

## 100 YEARS OF SUSTAINED POWER FLIGHT HISTORY

**Compiled By: Barbara Harris-Para**

Before the Wright Brothers experience there were attempts for men/women to fly:

- 1793 A French balloonist, Jean Pierre Blanchard, became the first aeronaut in America. He ascended from Phila. & 45 minutes later landed in Deptford, NJ
- 1830 Charles F. Durant of Jersey City was America's 1<sup>st</sup> native-born aeronaut. He flew his balloon from Castle Garden (Battery Park) in Manhattan & landed in South Amboy, NJ
- 1863 Perth Amboy's Dr. Solomon Andrews built & flew America's 1<sup>st</sup> dirigible balloon. With a rudder but no engine the doctor flew his invention from NJ to Long Island by tacking in the cross winds like a sailboat.
- 1903 December 17<sup>th</sup> Kitty Hawk, NC Orville Wright makes the first controlled powered flight, flying the "Wright Flyer" 120' in 12 seconds
- 1905 Mrs. Hart O. Berg flew with Wilbur Wright, just two years after Wright's historic flight
- 1906 Brazilian Alberto Santos Dumont publicly flew a powered aircraft in Europe in his 14-bis plane  
First Aero Exhibition, the NY Aero Show held with the auto show
- 1907 International Aeronautic Congress held in New York
- 1908 Glenn H. Curtiss finished his plane the "June Bug biplane". It was flown on March 12, for 300', he then improved upon it, flew it on July 4 over a measured kilometer  
First Flying Club established in New York City, "Aeronautical Society"
- 1909 First private airplane sold in U.S. a pusher sold to the Aeronautic Society of New York  
First Aeroplane dealership- Wycroff, Church & Partridge, auto dealers in NYC, acquired Curtiss line  
Dr. Wm. H. Green in Greene biplane makes a passenger carrying record at Morris Park, NY carrying Leo Stevens & two other passengers for a short flight  
Louis Bleriot takes off from Calais, France to Dover, England in his monoplane July 25 first aerial crossing of the English Channel in 37 minutes  
First Monoplane was built by Dr. Henry Walden at Mineola  
Curtiss wins Scientific American Trophy in his Golden Flyer at Mineola setting American distance record of 16 miles  
First air speed record – Rheims, France with an average speed of 43.385 mph in Curtiss biplane  
Bolard Brothers of Rahway built the 1<sup>st</sup> fixed-wing "aero plane" in NJ.
- 1910 Claude Graham-White begins delivering airmail on an unofficial basis, between Hendon & Windsor, England  
Wright Brothers exhibit four airplanes at Belmont Park Air Meet. The Wright Model R (Racer) was built especially for the Gordon Bennett Trophy Race  
Two shots were fired from Curtiss biplane at ground target with rifles (.30 caliber Springfield) by Lt. Jacobs Fickel at Sheepshead Bay, LI  
Henri Fabre takes off from & lands on water at Lake Berre, France  
Long distance flying record is set during first successful flight between Albany to NYC 142.5 miles in 2 hours, 50 minutes  
First demonstrated dropping of a bomb from an airplane  
James McCurdy sends an air-to-ground radio message from a Curtiss biplane

- Curtiss plane makes a successful takeoff from a Navy Ship the USS Birmingham flown by Navy Lt. Eugene Ely. The ship was stationed at Hampton Roads, VA
- Blanche Stuart Scott first American female pilot
- Walter Wellman, a newsman & explorer with a crew of 5 left Atlantic City in a dirigible to attempt to fly across the Atlantic Ocean. They made 71-½ hrs. covered 1008 miles before they were forced to abandon the craft off the coast of Maine. Both time & mileage set a record for a powered flight
- Glen Curtiss hurled “Orange Bombs-Over Boats in Miniature Battle” in Atlantic City to show the public the potential of aviation in the military. He flew at a height of 200’ he was decades before his time. Pilots were still called drivers at this time.
- 1911 Curtiss designs the first American seaplane, or hydroplane as it was called Jan. 26 made its first flight of 31 seconds landing smoothly on the water.
- Curtiss Albany Flyer makes 1<sup>st</sup> landing on a ship on the USS Pennsylvania in San Francisco Bay
- Curtiss makes the first water takeoff & landing at San Diego in his Hydro
- Sale of the 1<sup>st</sup> US Navy airplane: Curtiss D Triad as Navy A-1 first flown by Lt. T.G.Ellyson
- Pasadena, CA, Calbraith Rodgers flew the Wright EX Vin Fiz, completes 4,321 miles in 49 days cross-country flight from Sheepshead Bay, NY
- First military aviation school was established at College Park, MD
- Invention of the first dual pilot controls and retractable landing gear
- First issued U.S. pilot’s license-number one
- San Francisco, an Army test, Lt. Myron Chrissy drops a live bomb from an airplane
- Harriet Quimby received her license in 1911 her license number was 37, 1<sup>st</sup> women across the English Channel
- Harry Atwood flies St. Louis to NY 1155 miles, longest cross country to date
- First airmail delivery in US; Earle Ovington flies mail from NYC to Mineola, 6 miles in a Bleriot
- 1912 First flying boat demonstration on Keuka Lake, NY
- First Air Mail was flown from Dominguez, CA to Compton, CA by Martin, and to Catalina Island
- Pau, France, Louis Bechereau’s sleek Deperdussin racer piloted by Jules Vedrines is the first airplane to exceed 100 mph.
- Wilbur Wright dies on May 30, 1912 from typhoid fever
- Frank Coffyn takes automatic movie aerials over New York Harbor
- Boland Brothers (of Rahway, NJ) biplane was the first to fly in Central & South America
- Oliver Simmons flew the 1<sup>st</sup> airmail in a Wright Flyer, owned by publisher Robert Collier, from South Amboy to Perth Amboy.
- 1914 Tourist were flown across Tampa Bay on 1<sup>st</sup> scheduled commercial flight from St. Petersburg, FL to St. Petersburg Tampa
- Over the Seine River, France, Lawrence Sperry flew Curtiss Flying Boat fitted with four gyroscopes, demonstrates stable flying with no hands on the control.
- Russian Igor Sikorsky’s four engine Il’ya Muromets served a meal between Kiev & St. Petersburg
- 1915 U.S. National Advisory Committee for Aeronautics research, forerunner of NASA
- Orville disposed of his interest in the Wright Company, but consults for the company

