

DOWNTOWN IN MINUTES

PART I - THE STORY OF THE WORLD'S FIRST PASSENGER HELICOPTER OPERATIONS.

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By Craig Kodera

Photos courtesy of the author and the WINGS & AIRPOWER Historical Archive, except where otherwise noted.

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The HEU was based at Yeovil, which just happened to be the corporate/production facility of Westland Aircraft Helicopters. BEA didn't want to be too far from major technical help when it came to supporting all those whirling parts. However, by June 1948, the base moved to Peterborough as BEA was inaugurating the first commercial carriage of mail by helicopter on June 1. By October 1949, mail was being flown at night, another first for the HEU. Alas, the pioneering of mail in helicopters was to be short-lived in England, for the Sikorskys could hold only 33 mailbags at a time, which was commercially unviable. The bane of helicopter operations worldwide was, for the first time, rearing its ugly head as rotary aircraft were found to be too complex, too costly to maintain, and therefore too expensive to pay their way in a pure airline environment.

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IN MINUTES

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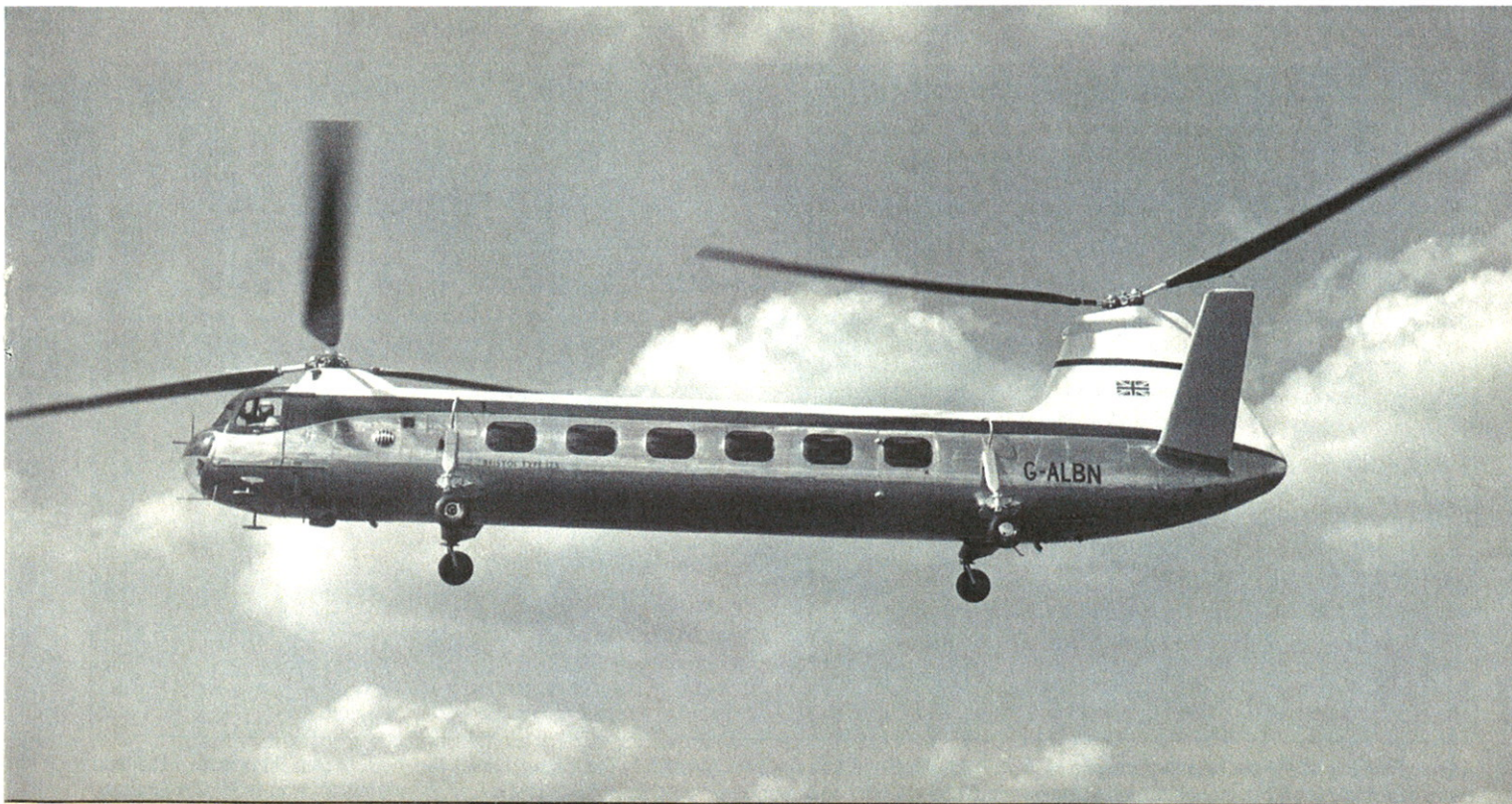
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British European Airways was merged into British Airways in 1974, and one of its Sikorsky S-61Ns is shown here in flight. More than any other modern helicopter, the S-61 proved the successful concept of transporting as many as 34 passengers at speeds of nearly 150 mph in affordable fashion.



