



# SIKORSKY NEWS

JUNE, 1967

Sikorsky Aircraft DIVISION OF UNITED AIRCRAFT CORPORATION  
STRATFORD, CONN.

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HH-3E refuels in flight from an HH-130 tanker airplane over Scotland on the final leg of the transatlantic flight. Both HH-3Es were refueled a total of 18 times during the 30 hour, 46 minute flight from New York to Paris.

## Ocean Hop Steals Air Show

### Share in America, Bond Drive Opens Monday



Pretty Betty Ann Baillie, left and Mary Salce, both of the project office, put the finishing touches to poster underlining the upcoming division campaign for the sale of U.S. Savings Bonds and the new Freedom Shares. The one-week campaign starts Monday, June 19.

A one-week division-wide campaign for the sale of U.S. Savings Bonds and the newly-authorized Freedom Shares will begin on Monday.

The campaign's goal is to 1) enlist every employe in the regular payroll savings bond purchase plan; 2) stimulate already-participating employes to increase their rates of purchase; and 3) offer participating employes "a chance to increase their savings investment" by making possible the purchase of higher interest-bearing Freedom Shares through the payroll plan.

Freedom Shares are offered for sale only to those employes who either are now buying or who sign up to become regular Series E bond buyers. The shares have been authorized by the U.S. government as an incentive to new buyers and as a reward to regular purchasers. The shares bear 4.74 percent interest and mature in only

four and one-half years. Series E bonds mature in seven years.

There are limits on the Freedom Share offering: for every share, a Series E bond must be purchased; no more than \$1,350 annually, \$100 monthly or \$25 weekly in face value of Freedom Shares may be purchased; unlike Series E bonds, Freedom Shares cannot be redeemed until they have been held by the purchaser for at least one year; they will be offered for only two years or for the length of the Vietnam conflict.

Patriotism is defined by Webster as "love of country" or "devotion to the welfare of one's country." The same authority says thrift means "a thriving condition" or prosperity.

"Patriotism has in recent years and in certain quarters taken second place to a form of national apologia for Am-

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Two U.S. Air Force/Sikorsky HH-3E Jolly Green Giants made aviation history this month, completing the first nonstop transatlantic helicopter crossing.

The ocean-hopping HH-3Es, of the 48th Aerospace Rescue and Recovery Squadron, were refueled in flight by four Hercules HC-130 tanker planes, also with the 48th.

Claims for world helicopter speed records — from New York to London and New to Paris — have been submitted to the Federation Aeronautique Internationale, the ruling body for such records. Speed claimed for the 4,270 mile New York to Paris hop was 30 hours, 46 minutes and for the New York to London mark: 29 hours, 13 minutes.

Distance records cannot be claimed, since both helicopters were refueled in flight.

The HH-3Es, which took off at 1:05 a.m. (New York Time) May 31, from Floyd Bennett Naval Air Station, Brooklyn, captured the heart of the 27th Paris Air Show, when they landed after the nonstop flight at Le Bourget Field.

Their arrival at Le Bourget

was the highlight of the Air Show's Helicopter Day. Appropriately, the theme for this year's Paris Air Show was "In the Spirit of Lindbergh" — in honor of Charles A. Lindbergh, who 40 years ago made the first nonstop transatlantic solo flight.

The two HH-3Es averaged 131 miles an hour, bucking headwinds for much of the flight (see map). Nine refuelings were accomplished by each aircraft. Commanders of the two helicopters reported the historic flights were without incident.

As the first helicopter came into view over Le Bourget trailing behind a tanker ship, an anxious crowd of thousands watched as it made a slow circle at about 1,000 feet, hooked onto the tanker in a simulated refueling, detached and landed in front of the United Aircraft Corp. chalet. The second ship, which flew over Heathrow Airport, London, landed at Le Bourget 12 minutes later.

