

65 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.

TAA

See terminal arrival area.

FAA definition of **Terminal arrival area (TAA)**:

A procedure to provide a new transition method for arriving aircraft equipped with FMS and/or GPS navigational equipment. The TAA contains a "T" structure that normally provides a NoPT for aircraft using the approach. Terminal instrument approach procedure (TERP). Prescribes standardized methods for use in designing instrument flight procedures.

TACAN

See tactical air navigation.

FAA definition of **Tactical air navigation (TACAN)**:

An electronic navigation system used by military aircraft, providing both distance and direction information.

Tactical air navigation (TACAN)

An electronic navigation system used by military aircraft, providing both distance and direction information.

Takeoff decision speed (V1)

Per 14 CFR section 23.51: "the calibrated airspeed on the ground at which, as a result of engine failure or other reasons, the pilot assumed to have made a decision to continue or discontinue the takeoff."

Takeoff distance

The distance required to complete an all-engines operative takeoff to the 35-foot height. It must be at least 15 percent less than the distance required for a one-engine inoperative engine takeoff. This distance is not normally a limiting factor as it is usually less than the oneengine inoperative takeoff distance.

Takeoff safety speed (V2)

Per 14 CFR part 1: "A referenced airspeed obtained after lift-off at which the required oneengine-inoperative climb performance can be achieved."

TAWS

See terrain awareness and warning system.

FAA definition of **Terrain awareness and warning system (TAWS)**:

A timed-based system that provides information concerning potential hazards with fixed objects by using GPS positioning and a database of terrain and obstructions to provide true predictability of the upcoming terrain and obstacles.

Taxiway lights

Omnidirectional lights that outline the edges of the taxiway and are blue in color.

Taxiway turnoff lights

Lights that are flush with the runway which emit a steady green color.

TCAS

See traffic alert collision avoidance system.

TCH

See threshold crossing height.

FAA definition of **Threshold crossing height (TCH)**:

The theoretical height above the runway threshold at which the aircraft's glideslope antenna would be if the aircraft maintained the trajectory established by the mean ILS glideslope or MLS glidepath.

TDZE

See touchdown zone elevation.

FAA definition of **Touchdown zone elevation (TDZE)**:

The highest elevation in the first 3,000 feet of the landing surface, TDZE is indicated on the instrument approach procedure chart when straight-in landing minimums are authorized.

TEC

See Tower En Route Control.

FAA definition of **Tower En Route Control (TEC)**:

The control of IFR en route traffic within delegated airspace between two or more adjacent approach control facilities, designed to expedite traffic and reduce control and pilot communication requirements.

Technique

The manner in which procedures are executed.

Telephone information briefing service (TIBS)

An FSS service providing continuously updated automated telephone recordings of area and/or route weather, airspace procedures, and special aviation-oriented announcements.

Temporary flight restriction (TFR)

Restriction to flight imposed in order to: 1. Protect persons and property in the air or on the surface from an existing or imminent flight associated hazard; 2. Provide a safe environment for the operation of disaster relief aircraft; 3. Prevent an unsafe congestion of sightseeing aircraft above an incident; 4. Protect the President, Vice President, or other public figures; and, 5. Provide a safe environment for space agency operations. Pilots are expected to check appropriate NOTAMs during flight planning when conducting flight in an area where a temporary flight restriction is in effect.

Tension

Maintaining an excessively strong grip on the control column, usually resulting in an overcontrolled situation.

Terminal aerodrome forecast (TAF)

A report established for the 5 statute mile radius around an airport. Utilizes the same descriptors and abbreviations as the METAR report.

Terminal arrival area (TAA)

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TERP

See terminal instrument approach procedure.

Terminal radar service areas (TRSA)

Areas where participating pilots can receive additional radar services. The purpose of the service is to provide separation between all IFR operations and participating VFR aircraft.

Terrain awareness and warning system (TAWS)

A timed-based system that provides information concerning potential hazards with fixed objects by using GPS positioning and a database of terrain and obstructions to provide true predictability of the upcoming terrain and obstacles.

TFR

See temporary flight restriction.

FAA definition of **Temporary flight restriction (TFR)**:

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Thermosphere

The last layer of the atmosphere that begins above the mesosphere and gradually fades away into space.

Threshold crossing height (TCH)

The theoretical height above the runway threshold at which the aircraft's glideslope antenna would be if the aircraft maintained the trajectory established by the mean ILS glideslope or MLS glidepath.

Thrust

The force which imparts a change in the velocity of a mass. This force is measured in pounds but has no element of time or rate. The term "thrust required" is generally associated with jet engines. A forward force which propels the airplane through the air.

Thrust (aerodynamic force)

The forward aerodynamic force produced by a propeller, fan, or turbojet engine as it forces a mass of air to the rear, behind the aircraft.

Thrust line

An imaginary line passing through the center of the propeller hub, perpendicular to the plane of the propeller rotation.

Time and speed table

A table depicted on an instrument approach procedure chart that identifies the distance from the FAF to the MAP, and provides the time required to transit that distance based on various groundspeeds.

Timed turn

A turn in which the clock and the turn coordinator are used to change heading a definite number of degrees in a given time.

