approach Fix</b>	<b>IAF</b>	The fixes depicted on instrument approach procedure charts that identify the beginning of the initial approach segment(s).
<b>Instrument Departure Procedure</b>	<b>DP</b>	A preplanned instrument flight rule (IFR) air traffic control departure procedure printed for pilot use in graphic and/or textual form. DP's provide transition from the terminal to the appropriate en route structure.
<b>Instrument Flight Rules</b>	<b>IFR</b>	Rules governing the procedures for conducting instrument flight. Also a term used by pilots and controllers to indicate type of flight plan.
<b>Instrument Landing System</b>	<b>ILS</b>	A precision instrument approach system which normally consists of the following electronic components and visual aids: <ul style="list-style-type: none"> <li>a. Localizer.</li> <li>b. Glideslope.</li> <li>c. Outer Marker.</li> <li>d. Middle Marker.</li> <li>e. Approach Lights.</li> </ul>
<b>Jet Route</b>		A route designed to serve aircraft operations from 18,000 feet

		MSL up to and including flight level 450. The routes are referred to as “J” routes with numbering to identify the designated route; e.g., J105.
<b>Lateral Separation</b>		The lateral spacing of aircraft at the same altitude by requiring operation on different routes or in different geographical locations.
<b>Longitudinal Separation</b>		The longitudinal spacing of aircraft at the same altitude by a minimum distance expressed in units of time or miles.
<b>Mach Number</b>		The ratio of true airspeed to the speed of sound; e.g., MACH .82, MACH 1.6.
<b>Mayday</b>		The international radiotelephony distress signal. When repeated three times, it indicates imminent and grave danger and that immediate assistance is requested.
<b>Mean Sea Level Altitude</b>	<b>MSL</b>	Altitude expressed in feet measured from mean sea level.
<b>Military Operations Area</b>	<b>MOA</b>	An airspace assignment of defined vertical and lateral dimensions established outside Class A airspace to separate/segregate certain military activities from IFR traffic and to identify for VFR traffic where these activities are conducted.
<b>Movement Area</b>		The runways, taxiways, and other areas of an airport/heliport which are utilized for taxiing/hover taxiing, air taxiing, takeoff, and landing of aircraft, exclusive of loading ramps and parking areas. At those airports/heliports with a tower, specific approval for entry onto the movement area must be obtained from ATC.
<b>National Airspace System</b>	<b>NAS</b>	The common network of U.S. airspace; air navigation facilities, equipment and services, airports or landing area; aeronautical charts, information and services; rules, regulations and procedures, technical information, and manpower and material. Included are system components shared jointly with the military.
<b>Navigational Aid</b>	<b>NAVAID</b>	Any visual or electronic device airborne or on the surface which provides point-to-point guidance information or position data to aircraft in flight.
<b>Non-directional Beacon</b>	<b>NDB</b>	An L/MF or UHF radio beacon transmitting nondirectional signals whereby the pilot of an aircraft equipped with direction finding equipment can determine his bearing to or from the radio beacon and “home” on or track to or from the station.
<b>Non-movement Area</b>		Taxiways and apron (ramp) areas not under the control of air traffic.
<b>Nonradar</b>		Generally means without the use of radar, such as:  <u>Nonradar Approach.</u> Used to describe instrument approaches for which course guidance on final approach may or may not be provided by ATC.  <u>Nonradar Approach Control.</u> An ATC facility providing approach control service without the use of radar.

		<p><u>Nonradar Arrival.</u> An aircraft arriving at an airport without radar service or at an airport served by a radar facility and radar contact has not been established or has been terminated due to a lack of radar service to the airport.</p> <p><u>Nonradar Route.</u> A flight path or route over which the pilot is performing his/her own navigation. Pilot may be receiving radar separation, radar monitoring, or other ATC services while on a nonradar route.</p> <p><u>Nonradar Separation.</u> The spacing of aircraft in accordance with established minima without the use of radar, e.g., vertical, lateral, or longitudinal separation.</p>
<b>Positive Control</b>		The separation of all air traffic within designated airspace by air traffic control.
<b>Precision Approach Radar</b>	<b>PAR</b>	Radar equipment in some ATC facilities operated by the FAA and/or the military services at joint-use civil/military locations and separate military installations to detect and display azimuth, elevation, and range of aircraft on the final approach course to a runway. This equipment may be used to monitor certain nonradar approaches, but is primarily used to conduct a precision instrument approach wherein the controller issues guidance instructions to the pilot based on the aircraft's position in relation to the final approach course (azimuth), the glidepath (elevation), and the distance (range) from the touchdown point on the runway as displayed on the radar scope.
<b>Prohibited Area</b>		Designated airspace within which the flight of aircraft is prohibited.
<b>Radar</b>		A device which, by measuring the time interval between transmission and reception of radio pulses and correlating the angular orientation of the radiated antenna beam or beams in azimuth and/or elevation, provides information on range, azimuth, and/or elevation of objects in the path of the transmitted pulses.
<b>Radar Point Out</b>		An action taken by a controller to transfer the radar identification of an aircraft to another controller if the aircraft will or may enter the airspace or protected airspace of another controller and radio communications will not be transferred.
<b>Radar Vectors</b>		Specific headings, issued to the pilot by a controller, to provide navigational guidance, based on the use of radar.
<b>Restricted Area</b>		A type of Special Use Airspace designated under FAR Part 73, within which the flight of aircraft, while not wholly prohibited, is subject to restriction. Most restricted areas are designated joint use and IFR/VFR operations in the area may be authorized by the controlling ATC facility when it is not being utilized by the using agency. Restricted areas are depicted on en route charts. Where joint use is authorized, the name of the ATC controlling facility is also shown.