- 1916 Army aviation was given funds by Congress to expand their fleet, WWI began 4/17  
Curtiss Co. produced the JN-4 “Jenny” military trainer, which would become the airplane of choice for barnstormers & mail carriers after the war.  
High Intensity Arc Lamps were installed for defense  
The Martin & Wright Companies were joined together as the Martin-Wright Company  
Ruth Law flies Curtiss Pusher from Chicago to New York with 2 stops en route for new cross-country record  
First Air Cooled Engine- developed by Charles Lawrence
- 1917 America’s entry into WWI, Curtiss invests \$4 million to build the world’s largest airplane factory in Buffalo, NY  
Pilot Licenses were now being issued to everyone completing training  
Five New Jersey Pilots- became flying aces during World War I
- 1918 May 15, first Air Mail service was inaugurated, and Major Reuben H. Fleet U.S. Army was in charge of this service between Washington, DC to Philadelphia to New York City  
Germany Fokker D VII considered by many the best fighter of WWI, enters service  
August the U.S. Post Office Dept. took over airmail service from the Army  
September the first transcontinental airmail service was in operation from NY to San Francisco, CA  
Lawrence Sperry test flies aerial torpedo over the Great South Bay; 1<sup>st</sup> U.S. guided missile  
First Army transcontinental flight by Major Albert Smith, San Diego-Jacksonville, New York and return
- 1919 In 19 days a six-man crew in a Navy-Curtiss flying boat completes the first transatlantic flight starting from Rockaway, NY to Lisbon Portugal.  
Lt. Cdr. Albert Read & pilot Lt. Walter Hinton fly first aircraft to cross the Atlantic, a US Navy seaplane leaves Rockaway Naval Air Station in Curtiss NC4 flying boat  
Curtiss L-3 tri-plane piloted by Roland Rohlfs sets altitude record of 31,420’  
Albany, NY becomes the first city to establish municipal landing site for airplanes at a former polo field in Latham named Quentin R. Roosevelt Field. It was later relocated to Westerio Island in Hudson River  
Bader Field in Atlantic City became the world’s 1<sup>st</sup> “*air-port*” was coined by a local newsman
- 1920 First attempt at passenger comfort a two-place cabin installed in a DH-4 by air mail mechanics  
September completion of the transcontinental airmail service  
Martin BM-1 America’s first two-engine bomber, powered with 2-400 h.p. Liberty engines, with speeds of 118 mph wingspan of 71’ came off the production line  
Four DeHaveland planes fly from NY to Nome, Alaska & return  
Worlds Largest Plane – the Barling Bomber, was built at Teterboro by the Wittemann Brothers. It was three wings and six engines.

### **THE GOLDEN AGE OF FLIGHT 1921-1935**

- 1921 First transcontinental airmail flight, Mineola, NY to San Francisco; takes 23 hrs. 20 min.  
The Navy built the world’s largest hangar at Lakehurst, NJ
- 1922 The U.S. Navy commissions its first aircraft carrier, the USS Langley