Maj. Herbert R. Zehnder, aircrew commander of the first HH-3E, told a press conference at Le Bourget: "This flight would not have been possible without the help of

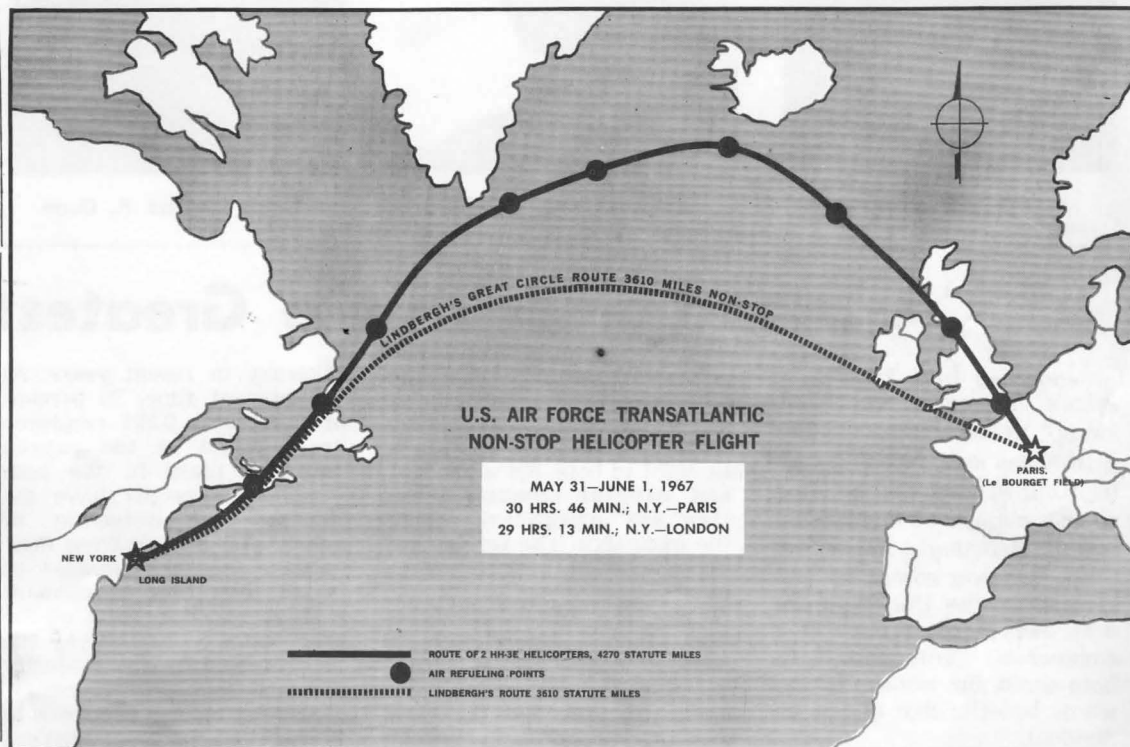
the people who backed us up both on the ground and in the air." He said the flight went as planned, except for headwinds that added nearly three hours to the estimated time.

Maj. Donald B. Maurras, commanding officer of the second HH-3E, said he was impressed by "the beautiful team effort" necessary for the flight's success.

Igor I. Sikorsky, founder of Sikorsky Aircraft, was present to express "deep admiration for this brilliant flight which takes us another step forward in the history of aviation. Also on hand to greet the fliers were Maj. Gen. John Lavelle, commander of the 17th Air Force in Europe; H.M. Horner, chairman of United Aircraft Corporation; William P. Gwinn, United Aircraft president, and Lee S. Johnson, Sikorsky president.

A congratulatory telegram was received from Brig. Gen. Allison Brooks, commanding officer of the Aerospace Rescue and Recovery Service. He wired: "Rescue men around the world are proud of your professionalism and courage."

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# Historic Transatlantic Flight Claims Records

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HH-3Es, like those that crossed the ocean, are called Jolly Green Giants in Vietnam where they fly search and rescue missions, often penetrating deep into North Vietnam to rescue downed airmen.

All HH-3Es now produced by Sikorsky carry refueling probes that partially retract into the forward fuselage. Aerial refueling allows almost unlimited range.

Refueling during the transatlantic flight was accomplished at altitudes that ranged from 1,000 to 9,000 feet, and at speeds of about

125 m.p.h.

Refueling techniques, using helicopter and tanker plane, have been refined since the first experiments in late 1965 proved successful. An in-flight refueling system, similar to that used on the HH-3E, is expected to extend the range of the HH-53B, a larger rescue helicopter produced by Sikorsky for the Air Force.

Commanding the first HH-3E in the transatlantic flight was Major Zehnder. His crew included Maj. Jim E. Hartley, pilot; Capt. Gregory A.M. Etzel, co-pilot; S/Sgt. Harold R. Schrader, flight engineer, and Capt. Clifford J. Buckley,

flight surgeon.

Commander of the second HH-3E was Major Maurras. His crew included Capt. Donald E. Alford, pilot; Capt. Charles P. Dunn, co-pilot, and T/Sgt. Marx T. Richardson and S/Sgt. Dennis W. Palmer, flight engineers.