<b>Runway</b>	<b>RWY. RY</b>	A defined rectangular area on a land airport prepared for the landing and takeoff run of aircraft along its length. Runways are normally numbered in relation to their magnetic direction rounded off to the nearest 10 degrees; e.g., Runway 01, Runway 25.
<b>Safety Alert</b>		A safety alert issued by ATC to aircraft under their control if ATC is aware the aircraft is at an altitude which, in the controller's judgment, places the aircraft in unsafe proximity to terrain, obstructions, or other aircraft. The controller may discontinue the issuance of further alerts if the pilot advises he is taking action to correct the situation or has the other aircraft in sight.
<b>Special Use Airspace</b>	<b>SUA</b>	Airspace of defined dimensions identified by an area on the surface of the earth wherein activities must be confined because of their nature and/or wherein limitations may be imposed upon aircraft operations that are not a part of those activities.
<b>Squawk</b>		Activate specific codes on the aircraft transponder; e.g., "Squawk one zero two zero."
<b>Stabilizer</b>		Stabilizers are located in the tail section of the aircraft. The Vertical Stabilizer is in the upright position, while the Horizontal Stabilizer is in a horizontal position. These are manipulated by the pilot in order to control the aircraft.
<b>Tactical Air Navigation</b>	<b>TACAN</b>	An ultra-high frequency electronic rho-theta air navigation aid which provides suitably equipped aircraft a continuous indication of bearing and distance to the TACAN station.
<b>Target</b>		The indication shown on a radar display resulting from a primary radar return or a radar beacon reply.
<b>Traffic Alert and Collision Avoidance System</b>	<b>TCAS</b>	An airborne collision avoidance system based on radar beacon signals which operates independent of ground-based equipment.
<b>Transponder</b>		The airborne radar beacon receiver/transmitter portion of the Air Traffic Control Radar Beacon System (ATCRBS) which automatically receives radio signals from interrogators on the ground, and selectively replies with a specific reply pulse or pulse group only to those interrogations being received on the mode to which it is set to respond.
<b>Vertical Separation</b>		Separation established by assignment of different altitudes or flight levels.
<b>Visual Flight Rules</b>	<b>VFR</b>	Rules that govern the procedures for conducting flight under visual conditions. The term "VFR" is also used in the United States too. In addition, it is used by pilots and controllers to indicate type of flight plan.
<b>VFR Aircraft</b>		An aircraft conducting flight in accordance with visual flight rules.
<b>VFR Conditions</b>		Weather conditions that are equal to or greater than minimum VFR requirements. Generally, VFR weather conditions exist when the ceiling is at or above 1,000 feet AGL and the visibility is at least 3 statute miles.

<b>Video Map</b>		An electronically displayed map on the radar display that may depict data such as airports, heliports, runway centerline extensions, hospital emergency landing areas, NAVAIDs 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.
<b>Visibility</b>	<b>VIS</b>	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.
<b>Visual Separation</b>		A means employed by ATC to separate aircraft in terminal areas.
<b>Voice Switching and Control System</b>	<b>VSCS</b>	A computer controlled switching system that provides air traffic controllers with all voice circuits (air to ground and ground to ground) necessary for air traffic control.
<b>Very High Frequency Omni Directional Range Navigational Aid</b>	<b>VOR</b>	A ground-based electronic navigation aid transmitting very high frequency navigation signals, 360 degrees in azimuth, oriented from magnetic north. Used at the basis for navigation in the National Airspace System. The VOR periodically identifies itself by Morse Code and may have an additional voice identification feature. Voice features may be used by ATC or FSS for transmitting instructions/information to pilots.
<b>Very High Frequency Omni Directional Range/Tactical Air Navigation Navigational Aid</b>	<b>VORTAC</b>	A navigation aid providing VOR azimuth, TACAN azimuth, and TACAN distance measuring equipment (DME) at one site.
<b>Wake Turbulence</b>		Phenomena resulting from the passage of an aircraft through the atmosphere. The term includes vortices, thrust stream turbulence, jet blast, jet wash, propeller wash, and rotor wash both on the ground and in the air.
<b>Warning Area</b>		A type of Special Use Airspace which may contain hazards to nonparticipating aircraft in international airspace.

