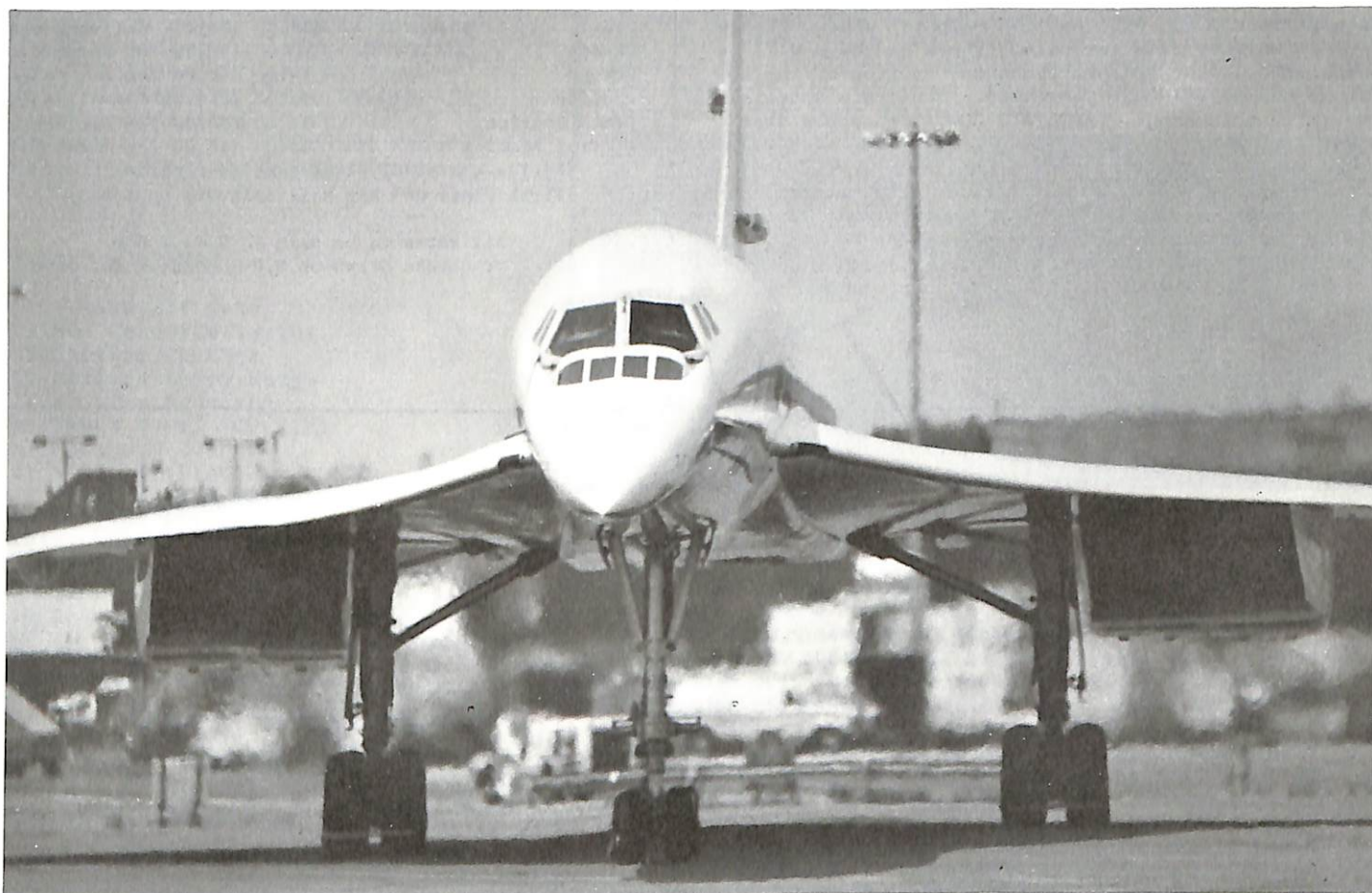




VOL. 12, NO. 4  
JANUARY '87

# CAPTAIN'S LOG

Airline and Airliner quarterly



Concorde F-BVFF, the 15th production aircraft, is seen here at Boston at the start of its takeoff run. In this issue, Jeff Magnet looks at the development of the world's only operational supersonic airliner. (Jeff Magnet photo)



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Historical Society

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THE FLIGHT EXCHANGE

The CAPTAIN'S LOG will publish members' wants, trades and items they have for sale. These requests will be published in the "Flight Exchange" section of the LOG at no charge to Society members. Send this material to: Flight Exchange, CAPTAIN'S LOG, 3381 Apple Tree Lane, Erlanger, KY 41018 USA. Please send such requests on a separate sheet of paper, written or typed so it can be easily read. **DO NOT** include this material within a letter or on your membership/renewal form. If material is not sent on a separate sheet there is no guarantee that the request will be printed.

CONTRIBUTIONS WANTED

All members and interested parties who wish to contribute articles, pictures, or other material of interest to the membership are invited to do so. When sending in your material, please be sure to include your return address. All material, after publication, will be returned to the owner. The Editor welcomes ideas on material to be featured in future issues of the CAPTAIN'S LOG.

PUBLICATION DATES

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# CAPTAIN'S LOG

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AIRLINERS INTERNATIONAL '87

The CAPTAIN'S LOG is the official quarterly publication of the WORLD AIRLINE HISTORICAL SOCIETY. Annual membership is U.S. \$14 and includes a subscription to the Captain's Log. An extra fee applies for airmail delivery of the Captain's Log outside North America - see inside front cover for rates.

Fifty years ago, on 06 MAY 87, the German airship "Hindenburg" was destroyed by fire while landing at Lakehurst, N.J. The giant passenger airship was arriving from Germany on the first of a series of scheduled trans-Atlantic flights that summer. 35 people died and the disaster meant the end of passenger airship travel, probably forever. The mighty airships "Graf Zeppelin", "Hindenburg" and their predecessors roamed the skies for 27 years. They carried thousands of passengers on scheduled services, first in Germany, then Europe and later to North and South America and, indeed, around the world. These 'Ocean Liners of the Skies' occupy a special place in the development and growth of passenger air travel. They offered their passengers an on-board luxury which is equal to that on the great ocean liners, but impossible to match on board today's jet airliners. The Germans were the greatest proponents of airship travel. The British tried but were thwarted by bad luck and bad preparation. We would like to ask readers to help us present a comprehensive review of passenger airship travel in the CAPTAIN'S LOG, Vol.13, No.2. We would be very grateful to borrow any material you believe would be useful in this review. Please send photographs to the main editorial address by 15 APR. For other material, please contact the editor who handles the items you have no later than 01 APR. All material will be handled carefully and will be returned to you after the issue of the LOG has been published. Thank you very much for your help! - JG



The WORLD AIRLINE HISTORICAL SOCIETY is open to all persons or groups interested in the collecting of airline memorabilia and the study of airlines and airliners past and present. The CAPTAIN'S LOG contains articles and photographs about these subjects. The Society has members on all continents.

Members must report any changes of address promptly to the Society to be assured of receiving their copy of the CAPTAIN'S LOG. The Postal Department in the U.S.A. and those in many other countries will not forward permit mail. If we do not have your correct address, you will not receive your CAPTAIN'S LOG. A charge of \$4 will be made to have a replacement copy mailed to you. There will be NO EXCEPTIONS to this charge. The name and address of the Society and its membership co-ordinator are listed on the inside front cover of this issue.

Society memberships expire at different times in the year. The last four numerals of your membership number show this expiry date. For example: 0001FIRC1287 means this is membership number 1, the CAPTAIN'S LOG is sent by First Class mail and the expiry date is the end of December 1987. You will receive several notices before your membership expires. Please get your renewal in as soon as possible to ensure you won't miss a single issue of the CAPTAIN'S LOG. Thank you.

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Thank you

# TAKE-OFF TALK

Welcome to the NEW LOOK CAPTAIN'S LOG!

Yes, your editor has bought a home computer/wordprocessor and printer and the CAPTAIN'S LOG will be produced on that equipment from now on.

The most-obvious change is that the columns of type in the magazine can now be 'justified', meaning the lines are flush to the right as well as to the left. This eliminates the 'ragged right' which was virtually inevitable in our previous typesetting process with an electric typewriter.

## The Convention

In this issue you will find the first official announcement about the AIRLINERS INTERNATIONAL '87 CONVENTION in Indianapolis in July. Please see page 33.

Arthur Smit Roeters, who sent me the advance information, says the Adam's Mark Hotel, where the convention will be held on 16-19 JUL, is a top-rated hotel and is located just one half mile east of Indianapolis International Airport. Convention participants who fly in, may use a courtesy shuttle bus service which is available 24 hours per day, and those who arrive by car receive free parking. Exhibitors have a direct access loading area into the main exhibit hall. Other facilities available at the hotel include indoor/outdoor pools, exercise room, and Quincy's, one of the city's most popular nightspots and at your service if you have enough energy left after wheeling and dealing all day on the convention floor. The hotel rate will be \$60 per night per room. I urge all members of the WAHS to attend the convention. I guarantee you will have a great time and that you will be able to add many wanted items to your collection of airline

## Please..

Will Ron Kluk of Chicago, IL, please contact me. Please include your ZIP code with your address. Thank you.

I see this change to computer typesetting as another step toward making the LOG look more attractive in the crowded market of commercial and hobby aviation magazines. Perhaps it will help attract more members to the WAHS and with more members we can improve the LOG even more.

I bought this equipment in late NOV 86 and that is the reason this issue is out later than I had planned. The editors had their material in on time (Thank you, gentlemen!), but I decided to make a clean break with the past and retype all



memorabilia, whatever your particular specialty may be. Those who have been at previous conventions, know, and those who have never been to one for whatever reason, try it. You'll like it! The organizing committee has planned tours of the Indianapolis International Airport terminal and ramp areas, so bring your camera. The convention floor and exhibits will be open to the general public on the Friday and Saturday in the daytime, so why not bring a friend to share in the good times. If you bring your family, there are plenty of non-aviation attractions in the area to visit.

When Arthur contacted me in mid-January, he said the first mailing of information packages and registration forms was being prepared. If you want to attend the convention, and you haven't yet heard by the time you read this, perhaps you should drop the committee a line. The address is on page 33.