The HH-3Es remained at Le Bourget to demonstrate the in-flight refueling concept for Paris Air Show visitors. After the show, both were scheduled for delivery to Vietnam and active duty as rescue aircraft.

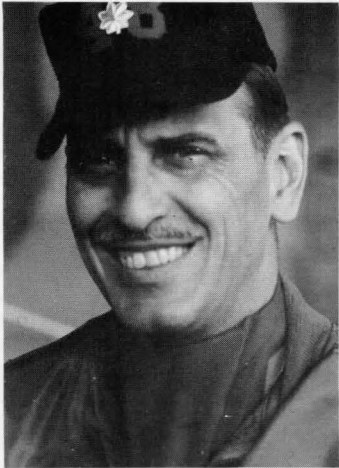
The flight of the two HH-3Es follows by 15 years the first transatlantic flight by helicopters. Two Sikorsky H-

19s, Hop-a-Long and Whirl-o-Way, followed a northern route in 1952, stopping at Labrador, Greenland, Iceland, Scotland, and Holland before reaching Wiesbaden, Germany, nearly 52 flight hours and 21 days after the initial takeoff. Another Air Force helicopter, a CH-3B, called the Otis Falcon, also made the second transatlantic helicopter flight in 1963, stopping in Labrador, Baffin Island, Greenland, Iceland, and Scotland on its way to the Paris Air Show.

Both Capt. Dunn and Capt. Etzel were scheduled to accompany the HH-3Es to ARRS

squadrons on active duty in Vietnam. Dunn will begin his second Vietnam tour of duty.

Aboard Maj. Zehnder's helicopter during the transatlantic flight was more than \$50,000 worth of scientific equipment used for inflight medical tests of Maj. Zehnder, Maj. Hartley and Capt. Buckley. The testing of blood pressure, electrocardiograph, pulse rates and other characteristics was conducted by Capt. Buckley for Aerospace Medicine. Capt. Buckley was selected earlier this year as the Air Force's "Flight Surgeon of the Year" for outstanding service.



Maj. Herbert R. Zehnder



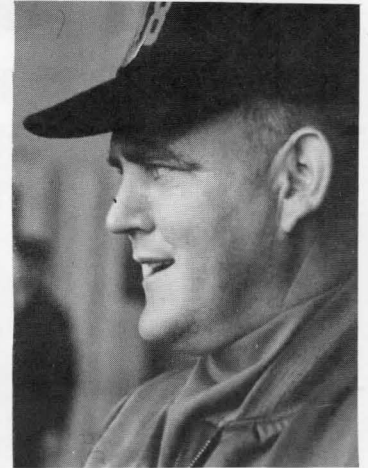
Maj. Jim E. Hartley



Capt. Gregory Etzel



Capt. Clifford J. Buckley



S/Sgt. Harold R. Schrader



Maj. Donald B. Maurras



Capt. Donald E. Alford



Capt. Charles P. Dunn



T/Sgt. Marx Richardson



S/Sgt. Dennis W. Palmer

## 'A Stockholder in the Greatest Country on Earth'

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merica's strength and well-being," Division President Lee S. Johnson said. "At this period in our history, the 'devotion to the welfare of one's country' is particularly important.

Mr. Johnson compared citizenship in the United States with ownership of stock in a commercial enterprise. In both cases, the welfare of the whole benefits that of the individual.

"I hope all Sikorsky employees — each a stockholder in the greatest country on earth — will give serious thought to both the individual and national interests when they are approached during the campaign. The results are of paramount importance to us all."

Under the campaign direction of J.S. McCullough, a team of nearly 500 solicitors boosters and campaign managers will undertake the most ambitious bond campaign at

Sikorsky in recent years. At the present time, 75 percent of Sikorsky's 9,794 employees are enrolled in the payroll purchase plan. In the past year, these people have authorized the deduction of nearly \$1.5 million from their salaries for the purchase of bonds. The total investment is a strong indication of the high esteem in which the plan is held by the majority of employees.

Addressing the solicitors in preparation for the campaign,

McCullough spoke of UAC President W.P. Gwinn's interest in the Sikorsky drive. Gwinn, serving his second year as head of the Industrial Savings Bond campaign in Hartford, said that one of this year's goals in Connecticut is the recruitment of 55,750 new bond buyers. In the 2,500 non-buying Sikorsky employees, he sees a healthy sales potential, McCullough said.

