

The Ninety-Nines, Inc.,® International Organization of Women Pilots®

Aviation Adventure Guide

Module 1 - Aviation History



Module 1

Aviation History



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Wright Brothers first flight.

Early history records show the Chinese flew kites in 400 BC. Many un-powered flight attempts of gliders and even some model airplanes followed. The first manned balloon flight was in 1783. (right)



The Wright Brothers, bicycle mechanics from Dayton, OH, are credited with the first powered flight in 1903. What is most important about their effort is that it was the first sustained, controlled, and heavier than air flight. The construction of *Flyer III* marked the first time that each of the “**three axes**” an aircraft moves on had separate controls. The aircraft flew 120 feet in 12 seconds. (below)

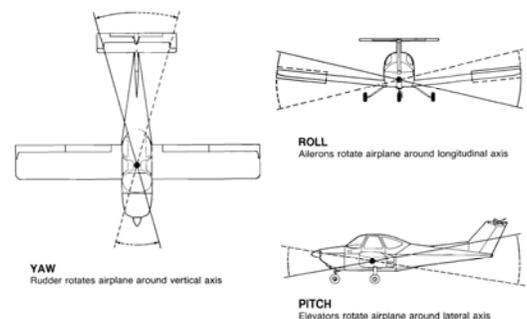


THREE AXES

Lateral axis controls **PITCH**.

Longitudinal axis controls **ROLL**.

Vertical axis controls **YAW**.



Barnstorming



By the year 1920 aviation was still in its infancy. World War I had just ended, leaving behind many pilots and aircraft with no practical use. Barnstorming became a new industry. Pilots would roam the countryside, buzzing or barnstorming local farms. The barnstorming stunts drew the attention of residents. Airplanes were a novelty, so people would rush to the farm hoping to experience the thrill of a ride. At \$5 a ride this was popular, but only for a short time.

As the novelty wore off, pilots had to find other ways to interest the public. Pilots and stunt people started doing tricks on the planes. Wing walking, hanging by the teeth and transferring from one plane to another, were just a few. The tricks became more and more daring and dangerous. In 1926 the Air Commerce Act started to regulate the aviation industry. Individual barnstormers were gone, replaced with flying circuses. Gates Flying circus was the longest running circus, replaced with the Flying Aces. By 1938 regulations imposed on the aviation industry closed this type of flying.



Airmail

The idea of using aircraft for mail delivery in the U.S. began to take shape in the 1910s. Initially, these were isolated experiments rather than part of a coordinated postal service.

On September 13, 1911, the first airmail flight launched. It was piloted by Earle Ovington.

During an aviation meet on Long Island, he was sworn in as the first airmail pilot and flew a bag of mail from Garden City to Mineola, New York. The US Airmail Service was formally established by the Post Office Department, May 15, 1918. The inaugural route was Washington, D.C. to New York.

A major development in the 1920s was the introduction of night flying. This was facilitated by the construction of a system of beacons and lighted airfields. The introduction of this system was pivotal in enabling 24-hour transcontinental airmail service, which commenced in 1924.

As routes expanded, commercial air travel started by piggy backing on the airmail flights. The earliest passengers used the mail bags for seats.



New York City Postmaster Thomas Patton and Lt. Torrey Webb 1918

Airshows



The flying circus in the post-barnstorming days was the predecessor of modern-day air shows. Early shows combined races, cross country and pylon races, aerobatic acts, air show performers and rides for the public. There are strict safety and training requirements now, so the air show is not only fun, but it is also safe.

Speed, Distance and Records

Pilots were also attracted to the prizes being awarded for speed and distance flights. One of the most famous was Charles Lindbergh, who won \$25,000 for being the first person to fly non-stop solo across the Atlantic Ocean in 1927. As with most pilots of the day, Lindbergh was a barnstormer and airmail pilot. His historic flight from New York to Paris lasted 33 ½ hours.



Faster, higher, longer. Those were just some of the records that pilots tried setting to push the boundaries of what pilots could do with airplanes. In the 1920s and 1930s records did not last long as aviation technology was moving forward at a “record-setting” pace.