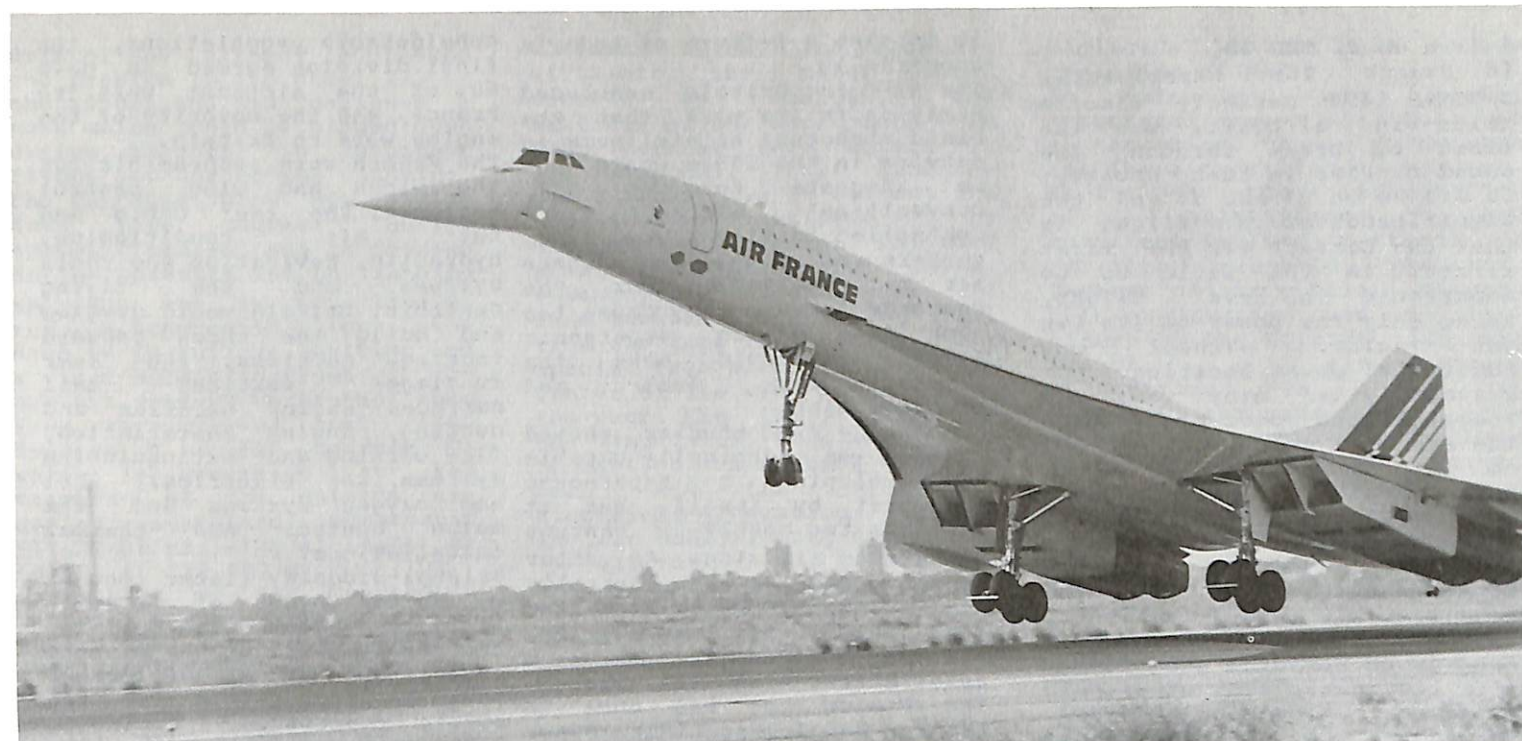
articles I had finished already on the typewriter. That meant retyping and doing new make-ups for 24 pages of this issue, amounting to nearly half of the editorial contents. That was a lot of extra work, but I believe it was worth it.

About that content: In this issue we carry a major feature about the Concorde, written by WAHS member Jeff Magnet of Cambridge, Mass. He also supplied us with some fine photos. Editors Don Thomas, George Cearley Jr. and Al Tasca have included major Concorde material in their columns.

In a surprise move, third-largest Canadian airline Pacific Western Airlines has taken over second-largest Canadian Pacific Air Lines. Since it is only two issues ago that WAHS member Tony Herben concluded his two-part history of CPAL, I thought it appropriate to look at the takeover and at the same time add some information which arrived too late to be included in his article.

We finish our review of the Boeing 247 and continue that of the Lockheed Twins. Editor Gerry Cole shows us step by step and photo by photo how to improve on a number of Boein 737 model kits, Bill Demarest presents a wide-ranging selection of postcards, Tom Dragges has what might well be the last Ozark-issued deck of playing cards, Richard Koran has a selection of historic and current wings, patches and other items, Carl Reese shows us some of the 'golden oldies' of his safety card collection and Tom Kalina sent another one of his great airplane pen drawings. Judging by the reactions I receive from readers from time to time, their work is much appreciated.

That is all for now. I hope you'll like the material your editors are bringing you in this issue. I'd like to end by wishing you all a very happy 1987.



Air France Concorde F-BVFF, the 15th production aircraft, lifts off from Boston Logan Airport in this fine photograph by Jeff Magnet. Note the five-degree down angle of the nose cone.

# The Concorde is 10!

Story and Air France Concorde photos by JEFF MAGNET

So much attention was lavished on the 50th anniversary of the DC-3 in 1986, another important anniversary in air travel has been all but neglected. We are talking about the 10th anniversary of supersonic passenger flight: 21 JAN 86! On that day the revolutionary British-French Concorde began the world's first successful, sustained supersonic passenger air service. Today only two airlines operate the Concorde: British Airways and Air France. But the initial order book listed the names of many respected, major international air carriers all over the world. However, the high cost of buying and operating the aircraft, and the refusal by many countries to allow overflights at supersonic speeds, made the order book shrivel away again almost as fast as it had built up. British Airways and Air France had in 1976, agreed to

inaugurate Concorde service simultaneously: British Airways from London to Bahrain, on what was hoped would be the first step in a scheduled supersonic service to Australia, and Air France from Paris to Rio de Janeiro. In order to achieve a true simultaneous inauguration, the control towers at London and Paris were linked by telephone and the two aircraft captains were in radio contact with one another during push back, taxiing and while holding at the runway. After a space flight-type countdown of 30 seconds, the brakes were released at exactly the same time. Both takeoffs were shown together on split-image TV screen in both Britain and France and it was estimated that around the world 250 million people saw the takeoffs either live or in some taped version afterward. Whether you see the Concorde in

the air or just sitting on the ground, you can't help but be impressed. Seen from the front it looks like a needle and when viewed from above or below, the wings remind one of the doors and windows of a Gothic church. The Concorde flies faster than any other commercial airliner in existence today and is also faster than many operational military jet aircraft, and its shape is one of beauty and grace.

### THE FIRST STEPS

On 14 OCT 47, a young U.S. Air Force major, Charles (Chuck) Yeager, strapped himself into a small, bullet-like rocket aircraft, the Bell X-1, and became the first man in the world to fly faster than the speed of sound. The flight led to the development of supersonic aircraft in many countries, but it is through the efforts of two of these in particular, Britain and France, that we are now able to fly commercially at supersonic speeds. The first British aircraft known to have achieved supersonic flight was a small experimental delta-wing plane, the deHavilland DH-108 Swallow, designed to investigate the properties of the delta wing. It reached 700 mph (1,120 km/h) in

a dive on 06 SEP 48. In France the experimental SFECMAS 1402 Gerfaut, also a delta-wing aircraft, was the first to break through the sound barrier in that country. It did so on 03 AUG 54 and the significance of this flight is that the Gerfaut was the first aircraft in the world to go supersonic in level flight, using only the power of its own jet engine, without any additional power boosting. Britain, after many years of research into speed higher than the speed of sound, on 01 OCT 56 set up a committee of representatives from the airframe manufacturers, engine builders, airline industry officials and government representatives. The committee's task was to initiate and implement a program of research and design into the feasibility of Britain building a commercial SST. Called the "Supersonic Transport Aircraft Committee" (STAC), it completed and evaluated a number of design studies. They included a range of proposals, from medium- to long-range aircraft, flying at speeds from Mach 1.3 to Mach 2. Meanwhile, Bristol Aircraft Ltd. in Britain and Sud Aviation in France were each working on supersonic transport aircraft which, by coincidence, had very similar design characteristics. Both were very slender delta-winged aircraft with four powerful engines which were yet to be developed. Bristol, which would later become part of British Aircraft Corporation (now part of British Aerospace - BAe), called its plane Model 223 and Sud, now part of the Societe Nationale d'Industrie Aero-spatiale (Aerospatiale) had the Super Caravelle on the drawing board. External details between the two aircraft were minor. The engines of the Model 223 were to be housed in one large nacelle straddling the fuselage centerline at the rear of the wing, and the Super Caravelle's engines were to have been mounted in two pairs of two, with each pair in a curved nacelle at the wing trailing edge, much like with the Concorde today. The Super Caravelle was to have had a fixed nose and the Model 223 had provision for a hinged nose to give the pilot sufficient visibility during take-off, final approach and landing, as well as taxiing. (We get back to this later, as

it is also a feature of today's Concorde.) The STAC in Britain concluded early on in its work that the basic structure of airliners in service in the 1950s would not be adequate for an SST. Conventional aircraft are controlled in flight by fins, rudders and flaps, but these are not suitable for the Concorde because they cause too much drag during supersonic flight and would make the aircraft less fuel- and cost-efficient. Continuing STAC studies showed Britain was technically capable of developing a supersonic transport by itself. But it would be too costly a venture to take on all alone. So, after seeing a model of the generally similar Super Caravelle at the 1961 Paris Air Show, the British decided to pursue a joint effort with the French. The French too had come to realize developing their Super Caravelle alone would be too costly. Discussions in both Britain and France resulted in the formation of a partnership on 29 NOV 62 to develop, design and build what is today the Concorde. The partnership symbolized the determination of the two countries and their respective aircraft industries to build a safe and reliable aircraft. How well they have succeeded is proven by the fact that today 88% of Concorde departures are on time, that is, within 15 minutes of the scheduled time. Design studies took longer than expected and the whole program overran grossly both in time and in cost. Part of the reason was that the Concorde was not only to be designed in two countries, but also built in two countries by two different manufacturers. Even the name of the new aircraft was a point of controversy for some time. The French opted for "Concorde", from a speech by the late former French President Charles de Gaulle, who talked about a new "concorde", a new "friendliness" between the two nations. The British favored "Concord", without the 'e' at the end. It was not until 1967 that France and Britain finally agreed on the present name: Concorde.

Since two different companies in two different countries would each set up a production line for the same aircraft, actual manufacturing had to be divided evenly, or as close to evenly as possible. After

considerable negotiations, the final division agreed on gave 60% of the airframe work to France, and the majority of the engine work to Britain. The French were responsible for the wings and wing control surfaces, the rear cabin and the air conditioning, hydraulic, navigation and radio systems, and the flying controls. Britain would develop and build the three forward fuselage sections, the rear fuselage, vertical tail surfaces, engine nacelles and ducting, engine installation, fire warning and extinguishing systems, the electrical, fuel and oxygen systems and the noise control and thermal installations. Bristol-Siddeley (later bought by Rolls Royce) of Britain would be designing and building the rotary parts of the Olympus engines and SNECMA of France would be responsible for the static components, including the rear nozzles with the thrust reversers and engine silencers. A panel was set up to discuss the best ways of reducing excessive noise by these engines, but after spending a lot of time and money on research, it was concluded that suppressing the engine noise would alter their performance too much. However, the research, time and money spent on noise suppressing systems has not been wasted. The technology which was developed with the Concorde in mind, is now being used in noise-abatement of the engines of today's subsonic passenger jets: the Boeing 747 and 757, Lockheed L-1011 and the Airbus. The basic structural material used in the Concorde is a copper-based aluminum alloy. Other materials include titanium, stainless steel (in areas of high stress and high temperatures), copper, gold, silver, platinum, nickel, manganese and chromium.

#### OGIVAL WING PLANFORM

The 'ogival' planform of the Concorde's delta wing requires a large angle of attack during landing and takeoff. This means that the forward view of the cockpit crew would be severely restricted during those critical stages of flight. Even during subsonic cruise a nose-up attitude is required, again at the expense of forward visibility over the aircraft's needle nose. Something had to be done.

