Throughout his Hollywood years, Hughes maintained his passion for flying. Like the movies, aviation was booming in Southern California, making the region a centre for new technology. Hughes was in the thick of it, but unlike other aircraft entrepreneurs, he preferred spending his time in a cockpit rather than a boardroom.

In 1934 he won his first speed title flying a converted Boeing pursuit plane 185 miles per hour.

Howard Hughes poses next to the red H-I aircraft in which he set the trans-continental speed record in January 1937

He and a young Caltech engineer, Dick Palmer, then built a plane called the H-1 (featuring a unique retractable landing gear) which Hughes piloted to a new speed record of 352 mph near Santa Ana, Calif. This was in 1935, the year that Hughes founded Hughes Aircraft Company as a division within Hughes Tool Company, operating out of a hangar in Burbank, Calif.

In 1935 he equipped a Northrop Gamma H-1 with the newest 1000-horsepower Wasp engine, and broke the old air speed record of 314.3 miles per hour (505.Skph) by thirty-eight miles per hour (6lkph). On June 14, 1936, Hughes set a transcontinental speed record by flying from Los Angeles to Newark Airport in nine hours and twenty-seven minutes, heating Roscoe Turner's 1934 record by two full hours.

Hughes (in flight cap) inspects the plane after a 1935 mishap in which he was forced to land with the retractable landing gear locked in the closed position. He had earlier set a speed record of over 347.3 miles per hour

In January 1937, after further work on the Gamma H-1 (using the wind tunnel at Cal-Tech, which he helped to fund), he cut yet another two hours off his own record, crossing the country in seven hours and twenty-eight minutes. Aviation professionals regarded the feat as reckless because he flew much of the way at altitudes above fifteen thousand feet (4,572m) without any special oxygen equipment. Hughes' crowning achievement came on July 14, I938, when he shattered Wiley Post's round-the-globe speed record by circling the Northern Hemisphere (essentially Post's route) in three days, nineteen hours, and eight minutes (about half the eight days Post needed). When Hughes' Lockheed twin-engine 14-N Super Electra, which was equipped with two enormous Wright Cyclone engines, the most powerful available, landed at Floyd Bennet Field, a throng of twenty-five thousand New Yorkers rushed onto the field to the plane to congratulate him. Upon his return, Hughes was given a ticker tape parade down Broadway in New York City. He was at the height of his popularity.

Lockheed twin-engine 14-N Super Electra

The years of World War II were frustrating years for Hughes, who hoped to transform Hughes Aircraft into a major airplane manufacturer after winning government contracts for two experimental aircraft. All around him, Southern California aircraft manufacturers were producing fleets of new planes. As it turned out, Hughes Aircraft produced armaments, but not a single plane for the war effort.


The United States government contracted Howard Hughes to build a high altitude spy plane that could go above radar with a special camera using newly developed fine grain film. Howard was a pioneer of innovative ideas such as the flat rivet to make aircraft more aerodynamic and was always the test pilot in a new plane. The twenty-eight cylinder engines in the XF11 developed more than enough power to the counter- rotating double propellers designed to create more thrust. Thirty minutes into the flight, the gear boxes made for the propellers failed, leaving Hughes without power and causing an out-of- control crash in Beverly Hills which destroyed two homes. The wreck that he miraculously survived left him scarred for life, addicted to morphine, and a recluse.

Debris from the crash of Howard Hughes' XF-11 reconnaissance plane lies scattered between two houses damaged after the plane's test flight on July 7, 1946. Hughes was seriously injured when the landing gear jammed.

One contract was for a photo-reconnaissance plane, a prototype of which (the XF-11) crashed in Beverly Hills shortly after the war during a test flight with Hughes at the controls, almost killing him. The other contract was for a plane with which Hughes is forever linked in the public mind -- a troop and cargo carrier made of wood and known by various names (the H-4 Hercules, the Hughes Flying Boat, the "flying lumberyard"), but most popularly as the "Spruce Goose."

When Howard Hughes thought he thought big and he never hesitated to take new directions. Conceived when German U-boats were ravaging Allied shipping in the Atlantic, the "Spruce Goose" was built primarily of birch -- not spruce -– in response to a wartime metal shortage. It had eight engines and the capacity to carry 700 troops or a load of 60 tons. In terms of wingspan (320 feet, which is longer than a football field) and weight (400,000 pounds) it is still the largest plane ever built. The war ended before it was completed. But it was flown -- once -- in Long Beach Harbour on Nov. 2, 1947.