"Because of the seriousness of the Vietnam situation and the need for increased sav-

ings bonds buying as an aid to curb inflation," McCullough said, "we must all think carefully of what bond and Freedom Share purchases can do for us and for our country.

"Although in the past several years we have maintained a fairly high level of employee participation in our bond plan with limited drives, we are going all out now to ensure every employe of an easy opportunity to either start or increase buying shares in America."

# Paris Air Show Scenes



At the end of their historic flight, Maj. Herbert R. Zehnder, left and Maj. Donald B. Maurras, commanders of the two HH-3Es, receive warm congratulations from aviation visionary Igor I. Sikorsky, founder of Sikorsky Aircraft.



Maj. Herbert R. Zehnder, commander of the first HH-3E to arrive at Le Bourget Field—30 hours, 46 minutes after it took off from Floyd Bennett Naval Air Station, Brooklyn, N.Y. is greeted by Sergei Sikorsky, left, director, Sikorsky sales—Europe and son of Igor I. Sikorsky; Maj. Gen. John Lavelle, commander of the 17th Air Force in Europe and Igor I. Sikorsky.



U.S. Marine Corps/Sikorsky CH-53A on static display at the 27th Paris Air Show this month. To the right of the aircraft is static display of the Budd Company's Skylounge prototype, the XB-1. The experimental module is the forerunner of a 40-passenger pod, which would be transported by an S-64 Skycrane. The Skylounge study is currently underway for the city of Los Angeles.

# Past Records

Hop-a-Long and Whirl-o-Way, two U.S. Air Force H-19 (Sikorsky S-55) helicopters, flew 3,984 miles from Westover Air Force Base in Massachusetts to Wiesbaden, Germany, in 51 hours and 55 minutes. The mission began July 15, 1952, and ended Aug. 4, 1952. Stops were made at Presque Isle, Maine; Goose Bay, Labrador; Narsarsuak, Greenland; Keflavik, Iceland; Prestwick, Scotland, and The Hague, Holland. The longest leg was 937 miles from Keflavik to Prestwick. Capt. Vincent H. McGovern and Capt. Harry C. Jeffers flew Hop-a-Long; Lt. Harold W. Moore and Capt. George O. Hambrick flew Whirl-o-Way.

The Otis Falcon, an Air Force CH-3B (Sikorsky S-61A) helicopter, flew 4,337 miles from Otis Air Force Base on Cape Cod to Paris in 35 hours and 35 minutes. The flight began May 27, 1963, and ended June 5, 1963. Stops were made at Loring Air Base, Maine; Goose Bay, Labrador; Saglek Bay, Labrador; Frobisher Bay, Baffin Island; Sondrestrom, Greenland; Keflavik, Iceland, and Prestwick, Scotland. Flying the Otis Falcon were Capt. John D. Arthurs, Capt. William B. Lehman, and Capt. William A. Scott III. The longest leg of the flight was 865 miles from Keflavik to Prestwick.

A Sikorsky S-61N purchased by Okanagan Helicopters Ltd. flew from Montreal, Canada, to Gatwick Airport, England, a distance of 3,720 miles, in 34 hours and 11 minutes. The aircraft left Montreal May 14, 1965, and landed at Gatwick May 29, 1965. Stops were made at Knob Lake, Newfoundland; Frobisher Bay, Baffin Island; Cape Dyer, Baffin Island; Sondrestrom, Greenland; Kulusuk, Greenland; Reykjavik, Iceland; Hofn, Iceland; The Faeroe Islands, and Prestwick, Scotland. Aboard the aircraft were Thomas Scheer, Okanagan, and Ross Lennox, United Aircraft of Canada Ltd., both pilots; Keith Rutledge, Okanagan, engineer, and Thomas Harrison, United Aircraft of Canada, crew chief.

An S-61 owned by Interessentskapet Helibuss and leased to Helikopter Service A.S. of Oslo, Norway, flew from Stratford, Connecticut, to Stavanger, Norway, in 35 hours. The trip began July 3, 1966, and ended July 11, 1966. Aboard the aircraft were Ross Lennox, United Aircraft of Canada, and Kjell Bakkeli, Helikopter Service, both pilots, and Richard Smith, Sikorsky. Stops were made in Montreal, Canada; Fort Chimo, Quebec; Cape Dyer, Baffin Island; Sondrestrom, Greenland; Reykjavik, Iceland; the Faeroe Islands, and Stavanger, Norway.