- Thomas Midgely of General Motors files patent for leaded gasoline, which leads to high-test aviation fuels
- First Army Air Route from Mitchel Field to McCook Field, Ohio
- Lawrence Sperry drops landing wheels from his plane in flight & successfully lands with skid device in Farmingdale, NY
- Bessie Coleman makes an exhibition flight at Curtiss Field, Garden City; 1<sup>st</sup> public flight made by a black woman in the U.S., she returned to France where she received her license & became the first woman black pilot
- 1923 Two U.S. Army de Havilland DH-4B's conduct first in-flight refueling
- Lt. Oakley Kelly & Lt. John Macready of the U.S. Army Air Service complete nonstop coast to coast flight from New York to San Diego in a Fokker T-2
- Patented beacon system guiding pilots with mail between airports in the Chicago-Cheyenne leg of the first airmail service route
- Lone Eagle takes off from DC in a Ryan Monoplane goes non-stop to Mexico City in 27 hours 10 minutes of flight time
- USN Lt. Alford Williams sets speed record of 266.59 mph in a Curtiss Racer at Mitchel Field; record would stand until 1930
- The 1<sup>st</sup> of the Navy's ill-fated dirigibles, the "Shenandoah," was built at Lakehurst NAS
- Charles Lanier Lawrence who perfected the 1<sup>st</sup> air-cooled aircraft engine in 1916, joined the Wright Aeronautical Co. in Paterson, NJ & developed the "Whirlwind" engine that would power many historic long distance flights over the next decade
- 1924 Between April 6 & September 28, first flight around the world was made. Four Douglas Cruisers with 2 men started from Seattle, WA. Two planes completed the journey in 175 days, distance flown 26,345 miles total flying time of 363 hrs. 7 minutes. One plane was destroyed in a crash in Alaska; the fourth sank after a crash in the Atlantic on the last lap of the trip
- Continuous chain of lighted airway beacons marked the airmail route from coast to coast
- A U.S. Army pilot flies from Boston to NYC in record 58 minutes solo.
- U.S. Postal Service- established an airport on John Hadley's farm in South Plainfield, NJ. All transcontinental airmail to/from the greater NY metro area passed through Hadley Field. Pilot Dean Smith made the 1<sup>st</sup> night airmail flight over the Allegheny Mountains
- First flight to use instruments USAS Lts. E.H. Bardsdale & E. Jones fly 575 miles from Dayton, OH to Mitchel Field, NY
- First transcontinental flight from dawn to dusk, Army Lt. Russell Maugham flies from NY to San Francisco in a Curtiss PW-8 makes five fuel stops
- 1925 Kelly Act allowing Post Offices to contract with private firms to sixteen companies held fly the airmail routes
- Ford Tri-motor was flown first American all metal aircraft, 3-200 hp engines
- Igor Sikorsky builds his S-29 aircraft in a small building at Roosevelt Field, NY
- Daniel Guggenheim donates \$500,000. towards establishment of School of Aeronautics at New York University
- 1926 First liquid fueled rocket
- Admiral Richard Byrd & Floyd Bennett flew to the North Pole, May 9 but controversy over who flew over the Pole first, Byrd & Bennett or Umberto Nobile & Ronald Amundsen in the dirigible "Norge" three days later. Also flew a trimotor monoplane designed by Anthony Fokker & built at Teterboro. Powered by Whirlwind engines

- Admiral Byrd & three others flew the Ford tri-motor to France
- Amelia Earhart & Wilmer Stultz flew a Fokker from Newfoundland to England. Amelia became the first woman to cross the Atlantic in an airplane
- US Army photographer drop flash powder bombs over Rochester enabling them to take 1<sup>st</sup> night aerial photographs
- 1927 May 21 Paris: Charles Lindbergh lands at LeBourget 33 hrs. 30 min. & 30 sec. after leaving Roosevelt Field, Long Island – first solo nonstop transatlantic flight. Powered by Whirlwind engine.
- In June Richard Byrd & a 3-man crew flew another Fokker trimotor to France, which was the 1<sup>st</sup> official sack of mail between America & Europe
- Alcoa research Edgar Dix introduces Alclad process for fabricating aluminum. Non-corroding airplanes soon take wing
- National Air Transport & the Aeronautic Branch tested aural radio ranges at Bellefonte.
- First Radio Beacon commissioned & began the era of true air passenger service
- Clarence Chamberlain takes aircraft owner Charles Levine & flies non-stop to Berlin from Roosevelt Field; 1st passenger to cross the Atlantic & new distance record set Flight lasted 42 hrs. & 45 min. was 9 hrs. 15 min. longer than Lindbergh's a Paterson built Wright-Bellanca monoplane with a Whirlwind. This was done two-weeks after Lindbergh's historic flight.
- Lt. Albert Hegenberger & Lt. Lester Maitland makes first long-range Pacific crossing (Oakland, CA to Honolulu in an Atlantic Fokker C-2 Bird of Paradise using dead reckoning
- 1928 Five feet of snow, 18 degrees below zero, 32 men worked in October to light the "Great Salt Desert" portion of the Transcontinental route, the Collier Trophy was awarded
- First solo, round-trip transcontinental crossing by a woman, Amelia Earhart leaves from Rye, NY to Glendale, CA and returns
- Amelia Earhart became the 1<sup>st</sup> woman to fly across the Atlantic as a passenger in a Fokker trimotor
- Newark Metropolitan Airport – opens as the only major commercial airport in the greater NY area, it soon became the *busiest in the WORLD*, a title held throughout much of the 1930's
- 1929 Mitchell Field, NY, Lt. James H. Doolittle takes off in a Consolidated NY-2, reverses direction, then returns to point of departure solely by instrument readings
- Link Trainer developed by Edwin A. Link at Binghamton, NY first electro-mechanical flight simulator
- Captain Frank Hawks flies from New York to Los Angeles in record 18 hrs. 22 minutes
- Elinor Smith seventeen years old, sets a women's solo endurance record of 26 hours, 21 minutes, 32 seconds in a Bellanca CH Monoplane at Roosevelt Field
- First Transcontinental non-stop round trip Nick Marner & Art Walker fly a Buhl CA-6 Special using air to air refueling to travel 7200 miles from Spokane WA to NYC
- Cleveland National Air Race took place with lots of women contestants
- The first organization for woman pilots the Ninety-Nines is formed at Curtiss Field in Valley Stream, NY
- Anne Morrow Lindbergh makes her first solo flight to Hicksville, NY
- Two of Aviation's greatest names Curtiss & Wright joined forces forming the Curtiss-Wright Corp. based in Paterson, NJ

