

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.

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.

RBI. See relative bearing indicator.

RCO. See remote communications outlet.

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.

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 the 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.

Relative bearing (RB). The angular difference between the aircraft heading and the direction to the station, measured clockwise from the nose of the aircraft.

Relative bearing indicator (RBI). Also known as the fixed-card ADF, zero is always indicated at the top of the instrument and the needle indicates the relative bearing to the station.

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.