

58 entries — every glossary entry under this letter, no curation. Reproduced verbatim from the Pilot's Handbook of Aeronautical Knowledge (FAA-H-8083-25C (July 2023)), Glossary.

Rabbit, the

High-intensity flasher system installed at many large airports. The flashers consist of a series of brilliant blue-white bursts of light flashing in sequence along the approach lights, giving the effect of a ball of light traveling toward the runway.

Radar

A system that uses electromagnetic waves to identify the range, altitude, direction, or speed of both moving and fixed objects such as aircraft, weather formations, and terrain. The term RADAR was coined in 1941 as an acronym for Radio Detection and Ranging. The term has since entered the English language as a standard word, radar, losing the capitalization in the process.

Radar approach

The controller provides vectors while monitoring the progress of the flight with radar, guiding the pilot through the descent to the airport/heliport or to a specific runway.

Radar services

Radar is a method whereby radio waves are transmitted into the air and are then received when they have been reflected by an object in the path of the beam. Range is determined by measuring the time it takes (at the speed of light) for the radio wave to go out to the object and then return to the receiving antenna. The direction of a detected object from a radar site is determined by the position of the rotating antenna when the reflected portion of the radio wave is received.

Radar summary chart

A weather product derived from the national radar network that graphically displays a summary of radar weather reports.

Radar weather report (SD)

A report issued by radar stations at 35 minutes after the hour, and special reports as needed. Provides information on the type, intensity, and location of the echo tops of the precipitation.

Radials

The courses oriented from a station.

Radio or radar altimeter

An electronic altimeter that determines the height of an aircraft above the terrain by measuring the time needed for a pulse of radio-frequency energy to travel from the aircraft to the ground and return.

Radio frequency (RF)

A term that refers to alternating current (AC) having characteristics such that, if the current is input to antenna, an electromagnetic (EM) field is generated suitable for wireless broadcasting and/or communications.

Radio magnetic indicator (RMI)

An electronic navigation instrument that combines a magnetic compass with an ADF or VOR. The card of the RMI acts as a gyro-stabilized magnetic compass, and shows the magnetic heading the aircraft is flying.

Radiosonde

A weather instrument that observes and reports meteorological conditions from the upper atmosphere. This instrument is typically carried into the atmosphere by some form of weather balloon.

Radio wave

An electromagnetic (EM) wave with frequency characteristics useful for radio transmission.

RAIM

See receiver autonomous integrity monitoring.

FAA definition of **Receiver autonomous integrity monitoring (RAIM)**:

A system used to verify the usability of the received GPS signals and warns the pilot of any malfunction in the navigation system. This system is required for IFR-certified GPS units.

RAM recovery

The increase in thrust as a result of ram air pressures and density on the front of the engine caused by air velocity.

Random RNAV routes

Direct routes, based on area navigation capability, between waypoints defined in terms of latitude/longitude coordinates, degree-distance fixes, or offsets from established routes/airways at a specified distance and direction.

Ranging signals

Transmitted from the GPS satellite, signals allowing the aircraft's receiver to determine range (distance) from each satellite.

Rapid decompression

The almost instantaneous loss of cabin pressure in aircraft with a pressurized cockpit or cabin.

RB

See relative bearing.

FAA definition of **Relative bearing (RB)**:

The angular difference between the aircraft heading and the direction to the station, measured clockwise from the nose of the aircraft.

RBI

See relative bearing indicator.

FAA definition of **Relative bearing indicator (RBI)**:

Also known as the fixedcard ADF, zero is always indicated at the top of the instrument and the needle indicates the relative bearing to the station.

RCO

See remote communications outlet.

FAA definition of **Remote communications outlet (RCO)**:

An unmanned communications facility that is remotely controlled by air traffic personnel.

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Recommended altitude

An altitude depicted on an instrument approach chart with the altitude value neither underscored nor overscored. The depicted value is an advisory value.

Receiver-transmitter (RT)

A system that receives and transmits a signal and an indicator.