- Leaving Lakehurst NAS- the 775' German "Graf Zeppelin" flew around the world in 21 days
- 1930 Charles Lindbergh & Ann Morrow set transcontinental speed record L.A. to NY in 14. hours 45 minutes  
Maiden flight of the first Schweizer glider takes place at Peekskill, NY, materials cost \$135.00  
Glider pilot Captain Frank Hawks released from Seaplane, Port Washington, NY  
 France's Costes & Bellonte first to link Paris to New York flying east to west  
First woman's solo transcontinental flight, Laura Ingalls flies a De Haviland Gypsy Moth from Roosevelt Field, NY to Glendale, CA with nine stops.  
First Transcontinental commercial service began in New York City and Los Angeles.  
Ellen Church the first airline stewardess works a Boeing Air Transport flight from Oakland, CA  
Cleveland Municipal Airport first in nation equipped with radios between tower & aircraft  
First Soaring contest hosted at Elmira, NY "Soaring Capital of America"  
Anthony Fokker built the largest passenger plane in the world at Teterboro. The F-32 would accommodate 32 passengers in a luxurious cabin.
- 1931 Wiley Post & Harold Gatty fly first single engine aircraft flight around the world, 15,474 miles from Roosevelt Field, NY in the Lockheed Vega "Winnie Mae"  
Dirigible Akron carries record number of 207 persons in flight over New York City  
Charles & Anne Lindbergh fly great circle route from NYC to China for Pan Am World Airways  
Notre Dame football coach Knute Rockne dies in crash of TWA Fokker F-10A. Public concern over air safety leads to the demise of wood-wing aircraft.
- 1932 Jackie Cochran obtains her pilot license at Roosevelt Flying School, Long Island, after only 3 weeks of instruction. In 1980 she would hold more speed & altitude records than anyone else in the world man or woman.  
Airways both lighted & ranged by radio, first passengers that boarded aircraft that were running on a schedule. There were 44 airlines flying the mail & passengers.  
All aircraft equipped with 2 way radios  
Franklin D. Roosevelt is 1<sup>st</sup> president to use air travel. After being nominated as the presidential candidate at the Democratic Convention he flies from Albany, NY where he was Governor to Chicago to deliver his acceptance speech.  
First modern day airliner  
Amelia Earhart- made her preparations for her solo Atlantic flight at Teterboro. *Ed Gorski* was her mechanic & *Bernt Balchen* taught her navigation. Both accompanied her to Harbour Grace, Newfoundland from where she departed to Ireland  
Casey Jones School of Aeronautics was established in Newark. During WWII, the school produced more than 17,000 Air Corps mechanics & technicians. The school is now the College of Aeronautics at LaGuardia Airport
- 1933 First global solo flight. Wiley Post flies 15,596 miles from and returns to Floyd Bennett Field, NY in the Lockheed Vega, "Winnie Mae"  
First Flight of Boeing 247, a low-wing, twin engine, all metal monoplanes that revolutionized air transport design

- Teaneck High School was 1<sup>st</sup> in the nation to offer an aviation course. Dozen of boys and girls learned to fly, 1<sup>st</sup> in a glider flown down the hill in front of the school, then at Teterboro Airport. Most went on to serve as aviators in WWII
- Atlantic City- Dr. Albert Forsythe with Alfred Anderson became the 1<sup>st</sup> African Americans to fly across the U.S. and 1<sup>st</sup> to fly to Canada, & various Caribbean Islands
- 1934 American Airlines inaugurates sleeper service between New York & Chicago  
Col. Roscoe Turner flies from New York to Los Angeles in 10 hrs. 2 minutes  
U.S. Army Air Corps purchases six Link Trainers; also know as the Blue Box, the 1<sup>st</sup> flight simulator to train pilots for instrument flying.  
Glen A. Gilbert an American Airlines radio operator in Chicago starts “flight following” for American. It grows to include many other airlines in and out of Chicago  
Italy- Lake Garda, Marshall Francesco Angello flying a Macchi Castoldi MC-72 set speed record of 440 mph at the Schneider Cup seaplane race, an international competition that pushes the boundaries of aircraft speed. Early winners only made 100 mph
- 1935 Newark, NJ Airline companies organize & staff first air traffic control center. Federal Bureau of Air Commerce opens a tower in Chicago the following April  
First flight with the Rolls-Royce Merlin V-12 engine, the most important engine used by the Royal Air Force during WWII powering Hurricane & Spitfire aircraft.  
Pan American’s Martin M-130 flying boat China Clipper delivers first trans-Pacific airmail following six-day flight from San Francisco to Manila, Philippines. Passenger service to Asia begins 11 months later.  
Army planes diverted lava flow in Hawaii by aerial bombardment  
Mass flight of 20 bombers completed flight from California to Florida in 21 hrs. 50 min.  
Douglas DC-3 introduced, the most popular passenger airplane of its era  
Don Luscombe the innovative builder of pleasure aircraft moved his company from Kansas City to Mercer County Airport in West Trenton. The new plant was organized on a production line basis, a revolutionary concept for the aircraft industry  
Thor Solberg a native of Norway, became the 1<sup>st</sup> aviator to fly from NY to Norway. His plane was a Wright Cyclone powered Loening amphibian. *Paul Oscanyan* of Bogota, NJ accompanied Solberg on the 5,300 mile flight. Upon returning to U.S. Solberg established an airport in Readington, NJ where the state’s balloon festival is held yearly
- 1936 First rocket airmail flight made at Greenwood Lake, NJ  
Aerial traffic report broadcast from the Goodyear Blimp over NYC  
First practical flight of a helicopter, the German Focke-Achgelis FW-61 (French helicopter pilot Paul Cornu had hovered one foot off the ground for 20 seconds, in 1907  
First Rocket Plane to carry 50 times its own weight was launched across Greenwood Lake to Hewitt, NJ  
Zeppelin Hindenburg made the 1<sup>st</sup> regularly scheduled passenger flight between Germany & the U.S. Lakehurst NAS became our nation’s 1<sup>st</sup> transatlantic air terminal. The airship made 10 round-trip flights that summer  
Chester Decker 19 yrs. Old of Glen Rock, NJ became the National Soaring Champion in Elmira, NY. At the next meet Decker established a new soaring record of 246 miles from Elmira to Atlantic City in his motor less craft. Again national champion in 1939
- 1937 The Hiddenburg catches fire, killing 35 people with 97 survivors & ending the era of commercial travel in rigid airships this was the 1<sup>st</sup> summer voyage May 6