Bristol had already addressed the problem in its Model 223 of the 1950s, and had designed a nose which could be hinged down during takeoff, in subsonic flight and during the landing. The Concorde nose now angles down five degrees during subsonic cruise, and 12 degrees during takeoffs and on landing approach and in the landing run. In supersonic flight, the nose is in full-up position and a visor slides in front of the cockpit windows to protect them from the extreme heat (500 degrees F - 127 degrees C) which is generated by the friction of the outside air during sustained supersonic flight at cruising altitude of 60,000 ft (20,000 m). Since half of the Concorde's takeoff weight consists of fuel, the wing must enclose sufficient volume to stow the bulk of it, correctly distributed in relation to the center of gravity of the aircraft. The fuel load of 31,620 U.S. gals (119,787 ltrs) actually plays an important role in maintaining the correct center of gravity and in controlling the aircraft in supersonic flight. Remember that the Concorde doesn't have the same array of flaps, trim tabs and other control surfaces as subsonic airliners to keep it under control because these would cause too much drag. The designers of the Concorde came up with a novel solution to the question of how to control the aircraft without these devices. They use the distribution of the fuel for that purpose! As the Concorde accelerates from subsonic to supersonic speed, the pressure over the wing changes considerably. This results in a nose-down pitching

movement which, in subsonic airliners, the pilot would correct by changing the settings of the appropriate trim tabs. Without this option at his disposal, the Concorde pilot would have to correct the nose-down attitude by maintaining a constant backward pressure on the control column. However, he accomplishes the same control by shifting fuel from one tank to another, using special trim tanks - two in the center of the wing and two in the rear. The fuel, while in the wing tanks, also acts as a coolant, by absorbing surplus heat from the hydraulic, electrical generating, oil and the air conditioning systems of the aircraft. The typical shape of the wing, with its 'built-in' twist, also contributes to maintaining proper control at supersonic speed.

#### FAIL-SAFE DESIGN

Early on in the design stage it was decided that all parts of the Concorde would be designed on the fail-safe principle or would have a pre-determined fatigue life. A fail-safe structure is one which is designed so that if one component fails, its function will be taken over by another component until the failed component is replaced. In a pre-determined safe-fatigue life structure each component has a given fixed number of flying hours, take-offs and landings, amount of load carried or other operation. During this pre-determined lifetime the possibility of fatigue failure of the component is considered unlikely. After the aircraft has completed the fixed number of cycles, the part is

replaced, whether it needs replacing or not. An extensive and costly structural course was followed in adapting these principles for the airworthiness program. It included close examination of maintenance and component-failure patterns in existing subsonic aircraft. Because of its critical nature, this examination was a joint effort by the British and the French airworthiness authorities. To arrive at meaningful and safe values, the effects of possible failures were categorized as: Minor, major, hazardous and catastrophic. The probabilities of failure were categorized as: frequent, reasonably probable, remote, extremely remote and extremely improbable. The success of these design parameters has been proven by the fact none of the four prototype Concordes and 16 production Concordes have been lost in service.

#### TEST FLIGHTS IN 1969

Construction began in both France and Britain in 1969. The French were to assemble the odd-numbered aircraft and the British the even-numbered ones. Aircraft 001, the first French Concorde, made its maiden flight at Toulouse on 02 MAR 69, followed by the first British aircraft, 002, at Filton in Britain on 09 APR. Production was based on a demand for 150 Concordes world-wide. However, even at this number the production would be a money-losing

*Coming right overhead. Another photograph of Air France's F-BVFF as seen by Jeff Magnet from the other end of the runway.*

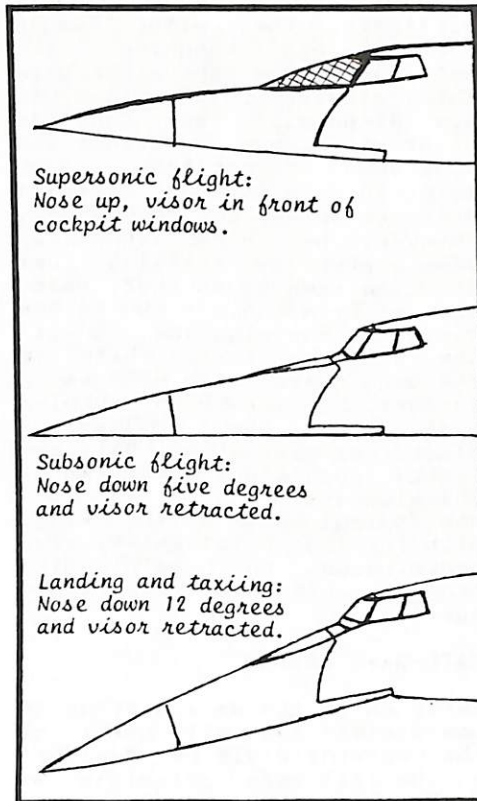


proposition because to keep the unit price within reach, development costs would not even be recovered if 200 aircraft were built.

As early as at the 1963 Paris Air Show in France, the world was shown a design proposal of the Concorde. This prompted both the United States and the Soviet Union to initiate their own SST programs. In MAY 67 Boeing was awarded a contract to design the U.S. entry in the SST race. This was followed by official approval of the program by then-President Richard Nixon in SEP 69. However, after much public pressure by environmentalists and because of the oil crisis, the U.S. Senate in 1971 voted against continuing the project, eliminating many jobs with it.

#### THE UNLUCKY TU-144

The Soviets also came up with an answer to the Concorde. But unlike the U.S. proposal, the Soviet's Tupolev TU-144 looked so much like the Concorde, the Western press was quick to name it "Concordski". A model of the aircraft was shown at the 1965 Paris Air Show and it was abundantly clear that the aircraft was a virtual copy of the Concorde. However, once flying, something proved seriously wrong with the TU-144. The Soviets, in their desire to beat the West by being the first to fly a supersonic airliner (they made it too, on 31 DEC 68), had apparently done such a rush job in designing their Concorde clone, it was plagued with problems. A prototype appeared at the 1971 Paris Air Show, but at the production version, seen at Paris in 1973, had many major design changes. This production aircraft, the third TU-144 built, was demonstrated at the 1973 show, but it crashed on a demonstration flight in full view of tens of thousands of spectators. It came down on a nearby village, killing the crew of six and seven people on the ground. 28 people on the ground were injured, 14 homes were destroyed and 109 damaged. Modifications were carried out on the other 12 TU-144s that had been built, and on 26 DEC 75 Aeroflot started supersonic services between Moscow and Alma Ata in central Siberia. Only freight was carried, in accordance with standard Aeroflot policy to use new aircraft on cargo services only until they have proven to be safe for passenger service.



Supersonic flight:  
Nose up, visor in front of cockpit windows.

Subsonic flight:  
Nose down five degrees and visor retracted.

Landing and taxiing:  
Nose down 12 degrees and visor retracted.

Passenger services with the TU-144 started two years later, but were suspended on 01 JUN 78, following an accident to another TU-144.

#### ESCALATING COSTS

By 1976 operating costs and the opposition by anti-Concorde environmentalists had reduced the orderbook considerably. At the height of interest, 74 options had been taken by 16 airlines: Air France, BOAC (British Airways), PanAm - 8 each; American, Eastern, TWA, United - 6; Air Canada, Qantas - 4; Braniff Int'l, Continental, Japan A.L., Lufthansa - 3; Air India, Middle East A.L., Sabena - 2 each.

However, only Air France and British Airways were to operate the Concorde. Braniff operated interchange flights with British Airways and Air France Concordes between Washington, D.C., and Dallas-Fort Worth, Texas, from London and Paris respectively. These flights operated at subsonic speeds over U.S. soil and continued until the end of MAY 80. They operated under Braniff flight numbers, but no Concordes were ever painted in Braniff colors, other than on publicity material.

One BA Concorde was painted in Singapore Airlines livery on the port side for a joint

service from London to Singapore for a short while. The environmentalists who protested against Concorde, did so out of concern that the aircraft, as it flies at twice the speed of sound, would destroy the ozone layer around the earth, and which protects the earth from harmful rays of the sun. Others were concerned about the noise pollution they said the Concorde would create around New York's JFK airport. However, both groups proved wrong. It was determined later by the U.S. Department of Transportation's "Climate Assessment Program" that the fluorocarbons released by aerosol sprays and refrigerants were estimated to cause 12 to 50 times as much ozone depletion as would be caused by the Concorde. Sound measurements taken by the DoT and the New York Port Authority demonstrated that the Concorde was no noisier at subsonic speeds than most other jet airliners in operation then. Long years of fatigue testing of the Concorde on the ground shows that at the current rate of utilization - about 1,000 flying hours per year per aircraft - each aircraft should last until the end of this century and perhaps into the next.

#### FEATURES OF INTEREST

Here are some features of interest about the Concorde:

--Concorde's total take-off thrust in relation to aircraft weight is about 1.7 times greater than that of the Boeing 747;

--The range of Concorde with maximum payload is 3,870 miles (6,230 km) against 6,560 miles (10,560 km) for the 747-200B;

--Concorde circles the airport upon arrival just like a subsonic jet. But it is given first priority for landing because of its high fuel burn;

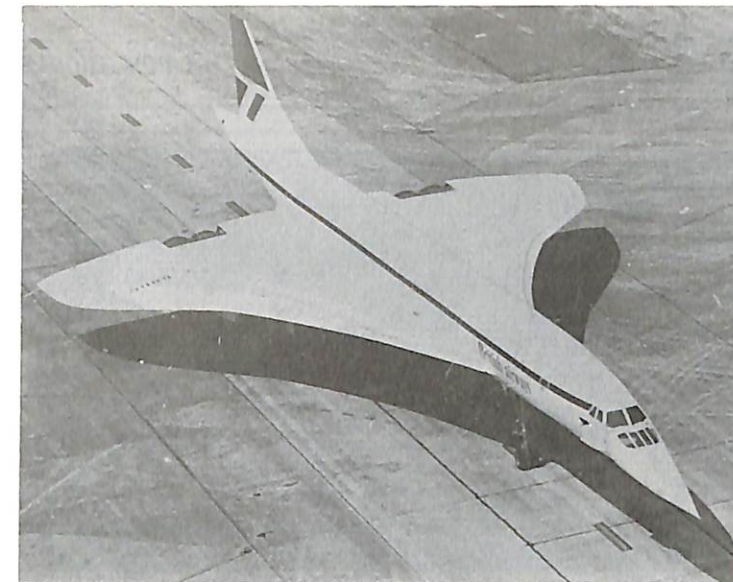
--The airport runway is checked for debris before the Concorde can take off;

--No other airplane can land or take off at an airport when Concorde is doing the same;

--There are only six moving control surfaces on the Concorde wing, against 52 on a Boeing 727 wing;

--Concorde is the only operational commercial airliner to have carbon brakes rather than steel ones;

--Concorde pilots take part in a tremendous amount of training and retraining. They have a medical examination every six



The typical shape of the Concorde wing is clear in this British Airways photo of the second production aircraft, G-BBDG.

months and also return to the flight simulator every six months to be observed by an instructor. Pilots undergo in-flight competency checks every 12 months;

--The French Concorde was certified on 09 OCT 75 and the British version on 05 DEC of the same year. Of the 20 Concordes built seven fly with British Airways and four with Air France. The others are either in museums or are used to take spare parts from;

--The lead aircraft in the BA fleet has logged more than 10,000 flying hours and nearly 3,000 supersonic cycles. Out of 60,000 hours total flying time of the airline's Concorde fleet, 40,000 have been at supersonic speeds;

--In scheduled service, both airlines operate their Concordes exclusively on trans-Atlantic services;

--At the speed of 1,336 mph (2,138 km/h) the Concorde is 10% faster than a rifle bullet and travels at more than 22 mi. (35 km) per minute.

In 1982 both Air France and British Airways began chartering their Concordes to groups and this has turned out to be a very successful venture. If you or your company would like to charter the aircraft, however, count on paying up to \$40,000. British Airways, Air France or Flight Time in Newton are glad to take your order!!!

#### COSTS WRITTEN OFF

The brave first venture into civil supersonic air travel, as represented by the Concorde, will never pay for itself and the \$4 billion launching costs

have long since been written off by Britain and France. The costs ran so high, Britain at one point came close to breaking the agreement with France and dropping out of the Concorde development. But the government changed its mind under pressure from France (the French even threatened to seek a co-operation with the Soviets if the British were to quit. Today, the Concorde is extremely popular with the travelling public and especially with businessmen. During the past 10 years Air France Concordes have carried more than 620,00 passengers and British Airways has seen close to one million travellers on board its Concorde fleet.