An amazing machine for its time, the magnificent Fairey Rotodyne pioneered the revolutionary combination of rotary and fixed-wing design to create the world's first true VTOL airliner concept. The sleek machine could carry 48 passengers at speeds of 185 mph over routes as far as 400 miles, and was powered by twin Napier Eland turboprop engines with Fairey 'pressure jets' at the rotor blade tips for take off and landing. With its capacious 4-1/2-ton payload, the Rotodyne should have been a world-beater, but economics, consolidation of the British aviation industry, and brutal noise from the tip jets spelled the end of the program before any airline orders were ever consummated.



The Bristol 173, seen here in 1952 wearing markings suggestive of British European Airways, was never put into its intended role as a 10-passenger commercial airliner, but instead saw military service with the Royal Air Force as the Bristol 192 Belvedere in 1958. Cruising speed was a stately 120 mph.

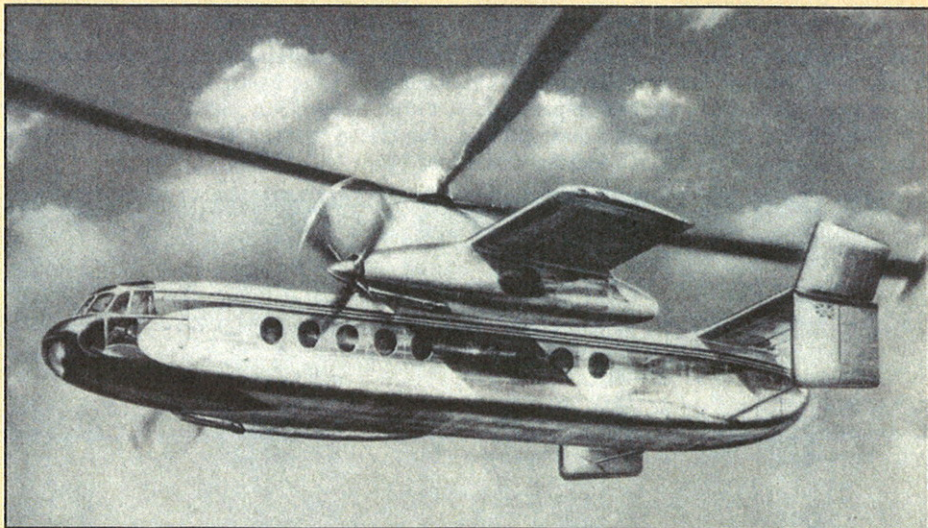
DOWNTOWN IN MINUTES

Helicopters Over the Golden Gate

One of the constant omissions when speaking of helicopter airlines is the recognition of San Francisco-Oakland Helicopter. Most folks don't even know it existed! But don't tell that to the management and employees of this fine local airline, for they operated safely and without government subsidy, enjoying a profitable existence for many decades. SF-O Sikorskys merrily hopped across the bay area, fulfilling the needs of commuters and airline connectors alike, connecting SFO with Marin County to the North, Berkely to the Northeast, Oakland Downtown, and Oakland airport to the South.

One major design concern for the airline helicopter manufacturers during the late 1950s was a water floatation system to be used in emergency landings, since most major cities in this country are either located near, or are surrounded by bodies of water. Vertol surmounted this problem by first adding pontoon/balloon floats to the landing gear of its V44 helicopters, thence creating sponsons as part of the structure for its larger V107 follow-on aircraft. The Sikorsky choppers were similarly 'pontooned' initially, followed