- First regular commercial transatlantic airline service in America – Pan American Martin & Boeing Flying boats departed & arrived at Port Washington.
- Control of approach & departures became critical during peak times with 50-60 departures or arrivals. Federal ATC was used in Newark, Chicago, and Cleveland. Glen Gilbert became the first chief of the organization.
- 1938 First non-stop transcontinental bomber flight Army B-18s from Mitchel Field
- Ailine Pat Rhonie becomes first American to obtain an Irish Commercial pilot's license. She was also the first woman to fly solo from New York to Mexico City and return.
- Howard Hughes & a crew of four leave from Floyd Bennett Field, fly northern course for record breaking around the world flight 14,791 miles in 3 days, 19 hrs. & 8 minutes.
- A flight plan to California on file, Douglas "Wrong Way Corrigan" flying a Curtiss Robin lands in Dublin, Ireland after non-stop flight from Bennett Field, Brooklyn, NY
- Berlin to NYC non-stop flight by Capt Alfred Henke.
- First Piper J-3Cub produced a name that would become synonymous with light aircraft.
- Johnnie Jones makes first transcontinental non-stop light plane flight in an Aeronca KCA from L.A. to NYC.
- Test pilot Edward Elliott makes first flight of Curtiss XP-40 at Buffalo, NY. Almost 14,000 P-40's will be built before production ends in 1944
- 1939 First long range aerial reconnaissance – Lt. Curtis Lemay flies 750 miles out to sea from Mitchel Field & intercepted Italian Ocean liner "Rex"
- Elimira's Schweizer-Aircraft Corp. oldest privately owned aircraft company in the US is incorporated; originally formed in 1937 as the Schweizer Metal Aircraft Company.
- Transcontinental speed record set by USAAF Lt. Ben Kelsey from March Field, CA to Mitchel Field, NY average speed was just under 400 mph.
- Pan American Airways first transatlantic scheduled airlines flies NY to Portugal & France in a Boeing 314 Yankee Clipper.
- First flight of Lockheed P-38 fighter, equipped with Allison V1710 engines, which could function well at high altitudes
- Kasumigaura Airfield, Japan, first test flight of the Zero, the carrier-borne Japanese Fighter used to attack Pearl Harbor
- AOPA Aircraft Owners & Pilots Association is formed
- Marieneke, Germany: first flight of a jet aircraft the Heinkel He-178, with engine designed by Hans von Ohain
- 1940 Republic Aircraft delivers 9,000 of 15,000 P-47 Thunderbolts which is the largest producers of fighter aircraft. Wildcat (F4F) & Hellcat aircraft were produced by Republic & Grumman for the war effort. First Super marine Spitfire
- First anti-aircraft defense area set up at Mitchel Field.
- First airport to have shops & services for waiting passengers – LaGuardia
- The Mitsubishi A6M2 Type O Model 11 carrier-based fighter known as a "Zero" was used in the war between Japan and China
- Oct. 25 first flight of P-51 Mustang fighter (prototype), which escorted allied bombers over Germany.
- July 8, Los Angeles: Boeing 307 Stratoliner with a pressurized cabin that made air travel at high altitude possible, debuts with a 12 hour TWA flight from New York. TWA & Pan American Airways flew these aircraft.
- Goal to build 50,000 aircraft was set in early 1940 as the U.S. was off to a late start.

- The B-17 weighing sixteen tons grew to a giant of twenty-two ton bomber w/1,200 hp. Curtiss-Wright Corp became the leading builder of aircraft engines & propellers. The Bendix Aviation Corp's Eclipse Aviation Division at Teterboro developed & built electronic starters, sextants, generators, drift meters, voltage regulators & other aircraft instruments. They also had facilities in Hackensack, North Bergen & Little Falls. Aircraft radios designed & developed by NJ technicians at the Aircraft Radio Corp. in Boonton were used by both the Army & Navy. The General Motors plants in Linden & Trenton built more than 13,500 Grumman Wildcat & Avenger fighter planes. Bayway refinery, Standard oil of NJ (now Exxon) developed 100/130 octane aviation fuel that gave allied fighter planes a power edge over enemy aircraft
- 1941 Bombing by the Japanese of Pearl Harbor
- 1942 Pan American "Pacific Clipper" arrives in New York having completed the first around the world flight by a commercial airplane.  
July 19 Germany Messerschmitt Me 262 Schwalbe, world's first operational JET fighter & the first airplane with a swept-wing design, takes off under jet power. About 300 would see combat, but too late to affect the outcome of the war.  
Oct 1, Muroc, CA: Robert Stanley pilot's flies U.S. Jet aircraft the Bell XP-59A Airacomet with a G.E. engine copied from British jet pioneer Frank Whittle's W.IX.
- 1943 Jan 13: Germany: First emergency ejection from an aircraft. From the prototype of the Heinkel He 280 V1  
July 27: Bryan, TX, Acting on a dare Army flight instructor Maj. Joe Duckworth pilots a single-engine AT-6 trainer into the eye of a hurricane twice on the same day. Scientific "hurricane hunting flights begin soon after.  
Oct. 3: Cleveland, OH: Trailing their German counterparts, U.S. engineers build the first afterburner for jet engines at the NACA's Lewis Flight Propulsion Laboratory in Ohio  
Six hundred fifty B-17's & B-24's made first major strike on German V-Weapons sites
- 1944 The Coast Guard flies blood plasma to 100 crewman burned in an explosion aboard a US Destroyer a few miles out of NY harbor, 1<sup>st</sup> recorded mercy mission by a helicopter.  
Dec 7, Chicago: Convention on International Civil Aviation establishes principle of a nation's sovereign airspace.
- 1945 March, Japan: Hundreds of Boeing B-29's the most ferocious bomber of the war; begin devastating night attacks of Japan's industrial & economic infrastructure.  
P-80 became the United States Air Force's first Jet fighter  
August 6 & 9: U.S. using the first atomic bomb bombed Nagasaki & Hiroshima.  
Major Thomas McGuire of Ridgewood, NJ became America's 2<sup>nd</sup> leading flying ACE with 38 enemy aircraft to his credit  
Capt. Bob Lewis of Ridgefield, NJ was the co-pilot aboard the B-29 "Enola Gay" that dropped the 1<sup>st</sup> atomic bomb on Hiroshima, Japan, thus ending WWII
- 1946 U.S. Civil Aeronautics Administration (CAA) introduces VHF omni directional radio range (VOR) stations, enabling pilots to stay on course by watching a needle on their instrument panel  
First radar-equipped control tower for civilian aviation demonstrated by CAA in Indianapolis, IN  
Intercontinental ballistic missile research starts in U.S.  
Jet propelled P-80 sets non-stop transcontinental record 4hrs.-13 min. Long Beach-NY