<b>Word/Phrase</b>	<b>Meaning</b>
<b>ACKNOWLEDGE</b>	Let me know that you have received and understood my message.
<b>ADVISE INTENTIONS</b>	Tell me what you plan to do.
<b>AFFIRMATIVE</b>	Yes.
<b>ATC ADVISES</b>	Used to prefix a message of noncontrol information when it is relayed to an aircraft by other than an air traffic controller.
<b>ATC CLEARS</b>	Used to prefix an ATC clearance when it is relayed to an aircraft by other than an air traffic controller.
<b>ATC REQUESTS</b>	Used to prefix an ATC request when it is relayed to an aircraft by other than an air traffic controller.
<b>CLEARED FOR TAKEOFF</b>	ATC authorization for an aircraft to depart. It is predicated on known traffic and known physical airport conditions.
<b>CLEARED TO LAND</b>	ATC authorization for an aircraft to land. It is predicated on known traffic and known physical airport conditions.
<b>CORRECTION</b>	An error has been made in the transmission and the correct version follows.
<b>EXPEDITE</b>	Used by ATC when prompt compliance is required to avoid the development of an imminent situation, usually in conjunction with a request for best rate of climb/descent, without requiring an exceptional change in aircraft handling characteristics.
<b>GO AHEAD</b>	Proceed with your message. Not to be used for any other purpose.
<b>HOW DO YOU HEAR ME?</b>	A question relating to the quality of the transmission or to determine how well the transmission is being received.
<b>IMMEDIATELY</b>	Used by ATC when compliance with an action is required to avoid an imminent situation.
<b>I SAY AGAIN</b>	The message will be repeated.
<b>NEGATIVE</b>	"No" or "Permission not granted" or "That is not correct."
<b>OUT</b>	The conversation is ended and no response is expected.
<b>OVER</b>	My transmission is ended; I expect a response.
<b>RADAR CONTACT</b>	Used by ATC to inform an aircraft that it is identified on the radar display and radar flight following will be provided until radar identification is terminated. Radar service may also be provided within the limits of necessity and capability. When a pilot is informed of "radar contact," he automatically discontinues reporting over compulsory reporting points.
<b>RADAR CONTACT LOST</b>	Used by ATC to inform a pilot that radar data used to determine the aircraft's position is no longer being received, or is no longer reliable and radar service is no longer being provided.
<b>READ BACK</b>	Repeat my message back to me.
<b>ROGER</b>	I have received all of your last transmission. It should not be used to answer a question requiring a "yes" or "no" answer.
<b>SAY AGAIN</b>	Used to request a repeat of the last transmission. Usually specifies transmission or portion thereof not understood or received, e.g., "Say again all after ABRAM VOR."
<b>SAY ALTITUDE</b>	Used by ATC to ascertain an aircraft's specific altitude/ flight level. When the aircraft is climbing or descending, the pilot should state the indicated altitude rounded to the nearest 100 feet.

<b>SPEAK SLOWER</b>	Used in verbal communications as a request to reduce speech rate.
<b>SQUAWK</b>	Activate specific codes on the aircraft transponder; e.g., "Squawk one zero two zero."
<b>UNABLE</b>	Indicates inability to comply with a specific instruction, request, or clearance.
<b>STAND BY</b>	Means the controller or pilot must pause for a few seconds, usually to attend to other duties of higher priority. Also means to "wait" as in "stand by for clearance." If a delay is lengthy, the caller should re-establish contact.
<b>THAT IS CORRECT</b>	The understanding you have is right.
<b>VERIFY</b>	Request confirmation of information; e.g., "Verify assigned altitude."
<b>WILCO</b>	I have received your message, understand it, and will comply with it.
<b>WORDS TWICE</b>	<ol style="list-style-type: none"> <li>1. As a request: "Communication is difficult. Please say every phrase twice."</li> <li>2. As information: "Since communications are difficult every phrase in this message will be spoken twice."</li> </ol>