The difference in totals not only reflects the difference in fleet size between the two airlines, but is also a result of the higher ticket prices for the Concorde, which appeals more to the businessman than to the holiday traveller. And there is more business travel between Britain and the U.S.A. than between France and the U.S.A.

Load factors on Concorde average 62% and it takes only 48% to break even. Not bad for a trip which costs \$5,104 for a roundtrip between New York and London. Compared to the number of people flying on subsonic air services, the number of Concorde passengers is very small. But that doesn't take away from the fact the Concorde is serving a vital air traffic need.

It has become clear that the noise and other environmental concerns of yesteryear will not materialize. Few people notice the few Concorde movements at

New York, London and Paris each day, unless they happen to see the aircraft taxi, takeoff or land.

Concorde has probably generated more pride, more controversy and more environmental hate than any other civil airliner of the past and now in service. But it were the foresight and dedication of the people of two nations which have brought us this graceful aircraft.

#### SIT BACK AND RELAX!

Now, sit back, relax and think about the fact that in only 10 minutes after take-off you will be flying at 35,000 ft (10,000 m) rather than the 35 minutes it takes in a subsonic jet. Also, enjoy that you will not suffer from any "jet lag" when flying on the Concorde, because the cabin of your aircraft is pressurized to an altitude of only 5,500 ft (1,680 m), rather than the 7,500 ft (2,280 m) of other jet airliners. There is one crew member for every 16 passengers; you have separate, high-speed check in facilities before and accelerated delivery of luggage after your flight. To top it all off, the food served is "gourmet style" rather than the regular airline fare.

It is only 30 seconds after takeoff and you already are travelling at 225 mph (360 km/h). This rate of acceleration is equivalent to that of a sports car going from 0 mph to 62 mph (100 km/h) in eight seconds. And when your flight reaches 28,000 ft (9,800 m) altitude, you are almost over Nantucket on your flight out of New York and already you are flying at Mach .95 (95% of the speed of sound). In less than four hours you will be landing on the other side of the Atlantic, destination Paris or London. That is in only half the time of subsonic jet travel.

As I said before, Concordes at their present rate of utilization can last until the end of the present century and perhaps into the next. But even then they will not be retired due to old age. Instead, they may be pushed out of service by the next generation of supersonic airliners. For make no doubt about it: there will be a next generation of commercial SSTs, just as in the past each generation of new airliners has been followed by a newer generation, faster and bigger than the previous one. There is no reason to believe Concorde will be an exception.

# STICKER CHATTER

by DON THOMAS

No special airline or aircraft to write about this issue. However, as an article on the Concorde is included, we like to show labels of this aircraft.

Several Concorde labels were already pictured in the previous issue of the Log, Vol.12, No.3, but here are two more. The British Airways label (No.1) and the similar, but smaller one without the big C, pictured in the previous Log, are very rare. They were used in the early days of Concorde service. Later, Braniff made a deal for the Concorde to fly from Dallas/Fort Worth to Dulles on the way to Paris and London. This service terminated in 1980 and the Braniff label (see the previous Log), was discontinued. Will send one to anyone who sends an SASE.

Air France's Concorde label was also pictured in the previous Log, and this time I am showing a BIL for the same carrier (No.2).

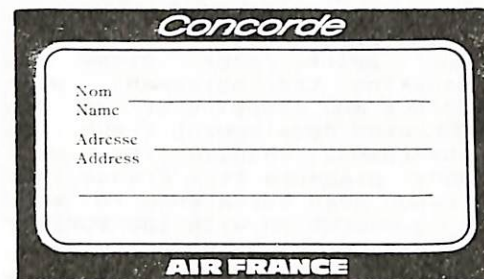
Unofficial souvenir stickers showing the Concorde are for sale at various British and French airports and flight shops, but these are not airline-issued.

The American Eagle label (No.3) was received from Don Lussky. Although he is employed by American Airlines, Don was unable to get any more. There are other American Eagle labels (such as No.4), but no one seems to be able to get any. Please let me know if you can track down some of these. American Eagle is using the ATR-42 and the label pictured was printed by the aircraft manufacturer, Avions de Transport Regional in France. ATR-42 labels are showing up for many airlines. One of the first was for Finair. Now we also see them for airlines such as Air Polynesie, Air Guadeloupe and others. Air Queensland of Australia, the former Bush Pilots Airways, now uses the ATR-42 as well.

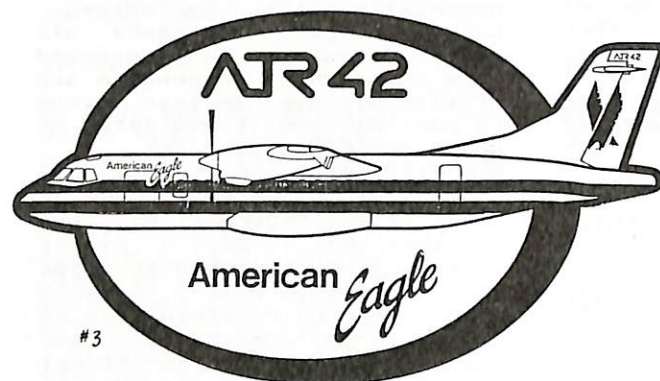
Would you like to see some nice Chinese art? Bill Demarest sent in a new label of Dragonair of Hong Kong (No.5). It shows a gold dragon



#1



#2



#3



#4



#5



#6

on an orange-red background. The name of the airline in English and Chinese, is also in gold.

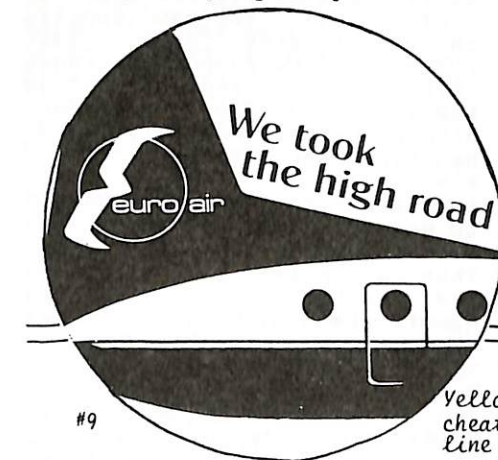
Pat McCollam sent the AirCal sticker (No.6) with no airline name or any other text on it. Christopher Murphy sent in some BILs from Kuwait, Flugleidir, PIA, BWIA and American Trans Air. Thanks all. This is the only way in which we can keep up with new issues.

Peter Rentzsch of Germany sent in two new Lufthansa labels. The one which shows a Boeing 747 with palm trees in the background, says "At home in a foreign country" in German (No.7). The color is orange. A blue one says "Meine Linie, Lufthansa" (Lufthansa, my airline).

From Lee Bachar of Chicago we received some nice new Alia Royal Jordanian Airline labels. Both were pictured in the Log Vol.12, No.2. One of these labels is marked Chicago



#7 Top part highlighted for contrast



#9

NAME \_\_\_\_\_  
 ADDRESS \_\_\_\_\_  
 CITY/STATE \_\_\_\_\_ ZIP CODE \_\_\_\_\_  
 PHONE \_\_\_\_\_

atlantic gulf

above the airline's name and we wonder whether or not there are others with different city names.

Now comes a lesson in natural history. I'll bet none of you realized seagulls can speak languages other than English, depending on where they live. Shown is a SAS/Danair label (No.8). The two birds are apparently talking to each other in Danish! "When does the next ferry go?" asks the one. "It doesn't matter, I am flying," the other replies. Smart bird!!!

Here is also a nice new label from EuroAir, which flies from London to Scotland (No.9). It was sent by Mike Howard, who also sent one of those reverse peelable limp items, probably made to iron on T-shirts. Both the label and the iron-on show the BAe 748 aircraft. This 748 is also pictured on the airline's Dundee - London schedule. Mike says Euro Air also operates Viscount and Herald aircraft.

Midway Airlines is using a simple BIL which looks like the common Air Transport Association BIL which Delta Airlines always has available.

The Atlantic Gulf BIL is dark blue on white (No.10).

Republic Airlines no

longer exists. Northwest Airlines has completed its takeover of the carrier. Bar Harbor Airlines is now an Eastern Express carrier, operated by Eastern Air Lines. Eastern Air Lines itself is to be taken over by Texas Air. Aspen Airways is supposed to become United Express. Rocky Mountain Airways is really Continental Express - and so it goes. I wonder when they will run out of new names for airlines.



#8

Black color below the line. Blue above it

For those who keep track of these details, here are the measurements and colors of the stickers described in this column:

#1. 6 x 2 1/8 in. (16.6 x 8 cm). NAVY BLUE: background; WHITE: border, text and aircraft; GOLD: crown in the big C & the first C of Concorde, words British Airways above word Concorde. Aircraft trim is red and blue.

#2. 3 1/2 x 2 3/16 in. (9 x 5.5 cm). ROYAL BLUE: border on both sides; name & address text & lines on front, and French text on reverse side; WHITE: inner rectangles & words Concorde & Air France in border on both sides; GOLD: narrow unbroken borders in white areas on front and reverse, and English text on reverse side.

#3. Aircraft fuselage length 7 in. (17.8 cm); oval 5 1/2 x 4 1/4 in. (14 x 10.9 cm). BLUE: all trim, text and borders in top half; RED: all trim, text and borders in bottom half, plus American Eagle text behind cockpit and the front wing of eagle on the tail.

#4. Diameter 2 in. (5 cm). BLUE: rear wing of eagle; RED: front wing and text. There is no border

#5. Diameter 4 in. (10.1 cm). ORANGE-RED sticker with GOLD text and dragon.

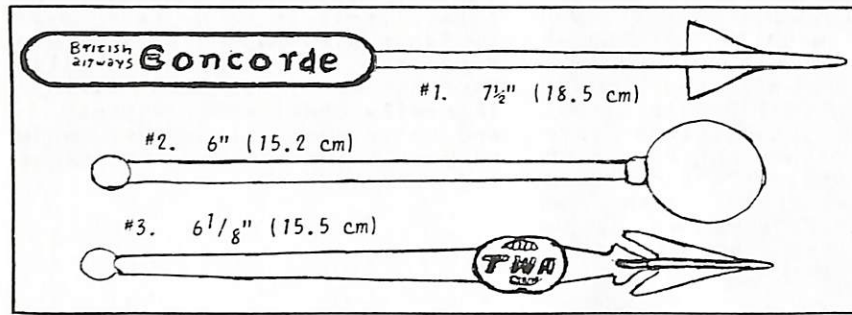
#6. Diameter of sticker 3 7/8 in. (9.8 cm); of circle 3 1/4 in. (8.2 cm). BLACK: all outlines. Aircraft trim is in standard AirCal colors of yellow, orange and purple. LIGHT BLUE: sky; WHITE: clouds.

#7. Outside measurements: 4 1/4 x 3 1/2 in. (12 x 8.6 cm). DARK BLUE: trim and name on aircraft; WHITE: German text; BLACK: palm trees; ORANGE in various shades: background.

#8. Diameter 4 5/16 in. (10.9 cm). ROYAL BLUE: entire background, except for, BLACK: bottom segment (the ground on which the birds are standing) and the birds' eyes; WHITE: all text and bodies of birds; YELLOW: beaks and legs & feet of birds.

#9. Diameter 3 1/2 in. (8.9 cm). BLACK & WHITE: background, aircraft and text; YELLOW: bird on tail and wide cheatline below windows.

#10. 4 x 2 1/2 in. (10.1 x 6.4 cm). DARK BLUE printing on white card.



Although the Concorde has been in service for more than 10 years, I know of only three styles of sticks designed for use on board the aircraft. Two of these are from British Airways and the third from TWA. They are drawn to scale in these illustrations.