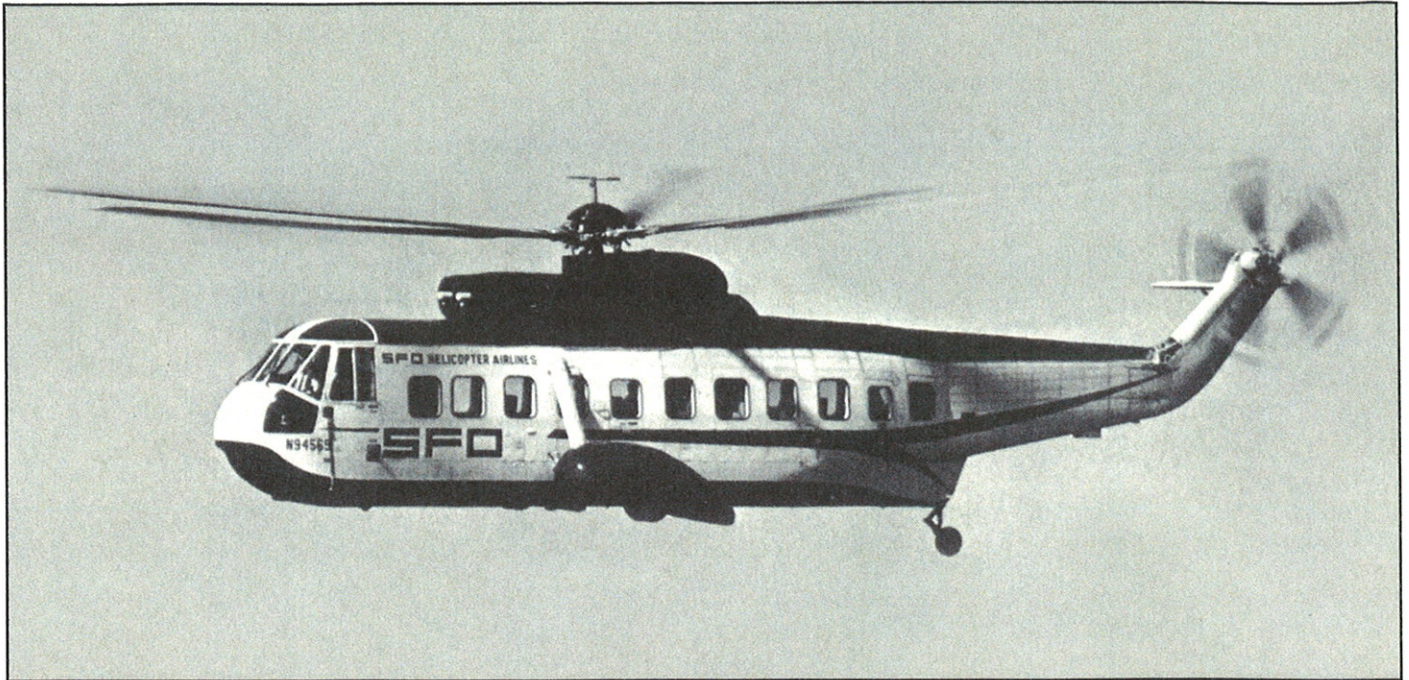
(Text continued on page 39)



Above: This artist's rendering of the Fairey Rotodyne also depicts the machine wearing quasi-BEA markings. New York Airways actually ordered Rotodynes for service between local city airports, but Fairey was firmly trumped by Boeing Vertol with its new 25-passenger twin-rotor and turbine-powered model 107 helicopter.

Below: The diminutive 3-passenger Bristol 171 Sycamore was a slight improvement over BEA's Sikorsky S-51s, and went into service in 1953. With a maximum speed of 120 mph it offered only a slight advantage over trains when covering its max. 430-mile operating range. Bristol was eventually taken over by Westland.





Above: Reading of the evolutionary travails of BEA in England and Los Angeles Airways in the 'States makes the story of San Francisco & Oakland Helicopter Airlines all the more amazing. Leapfrogging ahead of the piston-powered machines, SF-O first began operations in June 1961 with Sikorsky S-62s, a brand new turbine-powered helicopter never before used in commercial service. The S-62 (shown below) evolved into the larger, heavier, and faster twin-turbine S-61 (above), although the inverted numbering system was likely a result of both machines undergoing development with the smaller, simpler S-62 entering service first. Nevertheless, SF-O has the distinction of operating the world's first full-time regularly scheduled passenger service using jet-powered helicopters.

Below: 'The little 'copter that could', Sikorsky's marine-hulled 10-passenger S-62 shown here at the Catalina Island Seaplane base and heliport in May 1979. This aircraft, operated by Briles Helicopters of Long Beach, California, was formerly owned and operated by Los Angeles Airways before they took delivery of their 28-passenger S-61s in March 1962. Although many structural components were similar to the larger S-61, the S-62 still retained the 3-bladed main rotor and two-bladed tail rotor of its S-55 predecessor. Note outrigger landing gear spars allowing water landings and/or amphibious operations when necessary.



Sharing the spotlight with Bell's bubble-domed model 47 light helicopter, the Sikorsky S-51 made its entrance in February 1946. The design began as a commercial off-shoot of the XR-5 prototype evaluated by the U. S. Army Air Force, and then matured into the civvie version of the Air Force R-5D and Navy H03S helos which later became famous for their daring rescues during the Korean War. Sikorsky's first design to be built in large quantity, the S-51 held four people and was powered by a single 450-hp Pratt & Whitney R-985AN-5 Wasp Junior radial engine. Seen here in the markings of Helicopter Air Transport of Camden, New Jersey, the S-51 became the world's first rotary-winged aircraft to be used in scheduled commercial passenger service when operated by BEA in June 1950.