An S-61N owned by Interessentskapet Helibuss and leased to Helikopter Service A.S. of Oslo, Norway, flew from Stratford, Connecticut, to Stavanger, Norway. The trip began July 23, 1966, and ended Aug. 1, 1966. Aboard the aircraft were Ross Lennox, United Aircraft of Canada, and Michael Boxill, Helikopter Service, both pilots, and George Schaeffer, Sikorsky. Stops were made in Montreal, Canada; Fort Chimo, Quebec; Cape Dyer, Baffin Island; Sondrestrom, Greenland; Reykjavik, Iceland; the Faeroe Islands, and Stavanger, Norway.



Waiting anxiously on the runway of Le Bourget Field, Paris, for the arrival of the ocean-hopping HH-3Es were Igor I. Sikorsky, Maj. Gen. John Lavelle, and Lee S. Johnson, Sikorsky division president.

# The View At the Top

(The following full text of an interview with Lee S. Johnson, division president, is reprinted from the May issue of Vertical World Magazine. Mr. Johnson provides definitive answers to some of the more penetrating questions concerning the V/STOL industry.)

## Is the helicopter passe?

Very few people ask the questions — Is the automobile passe? Is the train passe? Is the bus passe? Why, any longer, do people ask — Is the helicopter passe?

The question itself, for one reason or another, has been asked too often and by too many "we can conquer the universe" types. The question itself when asked too often has had and continues to have a debilitating impact on helicopter progress, because the question implies "pie in the sky" substitutes for the helicopter that many people construe as just around the corner.

All current transportation systems are passe. It has been said for example, that by the time any aircraft reaches the operational stage it is already obsolescent. Ten, 20, 100 years from now, the automobile may be an absurd memory.

So when one asks the question, is a system passe, it would be well advised to qualify the question by adding a time frame reference. This is our way of saying that the helicopter now and in the foreseeable future is not passe. To the contrary, helicopters have a buoyant future and will play an ever-increasing role in the movement of people and things. **Would you discuss the rigid rotor and stowed rotor?**

For many design concepts, the rigid rotor may be a proper solution. Similarly, for many design concepts, a stowed rotor may be a solution. Neither the stowed rotor nor the rigid rotor is likely to make all other design concepts passe. Both concepts have advantages and disadvantages, and both are subject to a designer's choice.

## How do you answer the airlines' complaints about the helicopter's poor economics?

We would answer in many simple and sophisticated ways. A simple way would be to refer to your history of fixed-wing aircraft and the time required to achieve profitable results. A more sophisticated answer would involve a detailed operations analysis and cost study that would show mathematically the relationship between cost and return revenue.

Any evaluation of helicopter economics should not be made by comparing them to fixed wing aircraft, as is frequently done by airlines and is the basis of the general opinion that

the helicopter is expensive. Such comparisons are invalid because helicopters are not designed to do the same type of air transport mission as fixed wing aircraft. Instead they provide supplementary services rather than competitive ones. They provide transportation which, although short in distance, is often long in time, from the airport to a heliport closer to the traveler's final point of origin or destination, as an alternative to the traveler going by surface. To compare the cost per mile of this segment of his trip to that afforded by the fixed wing aircraft that may have carried him several hundred miles, is just as unfair as comparing the per mile cost of carrying an air mail letter across the country, to carrying it the last few miles in city traffic or in a mail truck, or even for the final distance in the postman's satchel.

## What is the optimum Sky-crane size?

This question would have more meaning if a time frame were attached. A plot of helicopter growth in terms of size will show that for the early 1970 period, cranes may range in size from five-ton payload capability to perhaps 40-ton capability. As an upper size indication, the plot shows that the payload capability will range from 20 tons to 40 tons. This implies an all up weight of 80,000 lbs to 160,000 lbs. These sizes are certainly feasible technically. There is no single optimum size. There are optimum sizes to do different jobs.

## How about U.S. Government support for export sales?

Due to the dearth, in the last few years, of new development projects, our national leaders must eventually assume prime responsibility for any reduction in export sales. France is moving briskly in the helicopter area with good products. The Soviets, with very impressive aircraft, are flexing their worldwide helicopter export muscles. The United Kingdom is beginning to move after a period of consolidation, and Japan, in the Far East, is always aggressively searching for opportunities. Without aggressive and brilliant utilization of our resources in terms of development, manufacturing and marketing, we stand to suffer a decline in our export business.