Fig.1 shows the stick which I was told was the first one used on the Concorde by British Airways and remained in use for quite some time. They come in three colors that I know of: dark blue, transparent gold and white. I have heard that a red one also exists, but I have never seen it. Actually, a red one would make sense as that color is part of BA's color scheme. As for color variations, I have four different blue shades and two in the gold. The sticks are one-sided except for the raised writing, which appears on both sides. The edge around the end of the stick is also raised, forming a ridge the same height

as the lettering. None of the sticks contain the name of the manufacturer.

Fig.2 shows a Concorde stick sent to me by member Doris Lemar when the aircraft visited Dayton, Ohio, in 1986. Unfortunately it is just a plain clear stick with a round shank and a bubble bottom. It doesn't contain any writing of any kind on it at all, but then again ... it is a Concorde stick.

Fig.3 shows a stick which a TWA employee told me was used in the early 1970s when the airline was considering buying some type of SST. Obviously they had the sticks made before they changed their mind about buying any supersonic transports, so all the airline wounded up with were the sticks. They are one-sided



MACH 2 TO MIAMI

Three flights a week from Spring 1984  
British Airways Concorde

#5

except for the raised name/logo which is identical on both sides. The top side of the aircraft also has a raised tail. These sticks are made by "Spir-it USA". The name appears on the reverse side, just forward of the round end. Known colors are all-red, including the logo, and an all-white one with a bright metallic color name and logo outline.

I am also showing two "Mach 2 to Miami" brochures by British Airways, issued in early 1984. They advertise the airline's new service from London to Miami via Washington three times a week beginning in the Spring of 1984: southbound on Tuesday, Thursday and Saturday and northbound on Wednesday, Friday and Sunday. Flying time in each direction is listed as two and a half hours.

Fig.4 is a little bigger than a playing card: 2 15/16th in. x 4 1/8th in. (7.4 x 10.4 cm). Printing is white on navy blue background both sides with title British Airways (to the left of the word Concorde) and crown inside the C of Concorde in gold.

Continued on page 14

## Concorde

London to  
Washington - New York

AND NOW

### MIAMI

3 Times per week  
(Via Washington)

From Heathrow on Tue. Thu. Sat.  
Departing 13.00

Return Flights via Washington  
on Wed. Fri. Sun.  
Departing Miami 09.30

All sectors flown Supersonic  
Daylight in both directions  
Extensive connections to/from points  
in Europe & Middle East, USA,  
Caribbean, Central & S. America

## Concorde

In addition to our new route to Miami  
Concorde also operates

LONDON - NEW YORK  
10.30 & 18.00 from London  
09.30 & 13.45 from New York

LONDON - WASHINGTON  
3 Times per week

13.00 from London  
Tue. Thu. Sat.

11.45 from Washington  
Wed. Fri. Sun

For further information see  
Concorde Timetable.

The "theme model" for this column will be the Boeing 737, the "baby" of the Boeing jet airliner fleet. By the time you read this, it will be almost 20 years since the rollout of the 737 prototype took place on 09 APR 67. This is definitely a historic aircraft, worthy of attention.

The physical characteristics which distinguish the 737 from other aircraft in its class - the pot-belly engine nacelles attached to the wings on very short pylons, its landing gear with "missing" doors - are what makes it an interesting model subject. These characteristics don't necessarily come across very well in model form. I'd like to describe some enhancements to 737-200 kits, especially the Airfix 1/144th scale version, which will improve their appearance and fidelity to scale.

Unlike its contemporary, the McDonnell Douglas DC-9/MD-80 series, the 737 does not seem ashamed of its legs and gear wells. The DC-9 keeps things pretty well covered up on the ground, opening both the nose and main gear doors only long enough to retract and extend the gear. The 737 not only keeps the nose gear doors open on the ground, it doesn't even have a full set of main gear doors. The wheels themselves, when retracted, form part of the main gear covers. When on the ground, it is therefore easy to see clear through the main gear well, as well as up into the nose gear well. The lady has no modesty.

However, this is portrayed very poorly in the Airfix kit. The main and nose gear wells show up as very narrow depressions in the fuselage contours, not at all like the prototype. The popular Hasegawa 737 in 1/200th scale is no better. Only the less-popular Heller and Nitto kits have reasonably proper gear wells. The engine nacelles on the Airfix kit also need some attention, as there is no proper intake duct leading to the engine compressor fan. With a little work, however, the inaccuracies with these kits can be corrected. I assume you have some plastic modeling

experience, or you probably wouldn't be reading this column. These are my suggestions on one way to do it, but it is not necessarily the only way to get the job done.

### IMPROVING BOEING 737 KITS

The nose gear well will be "boxed" with .020 in. (0.5 mm) styrene, up to the level of the cockpit floor. The parts are shown full size for 1/144th scale in fig.1. Sheet styrene of the width of the inside of the nose gear well, is cut to form the front, rear and top (cockpit floor). The location of the floor, by the way, can be easily referenced to the door cutouts. The top of the floor should be about equidistant between the bottom of the left front entrance door and the top of the airstair door cutout immediately below it. On the Airfix kit the floor is parallel to the raised panel line just below the windows on the fuselage sides. Mark the floor location full-length on both fuselage sides. Two rectangular nose well sides are next cut from .020 in. (.051 mm) styrene sheet, and the .060 in. (1.52 mm) holes are drilled. The top, front and rear parts are glued between the sides as shown. A piece of .060 in. (1.52 mm) diameter styrene rod forms the pivot for a modified nose gear strut. Note that a cut-out for the box will be required in the kit fuselage bulkhead, part #18. The completed assembly should look like photo 1. The styrene tabs shown in the photo help align the fuselage during assembly.

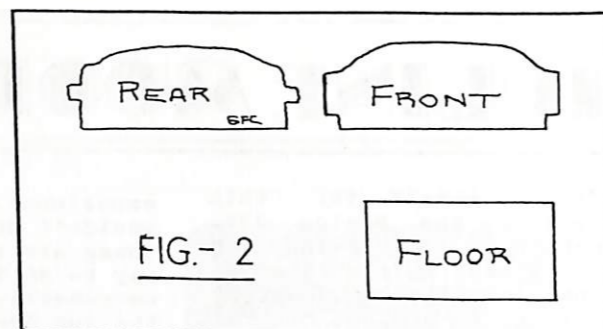
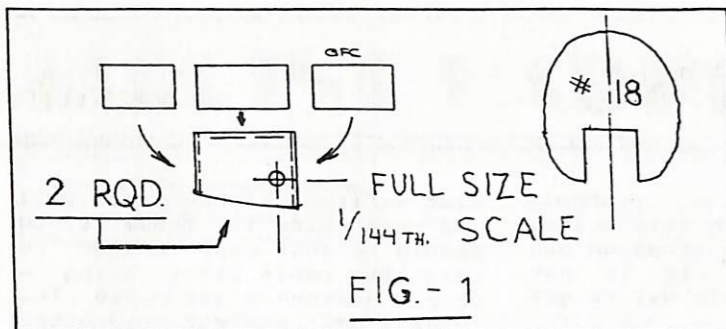
Rather than cutting the front and rear main gear well bulkheads to the complex shape required, we will try a different approach. Glue the modified bulkhead into one side of the fuselage ONLY and hold both halves of the fuselage securely together (without glue!) with strips of masking tape. Using the depression molded into the fuselage halves for Airfix part #30 as a guide, cut two slots in the fuselage parts, using an X-acto #239 fine razor saw blade. This saw cuts a slot almost exactly .010 in. (0.0254 mm) wide. Cut one

slot in front of the gear well and one behind it. These slots should be just deep enough to reach the cabin floor. Using a couple of sheets of .010 in. (0.0254 mm) styrene inserted into the slots as guides, make sure the main gear well slots have the same depth. If they don't, the floor won't be level.

Cut two main gear well bulkheads from .010 in. styrene, using the patterns in fig. 2. These are deliberately a little oversize. These bulkheads are pressed into the two slots and liquid glue is applied to ONLY the left rear of the rear bulkhead, and to the left front of the front bulkhead. Just tack-glue these bulkheads into the proper position, as we will need to disassemble the fuselage later to add the main gear well floor and the nose weight. When completed, the model should look as in photo 2.

While the glue joints of the main gear well are drying, the kits's shallow nose gear well can be cut out and enlarged to accommodate the new gear well box. When satisfied with the fit and after you have double-checked the alignment, use liquid glue to attach it to only one side of the fuselage. Now that the fuselage parts are drying, we will proceed to the engine nacelles. The biggest problem with the engines are the inlets. Airfix has provided a compressor fan and an intake lip, but nothing between except the nacelle wall. We can rectify the situation by using a length of plastic soda pop straw as a duct. The inside diameter of the straw should match the outside diameter of the fan disks, Airfix parts #31 and #35. I have found straws that work, in a number of fast-food restaurants. The clear plastic straws, those without a thick colored stripe down the side, are the best. Use 0/400 sandpaper to roughen the straw inside and out. This will help glue and paint adhere better.

Cut a couple of straw ducts about .500 in (1.27 cm) long and plug the end of one with part #31, the end of the other with part #35. Glue in place with



ACC, as styrene adhesives usually won't work on the straws. Naturally, the fans should face into the straw ducts. Proceed with assembly of the nacelles as per the Airfix kit instructions, but leave out the intake fans. The sub-assemblies are shown in photo 3. When the nacelle assemblies are dry, test fit the intake/fan sub-assemblies and enlarge the nacelle intakes as necessary. When you have achieved a snug fit, and the intakes are aligned with the centerlines of the nacelles, glue the fan/duct sub-assemblies in place with ACC. Trim off the excess duct from the front (it was a handy handle, right?)

You should now be able to separate the two fuselage halves by removing the strips of tape. Using a knife, files, etc., remove the portion of each fuselage half between the two main gear bulkheads, and provide clearance for the gear legs to retract. If you don't wish to lengthen the retracting links -kit parts #47 and 52- don't cut below the level of their notches in the fuselage sides.

Add a floor, or main gear well top, between the two bulkheads. This strip is shown full-size for 1/144th scale in fig. 2. The length is a cut-to-fit dimension. Use trial-and-error

wih both fuselage halves to get it exactly right. When satisfied, glue in place between the bulkheads as shown in photos 4 and 5.

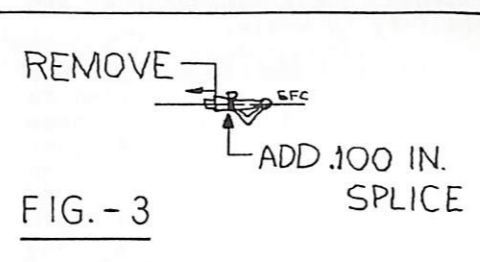
Add a nose weight of about .3 ounce (10 grams) and secure it in place with ACC or Epoxy. Now join the two fuselage halves using liquid glue. Remove about .010 in (.254 mm) from each side of Airfix part #30 so that it will fit between the main gear bulkheads. However, before gluing this part in place, you may wish to paint the interior of the main gear well and the inside of part #30.

The nose gear strut must be modified to fit the deeper gear well. I sliced mine as shown in fig. 3, and added a .100 in (2.54 mm) long extension to the strut cut from .050 in. (1.25 mm) styrene rod. Cut off the mounting tab at the end of the strut as shown, as it will later be glued directly to the pivot rod in the nose gear box. Complete the model by attaching the modified and stock kit parts in the sequence shown in the Airfix kit instructions. I have not discussed adding a lot of details. It is up to you, the builder, how far you wish to go in this direction. Whatever you do add (nose gear door details, gear retraction actuators, hydraulic lines, wiring, etc.) will now be much more visible. Even without added detail, the model will

better capture the feel of the real 737 ... and that is what I was looking for.