Left: Actual letter flown by a Los Angeles Airways S-51 on Air Mail Route 84, postmarked from Monrovia, California on October 1, 1947, and signed by local Postmaster Frank J. Bole. In today's world of express overnight delivery to almost anywhere in the world, it is difficult to remember what a novelty local airmail service really was back in a post-World War II America!

Below: Resplendent in its dark green and cream colors, one of the original S-51s delivered to Los Angeles Airways in 1947, N92813 languishes in the weeds at Chino Airport east of Los Angeles after being replaced by the larger 10-passenger S-55s. Written on the side of the fuselage under the rear window is a listing of all the many accomplishments of this particular aircraft including making the world's first scheduled helicopter Air Mail flight; first scheduled helicopter Air Mail flight at night; and the first scheduled service to a rooftop landing. This helicopter was one of 65 commercial S-51s built.



Flight crew of the Los Angeles Airways S-55 consisted of a pilot and 'hostess', seen here on the ramp at Los Angeles International Airport hamming it up for the camera in 1955. Note Pan American Stratocruiser parked in background.



Below: Pilot, passengers, ramp agents, and ground crew posing proudly with an LAA S-55 at LAX. Los Angeles Airway's Founder and President Clarence 'Clare' Belinn is at far right as pilot Norm Larson looks on from the cockpit. Note United Airlines DC-3 behind Belinn, and spotlight mounted above cockpit window to illuminate boarding area for passengers at remote heliports.



Clare Belinn (left) accepts a Civic Award from a Los Angeles City Official posed against the appropriate backdrop of an L. A. Airways Sikorsky in 1958.

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(Text continued from page 35)

by a new and novel design approach instigated at the factory - an amphibious hull, with balancing floats containing landing gear on either side of the hull. The resultant aircraft was the S-62, which borrowed much of the drive train from the old S-55, but put it in a fresh new package and added a turbine engine for reliability.

Beginning June 1, 1961, SF-O Helicopter Airlines began service with two S-62s leased from Sikorsky. Eighteen months later, nearly 100 flights per day were being offered to the residents of Northern California. Their success was so great, SF-O became the first helicopter airline to receive a PERMANENT Operating Certificate from the Civil Aeronautics Board, that being granted in November 1963. For all helicopter airlines, lift capacity - or the number of seats available to be sold to passengers - was the crucial economic factor in determining the viability of these operations, and Sikorsky met the market challenge for SF-O with the S-61. Three of these new aircraft were purchased in 1963, and this author was privileged to fly on one as late as 1976, seeing the San Francisco Bay as never before.

By 1965, with the ending of CAB Subsidy, SF-O Helicopter, as with other rotary-wing airlines, aligned itself with a major fixed wing carrier. In this case, they chose American Airlines, and operated from the AA concourse at the airport. Also that year, SF-O tried a very novel approach to passenger transportation by adding hovercraft to their helo operations! Since the British were the acknowledged leaders in Air Cushion Vehicles, SF-O chose the Saunders-Roe SR.N5, however it didn't make much of an impact. Service was suspended after only a few months, but such was the type of innovative thinking that emanated from most of these rotary wing visionaries.

Deregulation in 1978 changed everything for the airline industry, and with the new and enlarged service network throughout the country, there was an ever-decreasing need to shuttle between population centers and the only major airport in the region. Airlines were now coming to customers, rather than the other way around. Micro-commuter companies like helicopter airlines bore the brunt of this paradigm shift in transportation (which was also true for fixed-wing entities of similar size and application). By 1975, there was no more SF-O Helicopter as constituted in the prior decade. Relegated to being more of an air taxi service, the airline became an on-demand operation that one found by looking in the phone-book yellow pages. Nevertheless, another set of true aviation pioneers gave us the benefit of their foresight and made the world of air transportation better because of it.



Helos in the City of Angels

We are always told that trends begin in California and then make their way across the United States, labeling the 'Left Coast' as the harbinger of things to come. Thought of as a fairly recent condition, the truth is we can go back to 1944 to see the early stirrings of national progress and advancement in transportation emanating from the Golden State. On May 11th of that year, Los Angeles Airways (LAA) was incorporated by one dedicated pioneer by the name of Clarence 'Clare' Belinn. With the backing of several prominent local businessmen, Belinn set out to make history in Southern California.