Air Racing

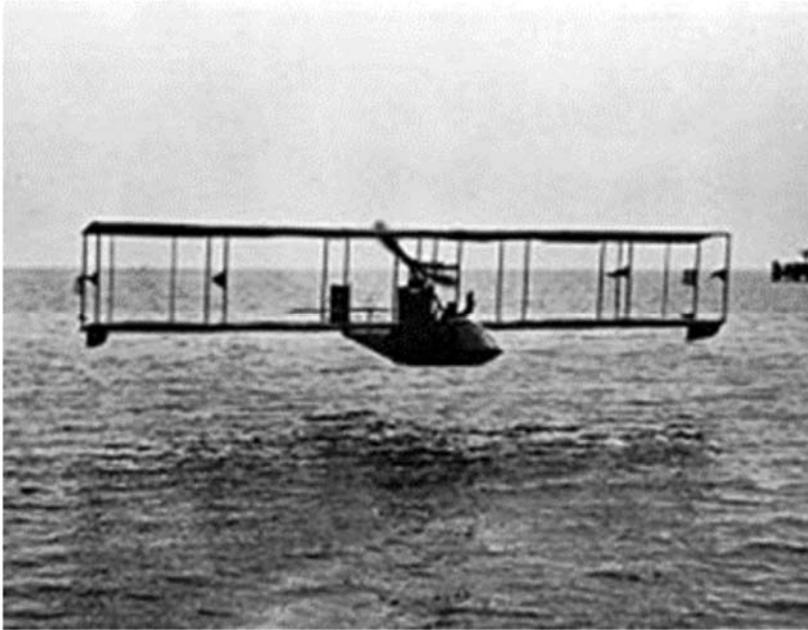
In the 1920s the National Air Races in Cleveland, OH, were a draw for thousands of spectators. They gathered each year to watch the men cross the finish line from their cross-country races, then fly the pylon races. Women, of course, were excluded from air racing.

As a result in 1929, twenty daring young female pilots formed their own race from Santa Monica, CA to Cleveland, OH. Named the Women's Air Derby, it was dubbed the Powder Puff Derby by humorist Will Rogers. This was the start of the All Women Transcontinental Air Race (AWTAR). They proved to the world that women were good pilots and good air racers. The pioneering spirit of these racers lives on today in the women who fly the modern-day races.



From left to right: Louise Thaden, Bobbi Trout, Patty Willis, Marvel Crosson, Blanche Noyes, Vera Dawn Walker, Amelia Earhart, Marjorie Crawford, Ruth Elder, and Pancho Barnes in front of NC229K, a de Havilland DH.60 Moth at the Breakfast Club, Los Angeles, California, before the start of the race

Commercial Air Travel



The first scheduled passenger service, using an airboat, was in 1914 from St. Petersburg, FL to Tampa, a total of 17 miles.

The introduction of the Douglas DC-3 in 1935 had a big impact on the future of commercial flight. The propeller-driven airliner was larger and much improved over its predecessors. It could carry 32 passengers, had a cruising speed of 207 mph and a range of 1500 miles.



The 1950s and 1960s heralded the age of jet engine aircraft, creating an expansion of commercial flights, airlines and international flying routes. In the 1960s, work began on the first supersonic aircraft, the Concorde. It offered transatlantic flights in 3.5 hours.



B-737



Concord

General Aviation

At the same time commercial travel was growing, General Aviation started to take-off. General Aviation is basically all aviation that is not commercial air transport or military. It includes private pilots flying their own aircraft, companies that hire pilots to fly their airplanes, chartered aircraft and flight instruction.



Activity: Word Search - Find the following important history words and circle them,

Wright

Airmail

Lindbergh

Barnstorming

Aerobatics

AWTAR

Wing Walking

Racing

W R I G H T C G T E B K X E A S
L F B S I O M P D E A M H T U C
W I N Y F M K L B D E Q G L O L
A R A T W A R M A R I W N A N I
T T O B G C K S R O N R I N K N
J A T E N I R O N C E L C L Y D
E N H V I P B L S R V K A T I B
W F Y K I A O A T E G J R M A E
S V Y D T N O Y O T N K L P O R
B E H I J L A I R M A I L E I G
G Y C L C E Q I M P L A B E C H
T S H E L X S T I T I R W V J O
F B E K O L N F N R I U E D C N
A G R S O W B G G Y O L S B I T
A R W I N G W A L K I N G O N F