#### A BIGGER BABY BOEING

The Leoman resin kit of the Boeing 737-300 in 1/144th scale arrived just in time for a review in this issue. If you have been disappointed with the cast-resin kits you have seen before, don't let that bias you against the Leoman kits. The 737-300, and the BAe 146-200 before it, are first-class models. The -300 kit includes 18 finely-molded resin parts,



with a very smooth, pit-free surface and fine recessed surface detail. Also included are nine injection molded styrene parts for the wheels and landing gear, a single sheet of basic instructions, and a set of Airliners America/ATP decals for the America West 737-300. The parts are shown in photo 6 and the completed Leoman model in photo 7.

PHOTO 1 (BELOW): Nose gear well box. Note cutout in bulkhead. (All photos except #7 by Gerry Cole)

PHOTO 2 (RIGHT): Bulkheads in slots.

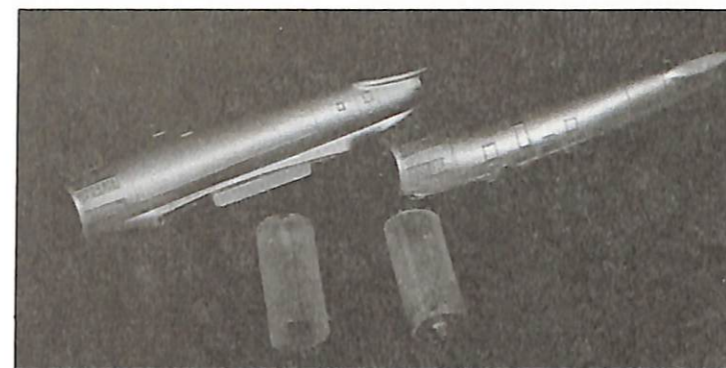
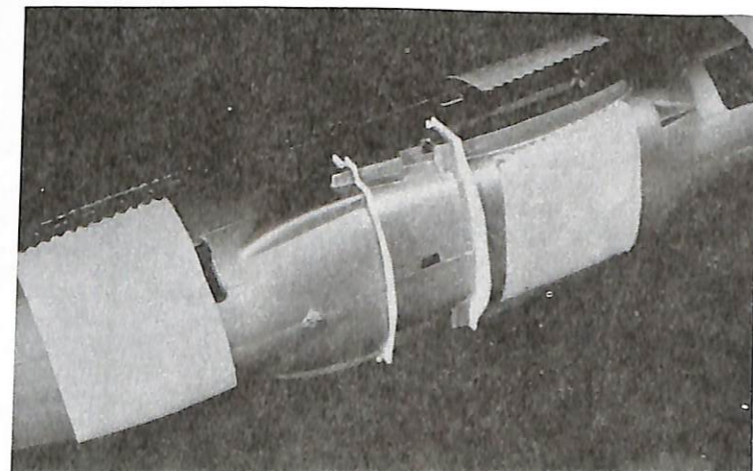
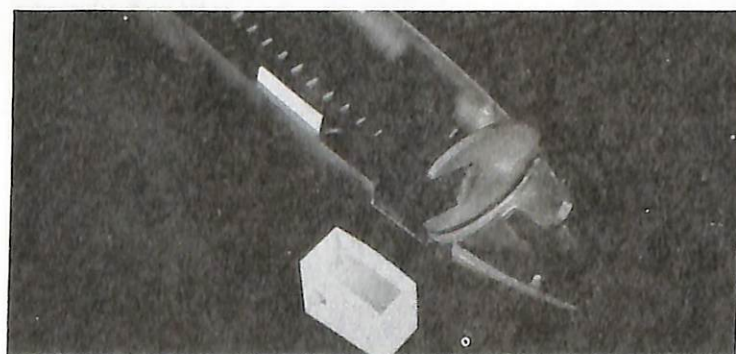


PHOTO 3 (ABOVE): Nacelles and intake duct sub-assemblies. PHOTO 4 (TOP RIGHT): Material between bulkheads removed, floor in place.

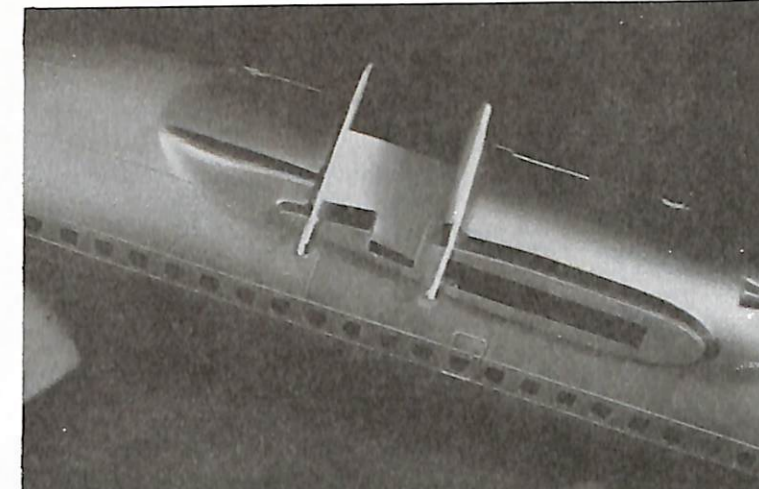
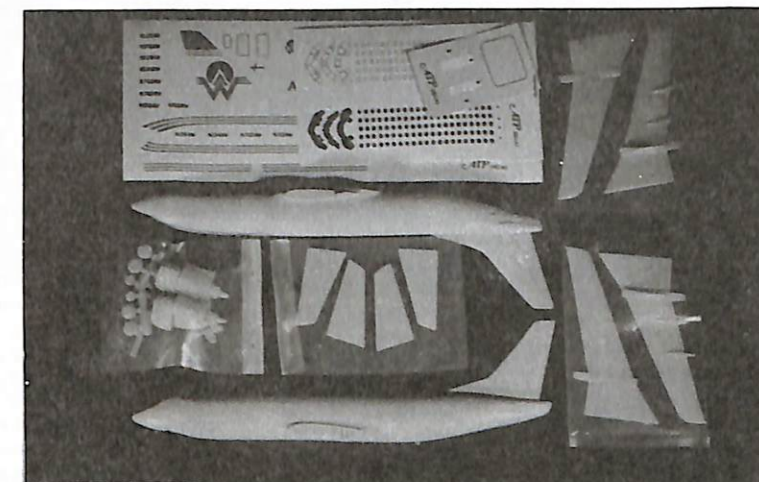
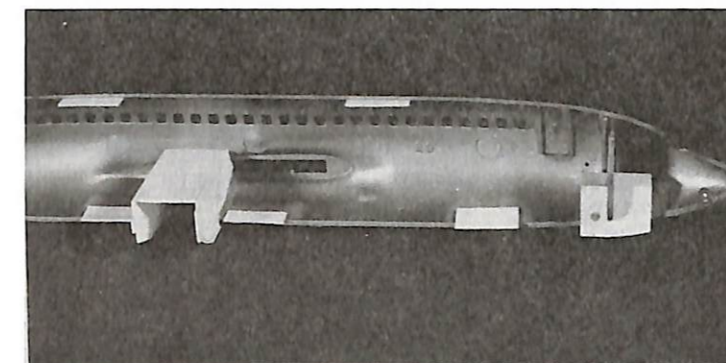


PHOTO 5 (BELOW): Fuselage side and modifications. Note sheet styrene alignment tabs. PHOTO 6 (BELOW RIGHT): Leoman 737-300 kit parts. Plastic bags are to protect parts from damage.



Windows and frames for cockpit and cabin are provided using the decals included. Leo Manoucherians of Leoman tells me the kit will be available with decals for the Western bare metal scheme at a later date. A number of other liveries are available by adapting older decals to fit, and changing the registration and fleet numbers to represent the -300. I did not have time to assemble the kit in time for this issue's deadline, so I cannot comment yet on the fit of the parts. The detailing, however, is exceptionally fine. The fan engine nacelles are particularly good. I have a personal phobia against hot and cold engine air exhausts that you can't see into, and these nozzles definitely do not have this problem. No soda straws will be required to form the engine intake walls either, as the detail in this area is very well done. All control surfaces, baggage doors, etc. are represented by deep, recessed lines which probably won't be destroyed by filling of joints and surface sanding. Even small parts such as gear doors are included, molded from

resin. The styrene parts for the gear struts and wheels are usable and keep the builder from raiding the supply of rare Airfix 737-200 kits. There is room on these parts for additional detail, particularly on the landing gear struts, if the builder desires to add extra details.

On the negative side, there are no molded gear wells for either nose or main gear. The landing gear struts glue into small holes molded into the surface of the fuselage and wings. If you just cannot live with that, perhaps the techniques discussed earlier for the Airfix 737-200 kit could be adopted here. There are no locating pins or tabs to align the wing or stab parts with the fuselage. Only time will tell whether or not this poses a structural strength problem with this relatively heavy model. I plan to add a music wire wing stub spar when I build my model, just in case.

In summary, an excellent kit of a popular current airliner, displaying the best of resin

molding technology. The retail price is about US \$25. I will have a more-detailed review later, as this beauty is at the head of my model production line.

#### AIRLINERS INTERNATIONAL '87

The model contest portion of the upcoming airliner enthusiast convention will be co-ordinated by Steve Brides. Since Steve was involved with the 1985 IPMS national convention at the same site, this should be a well-run event.

The contest will have six classes for stock kits of prop and jet aircraft, where any method of application of authentic colors and markings may be used. There will be classes for minor conversions (reconfiguration of stock kits), major conversions, models made from other-than injection-molded styrene, and airliner dioramas. Steve also plans classes for display models (on a stand), aircraft in non-authentic liveries and a Catch-22 class for airliners that don't fit in any of the other classes. The Boeing 707



and its direct variants will be the theme aircraft for the '87 contest. A Best in Show award will also be offered. I am sure the Indianapolis Airline Enthusiasts would like to see the "100-model barrier" broken. If you are going to Indy, take along a model for the contest. With many attractive full-scale airline color schemes vanishing left and right due to mergers and code-sharing, what better way than a three-dimensional model to keep the memories alive!

**NEW PRODUCTS**

Clint Groves of Airliners America/ATP has prototypes of 1/144th scale Twin Otter and Leoman Caribou kits. These should be available from him by the time you read this. AA/ATP is coming along well on the bare-metal Western 727/737 decal sheet, as well as a Western DC-10 sheet. Both will be available in 1/144th and 1/200th scale. A PanAm billboard decal is also in the works. Don't be surprised when the prices of these decals are slightly higher than those of previous sheets, as they may be run in smaller numbers to decrease the initial capital investment. This goes back to the theme of my column in Log 12/2. Without growth in the number of active airliner modelers, the number of "goodies" available to the modeler will tend to decrease, and what is available will cost more.



PHOTO 7: Leoman 737-300 (Leoman photo).

Leon Manoucherians of the Leoman line of resin kits has a growing list of airliner selections. Besides a BAe 146-200 and Boeing 737-300, he plans a Boeing 757 (which was due in DEC 86). A Boeing 767, MD-80, Ilyushin IL-62 and Tupolev TU-104 are due in 1987. They will be in 1/144th scale and will come complete with Airliners America/ATP decals. For more information, contact AA/ATP, or write Leon at P.O. Box 9840, Glendale, CA 91206. Fotocut, Inc. of Erieville Road, Box 120, Erieville, NY 13061, has a sheet of etched brass antennas in all the popular airliner scales. While

not strictly limited to airline aircraft, most airline types are covered. The sheet even includes water drains to embellish the belly of your model.

**FROM THE DEPARTURE LONGE**

Your response to my first column in the Log has been very positive. I appreciate your letters and pone calls. Please, however, include an SASE if you wish a reply to your enquiry. The WAHS doesn't provide an expense account for postage.

Happy Modeling

**AIRLINE HAPPY HOUR**

*Continued from page 10*

Fig.5 measures 6 x 8 in. (15.3 x 20.3 cm). This card is white and printed on one side only. Color of the two "watch faces" and text on bottom half is navy blue, Words MACH 2 and MIAMI are in gold, as is the crown inside the C of Concorde in both places.