If you've ever been to Los Angeles, you are immediately struck by the sheer size of the basin itself which stretches nearly 60 miles inland. Add to this the San Fernando Valley, San Gabriel Valley and Riverside/San Bernardino (Inland Empire), and you've got a land mass almost the size of Delaware! Linking the people of this expansive area via air transportation was not an option but a necessity, and rather than fly fixed-wing aircraft requiring a zillion airports with all those land-consuming runways, why not be daring and smart at the same time, and utilize the 'new-fangled' helicopter? One only needs a concrete pad clear of trees and wires to operate, and the thing can even land on top of buildings! This latter feature was crucial in the formation of LAA, for the beginning of operations was U.S. Mail carriage only, requiring landing atop the central post office in downtown Los Angeles known as Terminal Annex (TMX).

As WWII finally ended and a semblance of normal business activity returned to the country, Belinn was searching for a suitable candidate helicopter to fit his airline.

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Sikorsky Aircraft of Connecticut had improved their pioneering R-4 Dragonfly helicopter, which had seen limited service with the military duty during the final two years of the conflict. The result was the S-51, a metal-skinned helicopter powered by a 450-hp Pratt & Whitney piston engine. It was flown by a single pilot and could carry 900-1,000 pounds of mail in two compartments (the cabin and a separate cargo area). The choice having been made, experimental flights over the basin commenced in April 1947. On May 20, the Civil Aeronautics Board issued a three-year Certificate of Public Convenience and Necessity to L.A. Airways which allowed the airline to fly Air Mail Route 84 (AM 84). Clare Belinn and his helicopter airline were off to the races!

On the historic day of October 1, 1947, Los Angeles Airways began the world's first regularly scheduled helicopter mail service, delivering the post from the newly opened Los Angeles International Airport (LAX) to TMX. That same day and throughout the month of October, other cities were briskly added and direct airmail service came to most all of Southern California. By March 1948, San Bernardino was also included as a test city that lay beyond the original fifty-mile limit specified by the Certificate. It was a success, and marked the final spoke in the wheel of service provide by LAA. By December of 1949, the route structure had been rationalized, tweaked and refined, staying intact for the remaining years of operations.

Flight OPS – Helicopter Style

One cannot overstate the pioneering efforts made by LAA. Flying a helicopter in scheduled commercial service was so

new, there was no guidebook for just how to go about it! Early flying over the route was limited to daylight visual flight rules (VFR), but not the same type as a fixed-wing aircraft. Here again, the helicopter's flexibility and unique capabilities allowed for more dramatic flying, as a minimum ceiling of only 300 feet, and visibility of a mere one-half mile were required. (Talk about following roads and turning at landmark buildings!) Eventually night flying came to LAA, but it too was unique. A system of road flares in sand-filled oil drums was used to identify the heliport, and a material known as Scotch Light reflective strips (3 x 6 inches) was adhered to the fence posts surrounding the concrete landing pad. When the helicopter approached for landing, its lights illuminated the Scotch Light reflectors to define the touchdown area.

A hard-learned flying lesson was made clear while operating the S-51 in service, which unfortunately cost the life of a pilot. It was discovered that if no mail was located aboard the aircraft, the weight of the pilot so far ahead of the rotor mast sent the aircraft weight and balance completely out of the envelope. This was remedied by filling canvas water bags found at an Army Surplus store with sand and corking the openings. These bags were then thrown into the cargo areas to restore balance. Additionally, takeoff procedures were changed to require an immediate low hover after liftoff to assess the flyability of the helicopter before continuing on.

By July 1951, the CAB had extended the certificate of operations to include passenger service, and LAA needed a new and larger aircraft. Sikorsky was pleased to help out by offering the S-55, a large ten-place helicopter with a 600-hp engine

Below: If it's this clear over downtown Los Angeles, it has to be wintertime! Even in the pre-skyscraper days of the 1950s, L.A. traffic was becoming an issue as population growth rapidly outpaced freeway development. At rush hour, the helicopter sometimes proved more of a salvation than a convenience. Powered by a single 600-hp Pratt & Whitney R-1340 radial engine, the S-55 could cruise all day long at nearly 100 mph – maybe not that fast for an aircraft, but twice the average speed of any land transportation in the region.





Above: Stunning landing approach photo by a Garrett Corporation company photographer who was accompanying LAA pilot Norman W. Larson on his daily rounds flying the S-55 from LAX. This photo, one of a series shot for a story in the Garrett Magazine *New Frontiers*, was taken as the helicopter made its final approach to the rooftop heliport of the Los Angeles Postal Annex near Union Station just east of the city. Airspeed indicator (lower left on instrument panel) shows 30 knots. (Garrett Corp. via Norm Larson)

Below: Judging from the mountains and sparse populace evident in the background, this photo of LAA ship N413A appears to have been taken at the heliport in San Bernardino. Note complete absence of any airport security in 1957! The S-55 remained in production for an amazingly-long run of ten years, with a total of 1,067 being produced in both civil and military versions for 30 different operators worldwide. Another 547 examples were built under license by Westland in England, and were known as the Whirlwind.