- Schweizer Aircraft organizes a commercial glider school; still active it's the oldest commercial glider school in the world.
- 1947 Longest flight by a fighter 4,968 miles Honolulu to NY 14 hrs.- 32 min.  
First Supersonic flight- Chuck Yeager breaks the "sound barrier" in Bell X-1  
 U.S. Air Force was established. The rocket engines that powered the sleek craft was designed & built by Reaction Motors in Denville, NJ. In 1959 the company developed the XL99 rocket motor that propelled the experimental North American X-15 in excess of 4,000 mph. The X-15 was the 1<sup>st</sup> plane to fly into space.  
Howard Hughes' Spruce Goose, the largest airplane ever built (wingspan 319'-11") makes its only flight  
First flight of Soviet MiG-15, the intimidating Korean War Fighter.  
Two Light, single engine Piper Cub Super Cruisers were flown from Teterboro Air Terminal around the world by *Clifford Evans & George Truman*. They took off August 10 & returned Dec. 10 flying 25,162 miles in 123 days, a feat that had never been accomplished in light aircraft.
- 1948 Berlin Airlift  
DuPont begins commercial production of titanium a lightweight metal that will revolutionize  
Commercial aircraft industry operations begin at a major new airport built on the site of Idlewild Golf Course. It was later renamed to John F. Kennedy Airport in 1963 Jamaica, N.Y.  
Convair XF-92A is first U.S. jet with a delta wing, a shape that will become standard for supersonic aircraft from the F-102 to the space shuttle  
A B-36 completed a 9,300 mile non-stop flight without refueling  
C-47 using rocket boosters rescue twelve USAF pilots from Greenland Icecap
- 1949 Air Force B-50 Superfortress Luck Lady II lands after nonstop round-the-world flight aided by aerial refueling, proving ability to deliver nuclear weapons anywhere in the world  
Berlin Airlift ends after delivering 2.3 million tons of food, coal and supplies over 15 months  
William P. Odom- flew nonstop from Honolulu, HI to Teterboro Air Terminal in a single-engine Beech Bonanza. The flight was 4,957 miles established the International distance record for a light aircraft.
- 1950 New transcontinental record Burbank to LaGuardia-4 hrs. -52 min. -Paul Mantz in P-51 Mustang  
Late 1950's the age of flight became the *Jet Age* & throughout the nation science turned its attention to the conquest of outer space. Again NJ scientists, technicians & craftsmen were in the front ranks of avionics development. Their workshops were the Bell Labs in Murray Hill, RCA Astro in East Windsor, ITT of Nutley, the Army Signal Corps Labs at Fort Monmouth, the Navy Air Turbine Test Center in Trenton, the Forrester Center at Princeton, the Bendix/Allied Signal Corp. at Teterboro, Marotta Scientific Controls in Montville and similar research & development centers in the Garden State.
- 1951 Annual air passenger-miles (10,679,281,000) exceed traveled Pullman (train) car passenger miles (10,225,714,000)