I also have a four-page, full-color travel brochure, 8 1/2 x 11 3/4 in. (21 x 29.7 cm), showing the same "watch faces" on the front as those in Fig.5. The line 'Mach 2 to Miami' is printed in gold across the top of the front page and below the "watch faces" is the text 'The new British Airways Concorde service begins from Spring 1984 with three flights a week in each direction.' The backpage shows a London - Washington - Miami flight

schedule and a picture of the Concorde in flight in the white, red and blue livery of BA. The two inside pages have the usual tourist promotion text and pictures, showing the hotels along the Miami waterfront, people on the beach, happy people on board the aircraft and a globe showing BA's supersonic routes. There is also a gorgeous head-on view of the Concorde ready for takeoff. Shot with a long lens, it shows the heat rising from the runway, not unlike the photo on the front cover of this issue. The civil registration of the aircraft on the back cover is G-N94AA, under the cheatline on the rear fuselage.

(I have a negative of a BA

Schedule on four-page brochure →

Concorde at Gander, Newfoundland, Canada, in JAN 79, registered G-N81AC. These aircraft were used on the BA/Braniff interchange. Their legal U.S. registrations while operating the Braniff portion of the flight, were N94AA and N81AC. Other such registrations were N94AB, 94AD and 94AE - JG)

**British Airways Concorde** ← Logo as on #4

**Concorde London-Miami-London Schedule**

BA189			BA188	
Tuesday, Thursday, Saturday			Wednesday, Friday, Sunday	
27 March - 28 April	1 May - 25 October		28 March - 27 April	29 April - 26 October
1300	1300	London	2145	2045
1105	1205	Washington	1200	1200
1155	1255		1110	1110
1335	1435	Miami	0930	0930

All times local

# TAKEN OVER!

by JOOP GERRITSMA



Ex-Pakistan International DC-10-30 C-FCRE was one of the first Canadian Pacific aircraft painted in the airline's new colors. (CP Air photo via Tony Herben)

## Canadian Pacific Air Lines

Only two issues of the CAPTAIN'S LOG ago, Tony Herben concluded his great two-part series on the proud history of Canadian Pacific Air Lines / CP Air / Canadian Pacific Air Lines. Now that proud history of Canada's second-largest airline has come to an end with the purchase of the carrier by fourth-largest Pacific Western Airlines from parent company Canadian Pacific Limited for Can \$300 million on 02 DEC 86. The combination will have a fleet of 12 DC-10s and 75 Boeing 737s and serves 82 destinations in North America and 17 overseas. It will be one of the top 25 airlines in the world in terms of size and revenue, which is expected to be \$1.8 billion annually.

Since Mr. Herben's article went to press, and before the sale of the carrier, some other developments had already taken place.

**NORDAIR IS PURCHASED**

In the most significant of those, CP Air acquired complete ownership of regional airline Nordair. It had owned 65.5% of

Nordair's shares since 1985, but under Canadian federal law, control of at least 67.5% is required for a complete merger. The other 34.5% of Nordair shares, however, were owned by the Province of Quebec and the province's Parti Quebecois government refused to sell to CP Air. The province had owned money-losing Quebecair, the other Quebec-based regional airline, since 1981 and it was hoping it could one day merge it with very profitable Nordair to form one strong Quebec-based regional airline. Both airlines are headquartered in Montreal.

But after Quebecair posted a loss of more than Can \$10 million in 1985, instead of the predicted profit of Can \$1.5 million, the new Liberal government had enough of propping up the ailing airline. In AUG 86 it announced it was selling Quebecair to Nordair Metro, a joint commuter venture of Nordair and CPAL (which had a 35% interest). The province's 34.5% shareholding in Nordair was included in the deal. Nordair Metro immediately sold the shares to CP Air, effective 02 JAN 87, giving that airline

↑ Re-instatement of the proud traditional name 'Canadian Pacific Air Lines' was followed by the introduction of a new logo. It will likely be the last. (CP Air photo via Tony Herben)

full ownership of Nordair. The name Nordair disappeared on 24 JAN 87. Following the complete integration of Nordair's network and fleet into CP Air, it is expected Nordair Metro will be renamed Quebecair. At this point it remains to be seen how many of Nordair's 737s will be repainted into the new CPAL livery and as late as mid-NOV 86 I still observed Nordair's blue and white 737s operating into and out of Toronto. With the takeover of Nordair and that of Eastern Provincial Airways earlier, CPAL controls all major regional air services in Eastern Canada except those operated by Air Canada and some independent carriers.

Now Canadian Pacific Air Lines (the fine old traditional name was re-instated on 12 JAN 86) itself has been taken over. The announcement said PWA and CPAL will continue to operate independently, but industry observers feel total integrat-

ion is only a matter of time. CPAL president Donald Carty has already publicly said the airline must find a new name and "obviously we'd like to see something with 'Canada' in it - internationally that's an important component."

The PWA purchase does not include CP Hotels, which is highly profitable. CP Hotels, incidentally, sold its airline catering division in JUL 86 to Marriott Corp. of Washington, D.C., including kitchens in Toronto, Dorval and Mirabel (both at Montreal), Calgary and Vancouver.

PWA will finance the CPAL takeover from a \$350 million fund, built up in 1986 through the sale and leaseback of 16 of its aircraft (all Boeing 737s). The airline may now sell off some aircraft to reduce its overall long-term debts of Can \$600 million. Candidates for sale are the Boeing 737s acquired by CPAL in the EPA and Nordair takeovers, since these don't fit in the fleets of neither PWA nor CPAL.

#### AIR CANADA FIGHTS BACK

A totally unexpected result of the CPAL takeover was the sale of Air BC of Vancouver to Air Canada. CPAL and Air BC have had an agreement since 03 OCT 83, whereby Air BC provided commuter services to CPAL's Vancouver hub. Air Canada, which had been outmaneuvered in Eastern Canada when CP Air bought EPA and Nordair, learned of the coming deal between PWA and CPAL in NOV 86 and moved fast to protect its Western flank by buying Air BC from owner Jim Pattison for Can \$25 million. In OCT 86 it had already secured its position in Ontario by buying central and northern Ontario regional airline Austin Airways, literally from under the nose of CPAL. A tentative deal had

already been reached between CPAL and the Deluce family of Timmins, owners of Austin, for CPAL to buy into the airline. But Air Canada made a better offer, which was accepted. With the purchase of Austin come enough shares, when added to the ones Air Canada already owned, to give it a majority interest in Southern Ontario commuter airline Air Ontario. Air Canada also bought the Air Ontario shares held by PWA and that gives it 75% of a holding company owning both Austin Airways and Air Ontario. The Deluce family owns the other 25%.

#### FIRMING UP SOME DATES

Some news that reached us too late for inclusion with Mr. Herben's CPAL history:

CPAL started weekly nonstop Vancouver - Shanghai services on 19 APR 86. Plans were drawn up in 1986 to begin a round the world 747F freighter service together with Flying Tigers, using the U.S. carrier's aircraft and crew. Each airline would fill 50% of the capacity. That plan may now be in doubt, following the takeover of CPAL. Also up in the air is the continued repainting of CPAL's fleet of orange aircraft into the new blue and white colors as the aircraft come due for major maintenance. Instead, a new livery may be designed and applied.

Air Atlantic, the CPAL Commuter in the Canadian Maritime provinces on the east coast, started operations on 28 FEB 86, linking St. John's, Gander, Stephenville and Deer Lake (all in Newfoundland), Moncton (New Brunswick) and Halifax (Nova Scotia).

Nordair Metro started CPAL commuter services between Quebec City and Rimouski

(Quebec) on 12 MAY 86 with CV-580. The airline's livery is the same as that of Nordair, with 'Metro' added to the fuselage side.

In APR 86 CPAL bought a 25% interest in Norcanair of Prince Albert & Saskatoon (Saskatchewan) to turn it into a CP Air Commuter, linking points in Canada's prairie provinces and Minneapolis, Minnesota, with CPAL points. Norcanair operates two Fairchild FH-27Js, two Convair CV-640s, a Bandeirante and several smaller aircraft. It recently placed its first Fokker F-28 jets into service.



**CP Air**  
Canadian Pacific Airlines  
Official Airline of EXPO 86, Vancouver  
The 1986 World Exposition  
Vancouver, British Columbia, Canada  
May 2 - October 13, 1986

**EASTERN  
PROVINCIAL**

**NORDAIR**

We Are  
The West.  
**Pacific Western**

Canadian Pacific 737-2T5, C-GPEM, in the airline's new colors and titles. French-language side is shown. Other side has English name. This is a former EPA 737 and was photographed at Toronto, 02 JUN 86. (Joop Gerritsma)

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## POST CARD CORNER

by WILLIAM DEMAREST

#1. (RIGHT) Beautiful shot of Air Niugini A300B-4, P2-ANG "Bird of Paradise" on take-off (Wesley Nayak photo)



BOTTOM OF PAGE:  
#2. (LEFT) Boeing 737-2L9, VR-HKP of Dragonair of Hongkong. Card is one of three issued by the carrier.

#3. (RIGHT) 5W-PAL is a 737-200 Adv. of Polynesian Airlines. This and #2 are Continental-size cards.

Many new postcards have come my way in the past few months. Air Niugini has a colorful card of their A300 Bird of Paradise taking off (#1). Dragonair of Hong Kong has released three airline-issued cards of their 737-200. The in-flight shot (#2) looks terrific in color. The second card shows the inaugural flight arriving at Xiamen Gaogli Int'l Airport in China. There is a children's band playing in front of the aircraft. The third card doesn't show Dragonair's aircraft, but instead has the same band with a CAAC 737 in the background. Dragonair's 01 AUG 86 timetable could double as a postcard: a glossy card with a picture of the 737's tail on one side and the airline's schedule on the reverse.

From the same part of the world I have been able to verify the existence of CAAC 747-200B and MD-80 postcards. Rick Neyland sent me a copy of the 747 card - a gorgeous side view of the aircraft over the Forbidden City. The MD-80 is flying over the Great Wall. Both are airline-issued and are of excellent quality.

Another new airline issue comes from Polynesian Airlines and shows their 737-200 in flight (#3). The style is similar to the Bahamasair 737-200 and TAME 737-200 postcards produced for the airlines by Boeing. All are Continental size.

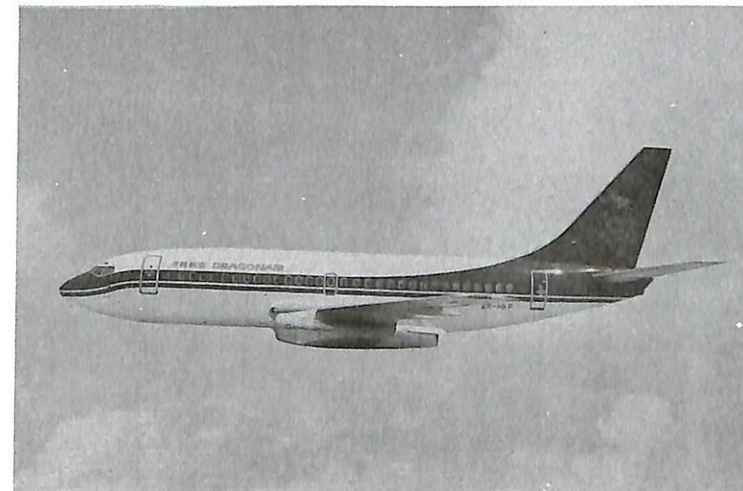
An unusual postcard featuring an Emirates Air Service Dash-7 was sent to me by another collector. This card was issued several years ago, but it

remains an interesting issue nevertheless and it is worth mentioning (#4).