DOWNTOWN IN MINUTES

that was the civil version of the Army's trusty H-19 proven during combat in the Korean War. In commercial service, it could carry over 1,000 lbs. and be flown by one pilot and a flight attendant! (Lest you think the attendant's job was too cushy, she was throwing mailbags out the sliding door to Post Office personnel waiting at the various stops!)

S-55s entered service with LAA in July 1952, and passengers were carried for the first time on November 22, 1954. Any of the old CG problems were now strictly a non-issue since the cavernous mail and passenger compartment was located directly under the 'copter's rotor mast. With bench seats and a big sliding door, it was easy-in/easy-out for both mail and people. I can remember many enjoyable evenings sitting at one of the picture windows of Mike Lyman's restaurant at the old LAX, watching an LAA S-55 taxi up to the terminal beneath us, shut down, and disgorge its businessmen and ladies from the compartment. Now THAT was commercial aviation! Most folks were connecting to the mainline carriers like American and United, and the sheer utility of the world's first true 'commuter' airline was reinforced daily. Clare Belinn could smile proudly.

By 1957, LAA had five S-55s and the two remaining S-51s. Each was painted in a stunning dark green and off-white,

Below: Looking to the south at LAX, Los Angeles Airways' first Sikorsky S-61L sits on the ramp awaiting its next load of passengers and freight. Nicknamed the *Megapolis I* by LAA's President Belinn, this machine brought passenger helicopter operations to the skies of Los Angeles at a time when the city was booming. Note name change above windows to 'L.A. Airways', whereas the S-55s had 'Los Angeles Airways' titles. S-61s earned their keep from 1962 until the airline merged with Golden West Airlines in 1971, and then continued flying under the new carrier's name for another year after that.

Opposite Right: Nice inflight study of the Sikorsky S-61L - the L designation denoting Land operations. S-61N (Nautical) featured sponsons for overwater or amphibious operations, while the S-61R (Rescue) had a different hull, sponsons, and rear fuselage configuration and actually became the H-3 series of helicopters for the U.S. Air Force and Coast Guard. Los Angeles Airways had a total of six S-61s, while other helicopter airlines using this type included New York Airways, Japan Air Lines, British Airways, and KLM helicopters among others. S-61's max. speed was 150 mph.

known by the folks at the company as Amoco Green, and Croydon Crème. Miniscule red pinstripes divided the two colors, and this basic color scheme remained attached to L. A. Airways' aircraft until the early 1970s. By 1957 the company was carrying a LOT of mail on its helicopters - more than four-and-a-half million pounds to be exact! It also started carrying express packages for the REA Company, making coast-to-coast package delivery a two-day affair instead of a week. Carriage of these parcels added 1,893,350 pounds to the lifting of the airline and also added much to the bottom line, as L.A. Airways became a profitable and successful operation. As for reliability, 92% of its flights were completed, which for a helicopter operation was simply astounding.






Helicopters Enter the Jet Age

By December 1960, LAA had stepped into the new and wonderful world of turbine-powered flight. First to utilize the Sikorsky S-62, LAA had such success with the aircraft that another helicopter airline was inspired to begin flying in Northern California - San Francisco & Oakland Helicopter (see pg. 36). The real breakthrough, however, again came from Sikorsky with its twin-turbine, 28-passenger S-61. With explosive growth in airline travel due to the introduction of jets at main-line carriers, more lifting capacity was once again badly needed, and this new giant 'helicopter airliner' was just what the doctor ordered. (As a point of interest, the follow-on design then on the drawing boards was the S-65 which, although never making it into airline service, evolved into the famed CH-53 Super Jolly Green Giant of the Vietnam era.)

Service with the S-61, dubbed *Megapolis I* by Belinn, began on March 1, 1962, and quite the fanfare accompanied its introduction, including VIP flights for the Governor and one of the state's Senators. By the mid-1960s, LAA was in full flourish, with one of its premier routes being from the Disneyland Hotel Heliport to LAX - a grueling hour-and-a-half drive at rush-hour, or an easy 15 minutes