TIS

See traffic information service. Title 14 of the Code of Federal Regulations (14 CFR). Includes the federal aviation regulations governing the operation of aircraft, airways, and airmen.

FAA definition of **Traffic information service (TIS)**:

A ground-based service providing information to the flight deck via data link using the S-mode transponder and altitude encoder to improve the safety and efficiency of "see and avoid" flight through an automatic display that informs the pilot of nearby traffic.

Torque

(1) A resistance to turning or twisting. (2) Forces that produce a twisting or rotating motion. (3) In an airplane, the tendency of the aircraft to turn (roll) in the opposite direction of rotation of the engine and propeller. (4) In helicopters with a single, main rotor system, the tendency of the helicopter to turn in the opposite direction of the main rotor rotation.

Torquemeter

An instrument used with some of the larger reciprocating engines and turboprop or turboshaft engines to measure the reaction between the propeller reduction gears and the engine case.

Total drag

The sum of the parasite drag and induced drag.

Touchdown zone elevation (TDZE)

The highest elevation in the first 3,000 feet of the landing surface, TDZE is indicated on the instrument approach procedure chart when straight-in landing minimums are authorized.

Touchdown zone lights

Two rows of transverse light bars disposed symmetrically about the runway centerline in the runway touchdown zone.

Tower En Route Control (TEC)

The control of IFR en route traffic within delegated airspace between two or more adjacent approach control facilities, designed to expedite traffic and reduce control and pilot communication requirements.

TPP

See United States Terminal Procedures Publication.

Track

The actual path made over the ground in flight.

Tracking

Flying a heading that will maintain the desired track to or from the station regardless of crosswind conditions. Traffic Alert Collision Avoidance System (TCAS). An airborne system developed by the FAA that operates independently from the ground-based Air Traffic Control system. Designed to increase flight deck awareness of proximate aircraft and to serve as a "last line of defense" for the prevention of midair collisions.

Traffic information service (TIS)

A ground-based service providing information to the flight deck via data link using the S-mode transponder and altitude encoder to improve the safety and efficiency of "see and avoid" flight through an automatic display that informs the pilot of nearby traffic.

Trailing edge

The portion of the airfoil where the airflow over the upper surface rejoins the lower surface airflow.

Transcribed Weather Broadcast (TWEB)

An FSS service, available in Alaska only, providing continuously updated automated broadcast of meteorological and aeronautical data over selected L/MF and VOR NAVAIDS.

Transponder

The airborne portion of the ATC radar beacon system.

Transponder code

One of 4,096 four-digit discrete codes ATC assigns to distinguish between aircraft.

Trend

Immediate indication of the direction of aircraft movement, as shown on instruments.

Tricycle gear

Landing gear employing a third wheel located on the nose of the aircraft.

Trim

To adjust the aerodynamic forces on the control surfaces so that the aircraft maintains the set attitude without any control input.

Trim tab

A small auxiliary hinged portion of a movable control surface that can be adjusted during flight to a position resulting in a balance of control forces.

Tropopause

The boundary layer between the troposphere and the stratosphere which acts as a lid to confine most of the water vapor, and the associated weather, to the troposphere.

Troposphere

The layer of the atmosphere extending from the surface to a height of 20,000 to 60,000 feet, depending on latitude.

True airspeed

Actual airspeed, determined by applying a correction for pressure altitude and temperature to the CAS.

True altitude

The vertical distance of the airplane above sea level—the actual altitude. It is often expressed as feet above mean sea level (MSL). Airport, terrain, and obstacle elevations on aeronautical charts are true altitudes.

Truss

A fuselage design made up of supporting structural members that resist deformation by applied loads. The trusstype fuselage is constructed of steel or aluminum tubing. Strength and rigidity is achieved by welding the tubing together into a series of triangular shapes, called trusses.

T-tail

An aircraft with the horizontal stabilizer mounted on the top of the vertical stabilizer, forming a T.

Turbine discharge pressure

The total pressure at the discharge of the low-pressure turbine in a dual-turbine axialflow engine.

Turbine engine

An aircraft engine which consists of an air compressor, a combustion section, and a turbine. Thrust is produced by increasing the velocity of the air flowing through the engine.

Turbocharger

An air compressor driven by exhaust gases, which increases the pressure of the air going into the engine through the carburetor or fuel injection system.

Turbofan engine

A fanlike turbojet engine designed to create additional thrust by diverting a secondary airflow around the combustion chamber.

Turbojet engine

A turbine engine which produces its thrust entirely by accelerating the air through the engine.

Turboprop engine

A turbine engine which drives a propeller through a reduction gearing arrangement. Most of the energy in the exhaust gases is converted into torque, rather than using its acceleration to drive the aircraft.

Turboshaft engine

A gas turbine engine that delivers power through a shaft to operate something other than a propeller.

Turn-and-slip indicator

A flight instrument consisting of a rate gyro to indicate the rate of yaw and a curved glass inclinometer to indicate the relationship between gravity and centrifugal force. The turn-and-slip indicator indicates the relationship between angle of bank and rate of yaw. Also called a turn-and-bank indicator.

Turn coordinator

A rate gyro that senses both roll and yaw due to the gimbal being canted. Has largely replaced the turn-and-slip indicator in modern aircraft.

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