- In NACA wind tunnels, aerodynamicist Richard Whitcomb verifies, “area rule”, a key to reducing drag, which hampered supersonic jets. Northrop F-5 was on design of this principle
- An Arro jetliner flies from Chicago to NYC in 1 hr. 42 minutes
- Charles Blair flying a converted Mustang fighter sets NY to London record 7 hrs. 48 min.
- First Electronic Flight Simulator invented by *Richard Dehmal* of Short Hills, NJ was produced at the Curtiss-Wright Carlstadt, NJ plant.
- 1952 First flight of a Boeing B-52 Stratofortress bomber, cold war icon & star of the film *Dr. Strangelove*
- Johannesburg, South Africa first passenger jet, Britain’s de Havilland Comet, inaugurates services from London. A series of crashes in the early 1950’s due to metal fatigue leads to a redesign, & forever tarnishes the Comet’s reputation.
- Pan American Airlines inaugurates first all cargo air carrier service across the North Atlantic from New York to England
- Transcontinental light planes record by Max Conrad, L.A. to NY nonstop 24 hrs –54 min.
- 1953 Paul Poberezny starts the Experimental Aircraft of America EAA
- Air Force B-29 flies cross-country on autopilot, verifying reliability of MIT researcher-Charles Stark Draper’s new inertial navigation system
- First flight of F-100 supersonic fighters
- Powered by Pratt & Whitney’s fuel-efficient J-57 engine, the YF-100A becomes first fighter to reach supersonic speed in level flight.
- 1954 First Mach 2 flight
- American Airlines DC-7 sets L.A. to NY commercial speed record 6 hrs. – 10 min.
- 1955 First transcontinental round trip flight in one day. USAF Lt. John Conroy flies a North American F-86 from NYC to Los Angeles & return over 5085 miles in 11 hrs. – 33 min.
- Delta Air Lines pioneers the hub & spoke system for routing flights through a central airport.
- First flight of U-2 spy airplane
- 1956 G.E.’s J-79 jet engine propels the F-104 Starfighter to speeds & altitude previously achieved only by rocket planes.
- Midair collision of TWA Super ‘Constellation’ & United Air Lines DC-7 over the Grand Canyon kills all 128 passengers & leads to improved air traffic control system. The FAA Federal Aviation Administration was an outcome of this incident.
- First Mach 3
- First use of computers for air traffic control- FAA taps Sperry-Univac for this use
- 1957 First transcontinental supersonic flight, USAF Major John Glenn flies from Los Alamitos, CA to Floyd Bennett Field, NY in a Vought F8U in 3 hrs. – 22 minutes.
- Sputnik 1 was launched by Soviets signals received from world’s first artificial satellite
- 1958 Pam Am flies first Boeing 707 jetliner NY to Paris 8 hrs. 41 minutes
- First U. S. Satellite Explorer & NASA established
- Michael Stokoff – built the largest aircraft,(YC-134A) up to that time at his Trenton, NJ base- Mercer County Airport
- 1959 First hypersonic flight & microchip invented
- Five Air Traffic Control centers use computers for flight information
- Charles Fletcher of Franklin, NJ invented, and flew the world’s first hovercraft.

- 1961 “Take me to Cuba” first series of aircraft hijackings in the U.S. begins when a passenger on a flight to Key West, FL forces the pilot to fly to Cuba.  
Love Possessed is the first film shown as part of regular in-flight movie services offered by TWA (Deutsche Luft Hansa was the first airline to show a film in flight 4/6/25)  
First Man in Space – Russian & first American to orbit the earth John Glenn
- 1962 Astronaut Walter M. Schirra, Jr. of Oradell, NJ circles the globe in the Mercury spacecraft for nine hours, 13 min. In 1966, he would again fly in space in the Gemini 6 & Apollo 7 capsules. He was the only astronaut to fly in all 3 original spacecraft.
- 1963 NASA pilot Joe Walker sets unofficial world altitude record of 354,200’ in the X-15 rocket powered aircraft  
First Learjet model 23 makes first test flight, inaugurating a brand that would become synonymous with “business travel”  
First Women in Space – Russian
- 1964 First flight of SR-71 Blackbird the world’s fastest & highest flying production aircraft  
Two Univac 1218 Computers bring automation to Air Traffic Control in Atlanta, GA. Called ARTS used advanced electronics to tag radar blips with symbols, letters, and number alphanumeric  
Mitsubishi uses American ATC knows how goes overseas as ARTSIII system for installation at two Japanese airports, Hameda in Tokyo and Itami in Asaka  
Beginning of the Vietnam War
- 1965 First Gemini Flight  
Gay Dalby Maher – Medford, NJ became the 1<sup>st</sup> person to fly a helicopter from coast to coast
- 1967 FAA begins requiring Cockpit Voice Recorders in large passenger aircraft. In Sept. the agency publishes new air cabin safety rules, dictating everything from number of exits to stowing of carry-on baggage  
Hugh Dennis Wisely – of Kearny, NJ was the 1<sup>st</sup> American fighter pilot to shoot down two enemy MIG aircraft during the Vietnam War.
- 1968 After a wave of hijackings, the FAA announces that “sky marshals” have begun flying on Florida-bound flights  
Soviet Tupolev TU- 144 is first supersonic airliner to fly, beating the European Concorde by two months  
First C-5 flight
- 1969 Boeing 747 jumbo jet with a capacity of 452 passengers makes first flight  
The FAA certifies the first airplane made entirely of composite materials, the Widecker Eagle AC-7  
Apollo 11 landed on the Moon/Astronauts sent live photos from the moon. Month’s prior to this landing Russell Schweickart of Neptune, NJ, was 1<sup>st</sup> astronaut to test the Apollo space suit outside a spacecraft.  
Col. Francis “Gabby” Gabreski retires from the Air Force commanding the 52<sup>nd</sup> Fighter Wing at Suffolk County AFB. At the time he is the greatest living Air Ace with 34.5 kills during WWII & Korean War.  
Edwin “Buzz” Aldrin, Jr. of Montclair, NJ was 1<sup>st</sup> man to land a vehicle on the moon.
- 1970 Gallup poll finds that about half (47%) of American adults have flown on a scheduled airline
- 1971 First mission to orbit another planet, Mars Mariner 9