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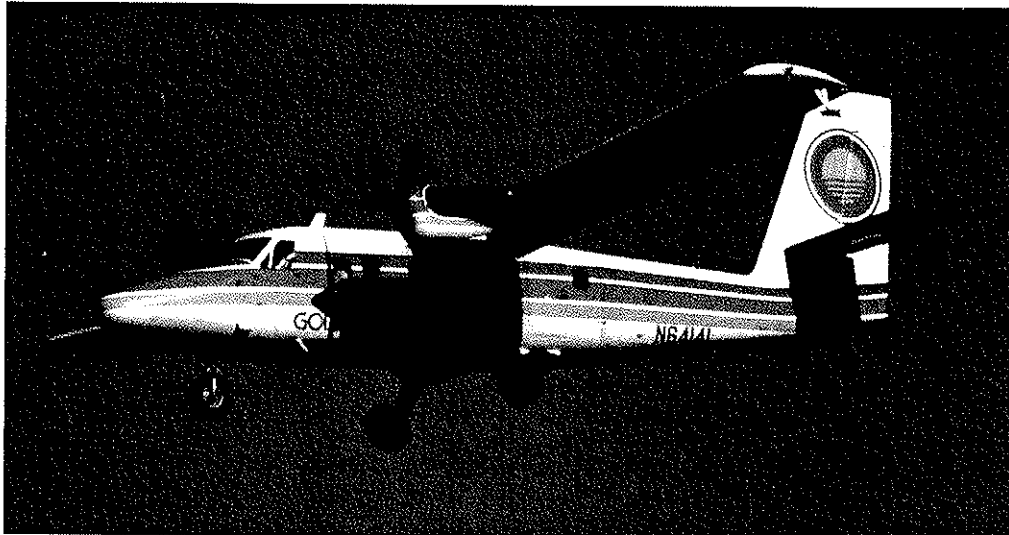
The World's First Helicopter Airline
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by helicopter. In those days, the freeway system was just reaching completion, and driving to the airport from Orange County, a bursting collection of new suburbs, was less than fun at the wrong time of day.

In April 1965, the tables turned when the CAB withdrew subsidies for helicopter airlines, which had played a major role in establishing LAA's profitability. In its wake, the Bureau suggested that helicopter airlines team with major carriers, having them invest in the operation, reaping certain advertising benefits and advantages for passengers connecting from the helicopters to their jet airliners. In that regard, LAA then signed a deal with United and American Airlines for \$3.2 million.

Life at LAA hummed along quite well until tragedy struck not once, but twice in two highly publicized crashes that both occurred in broad daylight and killed all on board. The causes were traced to obvious metal fatigue of the S-61s massive rotor blades, and although necessary changes were made, the scars for the public went deep, as both helicopters crashed into residential areas while spinning wildly out of control. Adverse publicity was rampant, as the local community was highly aware of what had happened, creating a new trepidation about flying on helicopters. These crashes, coupled with the now far-reaching freeway system, spelled the beginning of the end for LAA.



Another attempt at making helicopter airline operations a reality in Los Angeles in the post-deregulated skies of the early-1980s was a small company called Air Spur. Based at Long Beach Airport and flying the spacious 22-passenger British Westland 30 (left), Air Spur made a go of it in 1981, by which time more airlines had begun flying into the outlying airports around L.A., and the freeway system had matured to a (relatively) operable level. With operating costs, and therefore airfares at an all-time high, the lure of local helicopter travel faded rapidly. Golden West replaced their S-61s with 20-passenger de Havilland of Canada DHC-6 Twin Otters like the one shown here (right) on final approach to LAX in 1983. (Mike Machat photos)

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By way of trying to keep-up with the times, LAA actually started flying fixed-wing aircraft with de Havilland DHC-6 Twin Otters for a brief time. A radical departure (as was the new paint scheme of soft gray overall, and red lettering), the Otter operation attracted the attention of the 'other' commuter airline in the neighborhood, Golden West. Having already owed its existence to the conglomeration of other commuters, Golden West saw it as a natural evolution to purchase LAA, and in 1971, a quarter century after the dream was born, Los Angeles Airways officially became part of Golden West Airlines.