## A commercial V/STOL — when will we see it?

We can already see a commercial V/STOL in the form of helicopters operating in New York, Chicago, Los Angeles, San Francisco, Greenland, Great Britain, Belgium, Australia, USSR and other parts of the world. We will continue to see better V/STOL when our industry produces them. By the nature of our world today, this is most likely to happen when our national leaders provide encouragement and aid in developing new aircraft systems. Commercial helicopters are now being used for a variety of jobs such as oil exploration, power line construction, traffic control, police work, firefighting, aerial photography (especially for television pictures) and agriculture. The Helicopter Association of America is made up largely of commercial helicopter operators — companies ranging in size from small one or two-helicopter outfits to such large operators as Petroleum Helicopters Inc., Okanagan Helicopters Ltd., and Rotor Aids. All of them are making a profitable, nonsubsidized living from the operation of commercial helicopters. The use of V/STOL aircraft to help solve the problem of urban transportation is rapidly approaching the stage where it will no longer be a "luxury" for a few travelers, but will be a necessity for many.

## Is industry still willing to participate financially in the commercial V/STOL?

Yes.

## What is your prediction on the military helicopter V/TOL market by 1975? The civilian market by 1975?

Between now and 1975 we expect that from 12,000 to 20,000 military helicopters will be sold and from 3000 to 5000 commercial helicopters.

## How would you describe the outlook for small companies trying to enter the industry?

I would say the outlook is poor. In fact the present helicopter manufacturing companies will themselves be hard pressed to maintain their position in the industry as the major aerospace companies seek to enter the vertical lift aircraft field. Several have already done so or are attempting to do so with varying degrees of success. Small companies should be prepared to compete with the older helicopter companies (with their years of rotary-wing experience) and with the giant fixed-wing companies with their strong backgrounds and reputations.

## What impact do you see on industry as a result of the Army/Air Force agreement?

The impact is not significant.

## In military V/STOL, what is the best propulsion approach?

The rotor for vertical lift and for propulsion is the best bet for the foreseeable future for most applications. For the

"...helicopters have a buoyant future and will play an ever-increasing role in the movement of people and things."

"For the long-range future, it is my belief that significant advances in power plants (such as extremely lightweight and high-power turbine engines) as well as revolutionary changes in power plant philosophy will lead eventually to some rather phenomenal types of vertical lift aircraft."

— Lee S. Johnson



Lee S. Johnson

long-range future, it is my belief that significant advances in power plants (such as extremely lightweight and high-power turbine engines) as well as revolutionary changes in power plant philosophy will lead eventually to some rather phenomenal types of vertical lift aircraft. **We've backed away from the 200 by 200 foot vertiport. What about land costs downtown?**

Of course, land costs are high downtown in most cities. However, a most important point should be noted here: of the 52 largest cities in the United States, 48 are located on rivers, lakes or oceans. Thus the floating, or barge-type heliport, would appear to be ideal as a means of bringing vertical lift aircraft right into downtown, or near downtown, areas without the problem of high land costs. Other large cities in the U.S. are located in desert or plains areas where heliports could easily be built without facing the penalties of downtown land costs. Generally, I would say that for large-scale operations from city-center to city-center with vertical lift aircraft, the best bet would be the waterfront terminals.

## The claim is made that noise is making both onlookers and passengers nervous. What is the answer?

I feel that technology will provide, and is already providing, the answer. The turboshaft engine, for example, is not only far more efficient for helicopters, but is far less of a problem from the noise viewpoint. Certain types of rotor systems produce quite noticeable noise, while certain

other types do not cause such problems. The obvious answer is to concentrate on the refinement of those types of rotor systems which to date have proved to be the most quiet.

## Regarding the Skylounge, what is the possibility of a \$4 fare, airport to downtown, as has been predicted in Los Angeles?

Fine. The possibility is good, provided the ticket is sold as a part of a trip fare.

## What are the major problems facing the helicopter today?

We are faced with many problems. One is the problem of convincing our national leaders that vertical lift aircraft have a vital and legitimate place in the overall planning for future transportation. Others are our own industry problems of high development and manufacturing costs and resultant low profits. We do not view such problems as increased payload and speed as major problems; we know we can do better in those areas and have designs on the boards which are well within the capabilities of our present technology. The problem is merely to apply the new materials, designs, methods and techniques so that we can come up with aircraft that will be lower in cost, easier to maintain, quieter and will have less vibration. I submit that this is a relatively minor problem compared with the larger difficulty of convincing the powers that be that vertical lift aircraft have a most vital contribution to make to the future of transportation, especially in urban areas.