Reduced vertical separation minimum (RVSM)

Reduces the vertical separation between flight levels (FL) 290 and 410 from 2,000 feet to 1,000 feet, and makes six additional FLs available for operation. Also see DRVSM.

Reference circle (also, distance circle)

The circle depicted in the plan view of an IAP chart that typically has a 10 NM radius, within which chart elements are drawn to scale.

Regions of command

The "regions of normal and reversed command" refers to the relationship between speed and the power required to maintain or change that speed in flight.

Region of reverse command

Flight regime in which flight at a higher airspeed requires a lower power setting and a lower airspeed requires a higher power setting in order to maintain altitude.

REIL

See runway end identifier lights.

FAA definition of **Runway end identifier lights (REIL)**:

A pair of synchronized flashing lights, located laterally on each side of the runway threshold, providing rapid and positive identification of the approach end of a runway.

Relative bearing (RB)

The angular difference between the aircraft heading and the direction to the station, measured clockwise from the nose of the aircraft.

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Relative humidity

The ratio of the existing amount of water vapor in the air at a given temperature to the maximum amount that could exist at that temperature; usually expressed in percent.

Relative wind

Direction of the airflow produced by an object moving through the air. The relative wind for an airplane in flight flows in a direction

parallel with and opposite to the direction of flight; therefore, the actual flight path of the airplane determines the direction of the relative wind.

Remote communications outlet (RCO)

An unmanned communications facility that is remotely controlled by air traffic personnel.

Required navigation performance (RNP)

A specified level of accuracy defined by a lateral area of confined airspace in which an RNP-certified aircraft operates.

Restricted area

Airspace designated under 14 CFR part 73 within which the flight of aircraft, while not wholly prohibited, is subject to restriction.

Reverse sensing

The VOR needle appearing to indicate the reverse of normal operation.

RF

Radio frequency.

Rhodopsin

The photosensitive pigments that initiate the visual response in the rods of the eye.

Rigging

The final adjustment and alignment of an aircraft and its flight control system that provides the proper aerodynamic characteristics.

Rigidity

The characteristic of a gyroscope that prevents its axis of rotation tilting as the Earth rotates.

Rigidity in space

The principle that a wheel with a heavily weighted rim spinning rapidly will remain in a fixed position in the plane in which it is spinning.

Rime ice

Rough, milky, opaque ice formed by the instantaneous freezing of small supercooled water droplets.

Risk

The future impact of a hazard that is not eliminated or controlled.

Risk elements

There are four fundamental risk elements in aviation: the pilot, the aircraft, the environment, and the type of operation that comprise any given aviation situation.

Risk management

The part of the decision-making process which relies on situational awareness, problem recognition, and good judgment to reduce risks associated with each flight.

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RNAV

See area navigation.

FAA definition of **Area navigation (RNAV)**:

Allows a pilot to fly a selected course to a predetermined point without the need to overfly ground-based navigation facilities, by using waypoints.

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Rudder

The movable primary control surface mounted on the trailing edge of the vertical fin of an airplane. Movement of the rudder rotates the airplane about its vertical axis.

Ruddervator

A pair of control surfaces on the tail of an aircraft arranged in the form of a V. These surfaces, when moved together by the control wheel, serve as elevators, and when moved differentially by the rudder pedals, serve as a rudder.

Runway centerline lights

Runway lighting which consists of flush centerline lights spaced at 50-foot intervals beginning 75 feet from the landing threshold.

Runway edge lights

A component of the runway lighting system that is used to outline the edges of runways at night or during low visibility conditions. These lights are classified according to the intensity they are capable of producing.

Runway end identifier lights (REIL)

A pair of synchronized flashing lights, located laterally on each side of the runway threshold, providing rapid and positive identification of the approach end of a runway.

Runway visibility value (RVV)

The visibility determined for a particular runway by a transmissometer.

Runway visual range (RVR)

The instrumentally derived horizontal distance a pilot should be able to see down the runway from the approach end, based on either the sighting of high-intensity runway lights, or the visual contrast of other objects.

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