- D.B. Cooper disappears in Washington state after parachuting from a Boeing 727 with \$200,000 in extortion money. Still history's only unsolved hijacking
- 1972 Beechcraft Baron pilot suffers heart attack while making an approach at Shreveport, Regional Airport, LA a passenger manages to pull him off the yoke, ATC managed to get the aircraft on the ground using ARTSIII approach tool  
Edwards AFB, NASA F-8 research flight demonstrates a computerized, "fly by wire" flight control system. First put to service in a F-16 fighter, widely used by planes today ranging from airliners to the space shuttle.
- 1973 FAA anti-hijacking regulation takes effect, requiring all U.S. carriers to inspect carry-on luggage & scan passengers with metal detectors  
First U.S. manned orbital workshop flights (Skylab 1 & 2)  
Malcolm Forbes- of Far Hills, NJ, flew the 1<sup>st</sup> hot air balloon from coast to coast
- 1975 Apollo & Soyuz flight
- 1976 Concorde Service begins from France to U. S. or Great Britain
- 1977 Laker Airways pioneers Cut-rate air fares with its Skytrain service from London to NY  
Human powered aircraft experiments
- 1978 First transcontinental Balloon flight  
President Jim Carter signs the Airline Deregulation Act of 1978, leading to dramatic fare reduction & a still-ongoing shakeup in the airline business
- 1979 Raytheon Corporation takes over the Beechcraft Company  
Cyclist Bryan Allen pilots a human-powered vehicle, the 70-pound Gossamer Albatross, across the English Channel  
Voyager encounters Jupiter
- 1980 Leo Loudenslager of Sussex, NJ became the world's aerobatic champion. He won seven national aerobatic titles
- 1981 Newark, NJ: People Express begins cheap passenger service, becomes the 5<sup>th</sup> largest airline by 1986, and then files for bankruptcy later that year  
First flight of F-117A stealth fighter in Nevada  
First Space Shuttle - Columbia  
NY tracon handles its first aircraft a Lockheed Electra, ATC later landed over 1200 aircraft from three major NY area airports. Most modern equipment anywhere
- 1983 Rutan & Yeager 1<sup>st</sup> flight of Voyager  
First Women in Space in U.S.  
Supersonic Concorde makes record flight, NY to London in 2 hrs, 56 minutes
- 1984 Kathryn Sullivan of Paterson, NJ, became the first woman to walk in space
- 1986 Executive Jet pioneers the concept of business jet timeshare with its NewJets Program  
Space station Mir was launched  
Jeana Yeager & Dick Rutan land their homebuilt Voyager after completing the first non-stop refueled flight around the world.
- 1987 Stealth F-117 fighter made its' depute
- 1988 First flight of Antovonv AN-225 Mriya transport at 1.3 million pounds the heaviest aircraft ever built.  
Around the world in 37 hrs. 8.5 minutes faster than previous records. Record held by 747 Jumbo jets
- 1989 Space probes Magellan & Galileo launched in 1989
- 1991 Persian Gulf War & beginning of GPS navigation

- First project under the FAA's Military Airports Program –Stewart Airport  
Major Marie Rossi of Oradell, NJ, became the 1<sup>st</sup> American woman to fly in combat during the Gulf War  
Rick Trader of Elwood, NJ (southern half) flew his fragile ultra-light aircraft from NJ to California, and on to Alaska in nine months.
- 1993 Global Position System (GPS) network goes into operation, initially with 24 satellites, revolutionizing global navigation  
Citation X business jet hits Mach 0.92
- 1994 First flight of Predator Unmanned Aerial Vehicle (UAV) Era of pilot less military aviation begins with reconnaissance flights over Bosnia a year later
- 1995 Mooney Aircraft Corporation delivers its 10,000 aircraft
- 1996 Mars Pathfinder lands on Mars & Atlantis docks with Mir
- 1997 First test flight of the half-helicopter, half-airplane V-22 Osprey – Arlington, TX  
Mars Pathfinder lands on Mars & International Cassini Space probe launched  
Lunar Prospector launched, The International Space Station agreement was signed
- 1998 First flight of the high flying Global Hawk UAV reconnaissance aircraft  
Hubble Space Telescope sends images of planets outside of our solar system
- 1999 First comet sample return mission launched- Stardust  
Colonel Eileen Collins becomes the first woman space shuttle commander commanding The Shuttle Columbia She is a native of Elmira, NY
- 2000 Airbus begins production on A380 “super jumbo” passenger jet, capable of seating 840 passengers  
International Space Station begins assembly process  
First airport to be privatized under federal privatization pilot project, Stewart Int'l Airport Newburgh, NY
- 2001 Lockheed Martin X-35B takes off vertically, flies a supersonic “dash” then lands vertically at Edwards AFB, CA  
Remotely piloted Helios flying wing sets altitude record (96,863) for propeller-driven airplane in Hawaii
- 2002 NASA/F/A-18 begins testing Active Aeroelastic Wing (AAW) technology for flight control, a 21<sup>st</sup> century twist on the wing warping technique pioneered by the Wright Brothers

MATERIAL WAS GATHERED FROM ONE OF THE FOLLOWING SOURCES:

Wm. J. Hughes Technical Center – displays  
 Aviation Hall of Fame of New Jersey – H.V. Pat Reilly  
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 The Challenging Skies- Years 1903-1966 by C. R. Roseberry  
 Empire State Aviation Newsletter Winter 2002-2003 Joseph H. Boardman  
 The Wright Brothers –  
 AOPA Web page First Powered Flight  
 Celebrating A Century of Powered Flight- U.S. Centennial of Flight Commission