Spruce Goose during its short flight

With Hughes at the controls, the Flying Boat achieved a top speed of 80 mph, lifted 70 feet off the water, and flew a mile in less than a minute before making a perfect landing. The plane was then

towed to a Terminal Island dry-dock, cocooned inside a giant hangar, and never seen again by the public during Hughes' lifetime. Hughes' Summa Corporation spent close to a million dollars a year for the lease and maintenance. After his death, the Flying Boat was put on exhibit in Long Beach Harbour beside the Queen Mary; it has since been moved to McMinnville, Ore., for display in an aircraft museum.

"It was as if he was missing the gene for corporate success," write Bartlett and Steele in their biography of Hughes. In 1948, he bought a controlling interest in RKO Radio Pictures, which he almost brought to ruin with his aberrant management style. He did much the same with Trans World Airlines (TWA), whose controlling interest he bought in 1939. Although he did much to transform TWA into a major international carrier, his secretive ways and quixotic decisions nearly plunged the airline into bankruptcy. In 1966 he was forced to sell his TWA shares after losing a lawsuit that charged him with illegally using the airline to finance other investments. The sale netted Hughes over half a billion dollars. To many, it seemed more like a victory than a defeat.

That same year, 1966, Hughes moved into the Desert Inn Hotel in Las Vegas, which he proceeded to buy (rather than be evicted), along with four other Las Vegas casinos, a radio station, and other Nevada properties. He hired an ex-FBI agent, Robert Maheu, to protect his privacy and keep him out of court, even when his own legal interests were at stake. He had become "the hermit gambling entrepreneur of Las Vegas."

Even before moving to Nevada, while he was living at the Beverly Hills Hotel, Hughes had exhibited alarming behaviour. In 1958, he apparently suffered a second mental breakdown, the first having occurred in 1944. Of his days at the Beverly Hills Hotel, Bartlett and Steele write: "Hughes spent almost all his time sitting naked in [his white leather chair] in the center of the living room – an area he called the 'germ free zone' – his long legs stretched out on the matching ottoman facing a movie screen, watching one motion picture after another." The same pattern was repeated in Las Vegas, made worse by a drug habit that included both codeine and Valium. (The codeine had first been prescribed to alleviate pain from injuries incurred in the XF-11 plane crash years earlier.)

Although Hughes managed to attend to business and had many periods of lucidity (he held a telephone conference call with reporters in 1972 to repudiate a book by Clifford Irving purporting to be Hughes' taped reminiscences), his physical health had turned precarious. A doctor who examined him in 1973 likened his condition to prisoners he had seen in Japanese prison camps during World War II. That same year, ironically, Hughes was inducted into the Aviation Hall of Fame in Dayton, Ohio. He was represented by a member of his 1938 around-the-world flight crew. One of the inductees defended Hughes, calling him "a modest, retiring, lonely genius, often misunderstood, sometimes misrepresented and libeled by malicious associates and greedy little men."

In the final chapter of his life, Hughes left Las Vegas for the Bahamas where he stayed until he moved to Mexico, reportedly to have greater access to codeine.

(X-rays taken during the Hughes autopsy show fragments of hypodermic needles broken off in his arms.) He died of apparent heart failure on an airplane carrying him from Acapulco to a hospital in Houston.

"Such was the mystery and power surrounding his life that when he was pronounced dead on arrival at Methodist Hospital in Houston, Texas, on April 5, 1976, his fingerprints were lifted by a technician from the Harris County Medical Examiner's Office and forwarded to the Federal Bureau of Investigation in Washington," write Bartlett and Steele. "Secretary of the Treasury William E. Simon, for federal tax purposes, wanted to be sure that the dead man was indeed Howard Hughes. After

comparing the fingerprints with those taken from Hughes in 1942, the FBI confirmed the identity." He had not been seen publicly or photographed for 20 years.

Howard Hughes' greatest legacy to Southern California is the family of Hughes companies founded during his lifetime. These include Hughes Aircraft Co. (1935) and Hughes Space and Communications Co. (1961), a unit of Hughes Electronics Corp. Based in Westchester, Calif., Hughes Space and Communications is the world's largest manufacturer of commercial satellites, the designer and builder of the world's first synchronous communications satellite, Syncom, and the producer of nearly 40% of the satellites now in commercial service. Hughes Electronics is owned by General Motors. Hughes Aircraft merged with Raytheon Company in 1998 and is now called Raytheon Systems Co. Prior to the merger, Hughes Aircraft was a world leader in high technology systems for scientific, military and global applications.

All the technological prowess of these Hughes companies would almost certainly have pleased their founder, who always had a passion for building things.

It is possible the Howard Hughes suffered from ADHD (attention deficit hyperactivity disorder). He certainly suffered from OCD (obsessive compulsive disorder) which is a common co-morbidity to ADHD.

The Hughes H-1 replica prior to its fatal crash