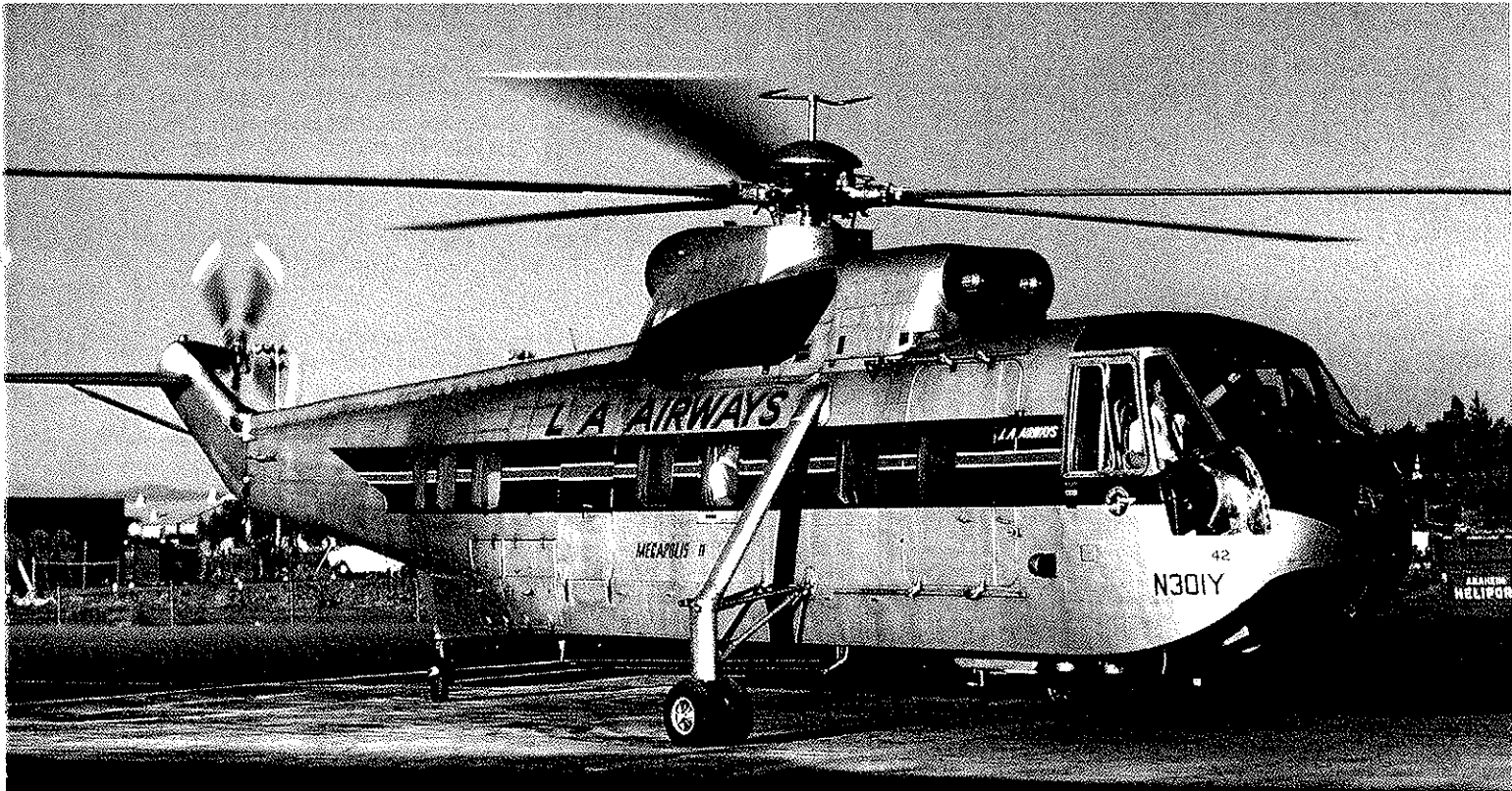
As you might imagine, the five S-61s disappeared fairly quickly, as did most of the associated personnel. Helicopter operations in Southern California lay dormant until 1981 when a new airline named Air Spur began using Westland helicopters to shuttle passengers around the vast Los Angeles

basin. Once again, expensive fares ruled out any chance of long-term success, and they too suffered a serious accident. Operations didn't last long and soon even stalwart Golden West faded from the scene, leaving only the over-crowded freeways to get people to the airports.

The proud folks of Los Angeles Airways represented the very best in airline aviation, being more like a small tight-knit family than just another airline. To say they did something special in local service aviation would be an understatement, and it would be far more appropriate to credit them with an entire reshaping of the airline industry. To know them is a privilege, and I can say that I number some very good friends among the folks from Los Angeles Airways, as my family was also a brief part of the magic. ☺

Many thanks to the following for their help in writing this article: Norm Larson, Jim Gammonly, Walt Karutz, Ron Davies in his book Airlines Of The United States, William Schoneberger in his book California Wings, and Jeff Evans for his photography.

Watch for Part II of this informative series in the April issue of WINGS, where we will explore the development of such passenger helicopter airlines in the eastern U.S. and Europe as New York Airways and SABENA with many never-before-published photos!



Above: Megapolis II, an L.A. Airways Sikorsky S-61L N301Y prepares for takeoff for LAX from the Anaheim/Disneyland Heliport on a late afternoon in August 1968. (Jeff Evans photo)

Middle Right: Former L.A. Airways S-61L N305Y now wearing its new Golden West colors sits on the commuter terminal ramp at LAX during its final months of service in August 1972. Passengers were picked up by bus at the door of the helicopter, and then driven ramp-side to their respective airline terminals to connect with their flights. Baggage was already checked through when helicopter was boarded.

Right: View from Golden West S-61 in 1972, on approach into LAX centered between the two sets of parallel runways with the southern pair, 25 Left and 25 Right, visible at upper left. Note array of brand new Boeing 747s being used by all the major domestic U.S. airlines such as (from bottom) United, Continental, Delta, and American. Passengers would be transferred to them just minutes after landing aboard the helicopter.

