

## Aviation Glossary

**Aerial:** having to do with airplanes and air

**Aerobatic flight:** intentional maneuvers involving abrupt changes in an aircraft's speed and/or direction

**Aerodynamics:** study of moving air, especially how objects move through air

**Aerofoil:** wing shape that provides lift. Typically it is curved down at the front and back and has a streamlined shape to help air flow over it easily.

**Aeronautics:** science of flying

**Ailerons:** flaps on the wings that control rolling or banking

**Airship:** self-propelled aircraft filled with a lighter than air gas

**Air show:** performance of stunt pilots, wing walkers, parachutists, etc., or air races over an audience usually standing in a large field

**Aviator:** pilot of an airplane

**Banking:** when a plane steers to the left or right and leans over in the direction it is turning

**Barnstormer:** pilot in an air show, or performers like wing walkers or parachutists who perform stunts

**Barnstorming:** flying to entertain people; barnstormers charged money for rides and performed aerial tricks for people

**Barrel rolls:** stunt in which the plane rolls over and over in the air like a barrel

**Biplane:** airplane with two pairs of wings

**Buzzing:** flying an airplane very low over the ground

**Drag:** friction between air and a moving plane, acting to slow the plane down

**Elevator:** small hinged flap on the tail wings of an aircraft that direct the front of the plane upward or downward

**Exhibition:** public display where pilots show off their skills

**Fixed-wing aircraft:** aircraft with wings that don't move or flap

**Glider:** aircraft with no engine or power that flies by riding air currents alone

**Gravity:** force that pulls the plane's mass toward Earth

**Heavier-than-air flight:** flight in aircraft that weigh more than air, like airplanes, gliders and helicopters

**Jenny:** biplane that acquired its name from its initials: its official model name was the Curtiss JN-4D. Mostly a product of trial and error, it was often described as "a bunch of parts flying in formation." Nevertheless, it was a giant step forward in aircraft design. It was so popular after World War I that it was called "the Model T of the air."

**Joystick:** airplane's steering and control lever

**Lift:** force created as air rushes over the top of the wings and pushes upward from below the wings, causing the plane to go up

**Lighter-than-air flight:** flight in floating aircraft that weigh less than air, like hot-air balloons, airships, and dirigibles

**Loop-the-loop:** circular dive in which the plane revolves in the air like the script letter *e*

**Monoplane:** airplane with one set of wings

**Patent:** government grant that gives an inventor the sole right to make, use, and sell his or her invention for a set amount of time

**Pitch:** climbing and diving movement of an aircraft

**Powered flight:** when a flying machine uses an engine or some other source of power or energy to keep itself airborne and moving

**Propeller:** set of rotating blades on the front of an airplane that provides the force to make the airplane fly

**Ribs:** short support bars that run from the front to the back of a wing between spars

**Roll:** raising or lowering of the wingtips, controlled by the wing ailerons. A full roll is when an airplane makes complete rotations, ending with the plane flying the same direction in which it started

**Rudder:** movable vertical surface on an airplane that controls left and right movement

**Spars:** long support bars that run the length of an aircraft's wing

**Stall:** when the engine of a plane stops either as part of a stunt or as mechanical failure

**Struts:** support bars that connect the two stacked wings of a biplane and are often trussed with wire

**Thrust:** engine-powered force that pushes the plane forward through the air

**Truss:** wire that gives support to aircraft wings

**Wind tunnel:** device for testing the way air flows over objects

**Wing walker:** person who rides or moves about on the exterior of an aircraft in flight

**Wing warping:** system of roll control invented by the Wright brothers that uses wires to twist or warp the wings to give one side of the wings more lift than the other, allowing stable banked turns

**Yaw:** left and right movement of an aircraft

**Zoom:** plane is pitched suddenly upward at great speed. This is usually accomplished after a dive has given the craft greater momentum or power

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