The West-German charter airline Aero Lloyd's MD-83 postcard looks great in their new color scheme, flying over a coastline. This airline-issued postcard is Continental size. Another new airline-issued card is of a Conair 720B in flight, facing right.

I found two different Airlanka 747-200B postcards at the convention. Although these cards have been out for a while, I am impressed with their quality and I thought many collectors would enjoy seeing one of them (#5). The other card is of the same format and shows the aircraft with a sunset behind it.

With the introduction of their



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737-300, Transavia Holland also revealed their new colors and, lo and behold, a new airline-issued postcard. It is an artist's conception and has the aircraft in flight facing left. Michel Moskal's new postcard, no. 115, is a beautiful photograph of the same aircraft. (#6).

Closer to home, San Juan Airlines of Washington State has produced two Continental size postcards. One shows a Bandeirante and the other a Cessna 402 (#7). Both are inflight shots. Thank you to Bill Stubkjaer for providing these cards!

Boeing 737-200 cards are popping up all over. EDITIONS PI has released three nice issues showing:

435 Southwest AL (U.S.)  
438 CAAC  
439 Pakistan International

I have been told they will come out with the following cards soon: New York Air 737-300, Continental West 737-300, Kuwait A310 and 707-320C, TAME

F-28-4000, Air Wisconsin F-27. Here are a few more new airline-issued cards to tweak your interest: Air Niugini has a card showing an F-28 in flight over a small island, DLT of West Germany has two: a BAE Jetstream 31 and a Bandeirante. An Air France Concorde postcard is available showing the aircraft from under the nose of another Concorde. SAS has a landing shot of their F-27-600 and a sideview takeoff shot of their DC-8-62. Another new card comes from Tempelhof Airways showing their Nord 262. Many thanks to Rick Neyland and Berndt Frenzel for providing this information.

Japan A.L. just released a beautiful inflight card of their 767. Be sure to add this card to your collection

#4 (TOP LEFT) Dash-7-103 of Emirates Air Service, AUG 78, A6-ALM, s/n 09.  
#5 (BOTTOM LEFT) Cessna 402C, San Juan Airlines, N26150 (Matt Brown ph)  
#6 (TOP RIGHT) Boeing 747-238B, of Air Lanka, 4R-ULF  
#7 (BOTTOM RIGHT) Transavia 737-3K2, PH-HVF, in new colors (API 014)

From West Germany I received an interesting inflight card of an American Airlines DC-10. It advertises the airline's service to the U.S. (#8). While the reverse of this card is "plane", I would not have any hesitation at all in adding it to my collection.

Along the same lines, Ansett has four new flight souvenir cards of their 767, F-28-4000, F-27-200 and BAe146-200. All aircraft look great in Ansett's current colorscheme.

Fellow collector Allan Van Wickler reports that BWIA has issued at least four new cards in a collector series: Lockheed Lodestar, Vickers Viking and Viscount and Lockheed L-1011-500. Does anyone have more details on this series?

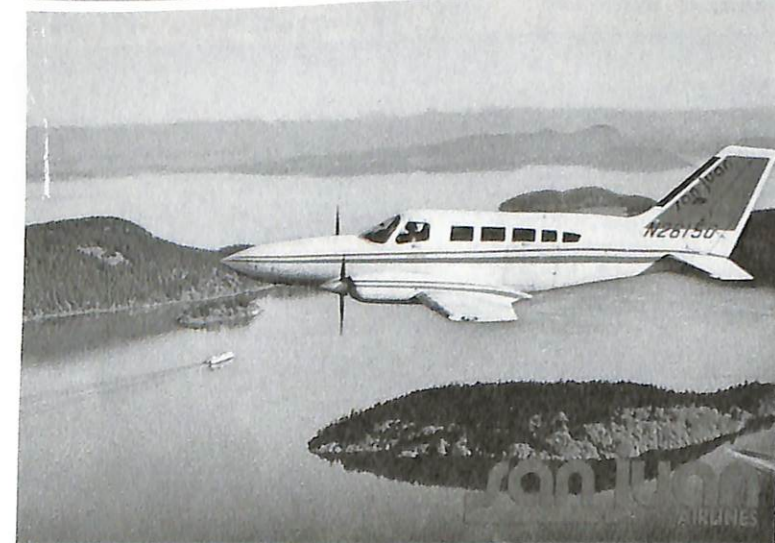
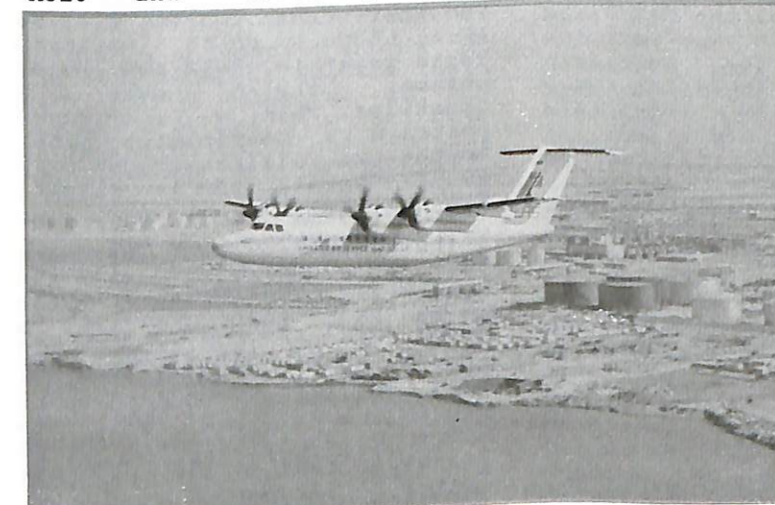
Two new 767ER postcards have appeared from Tiki Cards: Qantas (P.2725) and Air New Zealand (P.2714). Both are inflight shots. Also from New Zealand I have received an oversized card with sectional views of Air New Zealand's 747-200, 737-200 and F-27 (CAP



#8. American Airlines DC-10 card with promotional text in German.



#9. 5T-CLG is an F-28-4000 of Air Mauritania.



card 2610E).

Dave Prins in The Netherlands has issued 11 new spectacular cards:

- P & B HOLLAND
- 005 Spantax DC-6A
- 006 Transavia Caravelle
- 007 Air Ceylon DC-8-53
- 008 Transavia 737-3K2 on grnd.
- 009 Transavia 737-3K2 in flight
- 010 Maersk Air F-27 in flight
- 011 TAAG Angola F27 on ground
- 012 Air Mauretanie F-28 (#9)
- 013 KLM L-188 on the ground
- 014 Air Niugini F-27 takeoff
- 015 Scribe Airlift F-27 on gr

Another new publisher from The Netherlands is WORLD AVIATION PUBLICATIONS. Their first releases are:

- WAP 01 IFA (Belgium) DC-6B
- WAP 02 USAF/ANG C-97
- WAP 03 Transavia Caravelle
- WAP 04 US Navy C-188 (DC-6B)
- WAP 05 Emirates 737-340
- WAP 06 Air Malawi 747SP
- WAP 07 Spantax DC-7C
- WAP 08 Aviateca CV-340

A new postcard series has surfaced in France.: AVIMAGE. Their initial releases include

a Royal Nepal 727-116 (new colors), Lauda Air 737-2T5, SAETA Caravelle 6N and Unifly F-28-1000. Look for more cards to come from this group.

PETER RENTZCH continues to bring out new cards for collectors at a rapid pace. His latest include Air Niugini F-28, Evergreen Int'l DC-8-61 (#10), Evergreen Int'l L-188C, Capitol Air DC-8-32, Air Queensland F-27-200 and DLT (West Germany) Twin Otter.

MARY JANE'S RAILROAD SPECIAL-TIES just released three new issues: Brockway Air Beech 1900C (MJ 591), Pacific Southwest Airlines L-1011 (MJ 592) and Malaysian Ailine System DC-10 with "PATA 86" titles (MJ 593).

A sharp new card from AIR PICTORIAL INTERNATIONAL shows a great shot of a Republic 757 (API 04). Better get a copy of this card before Republic disappears forever.

FLITE LINE FOTOCARDS of our friend Jon Proctor has taken up the void left by the demise of

Aviation World. One spectacular issue shows a John Wegg shot of United's 747-SP21, N143UA in full UA colors (FLF 006, #11). Other FLF issues include:  
FLF-001 Braniff 737-30C Ultra  
FLF-002 Braniff 727-27 } colors  
FLF-003 Skybus 737-200 (rare)  
FLF-004 Connie Kalitta 727-35F  
FLF-005 PanAM 747-221B new cls  
FLF 008? Southern AT 707-369CQ (a great night shot)

Four Braniff Int'l 727-227:  
FLF-008? Corvette blue  
FLF-009 Orange/ochre  
FLF-010 Mercury blue  
FLF-011 Red/gold (#12)  
The colors in these Braniff cards are spectacular!  
FLF-012 Piedmont Comm F-27-600

AEROGEM continues to publish a very wide range of unique and high quality postcards. Their latest list has the following:

- 701 Aeromexico DC-10-30 new cs
- 702 Air Hawaii DC-10-30
- 703 American DC-10-10
- 704 British Caribbean BAe146
- 705 Burlington 707-321C
- 706 Empire (Piedmont c/s) F-28-4000
- 707 LIAT Dash-8
- 708 Nationalair Canada DC-8-61
- 709 PanAM L-1011 old colors
- 710 PanAm DC-10-10 old colors
- 711 Republic DC-9-50 new clrs
- 712 Skybus 727-291
- 713 TransStar DC-9-51
- 714 United DC-10-10
- 715 USAir 737-3B7

Aerogem's latest series of cards for this fall promises lots of interesting aircraft for all collectors:

- 0801 Air BC/CP Comm DHC-8-101
- 0802 Air Canada DC-8-43 nw cs
- 0803 American 727-23 new cs
- 0804 Braniff Int'l 707-327C (beige, old colors)
- 0805 Continental 737-024B (new colors)
- 0806 EAL DC-8-61 hockey stick
- 0807 National 727-25 old clrs
- 0808 Northwest Orient 727-51 (old colors)
- 0810 Piedmont 727-22 old clrs
- 0811 Royal West BAE 146
- 0812 SunCoast 727-191 (new cs)
- 0813 Sun Country DC-10-40 (new colors)
- 0814 United Viscount 734D (old colors)
- 0815 Western 720-062 (old cs)

From other commercial publishers have arrived:

- MICHEL MOSKAL
- 77 Egyptair 707
- 81 Pakistan Int'l 747-200
- 88 Air Zaire DC-8-63CAF
- 95 PanAm 727-235 new colors
- 96 PanAm 747ST new colors
- 99 Korean Air Cargo 707

- 100 St. Lucia AW 707 old clrs
- 102 Saudia 747-300
- 106 Condor 737-200
- 107 Arab Air Cargo 707
- 108 Pakistan Int'l 737-300
- 109 Cathay Pacific 747-300
- 110 St. Lucia AW 707 new clrs
- 111 CAAC 737-200
- 113 Korean Air 747-300
- 114 Tower Air 747
- 115 Transavia 737-300
- 116 Air Belgium 737-300

- UDO SCHAEFER PUBLICATIONS
- 47 CalAir DC-10-10
  - 48 Lauda Air 737-200
  - 49 Hawaiian Air DC-9-15
  - 50 Canadian Pacific DC-10-30
  - 51 St. Lucia AW Hercules
  - 52 GAS Air Cargo 707
  - 53 SAT Caravelle
  - 54 Misr Overseas 707
  - 55 SAT 727-100
  - 56 Dragonair 737-200
  - 57 Transwede Caravelle
  - 58 Cargo Air Lines 747-200C
  - 60 TACA 767
  - 61 TranStar DC-9-51
  - 62 Burlington Air Exp 727-100F

- AVIATION HOBBY SHOP
- AHS-76 Lybian Arab 720
  - AHS-68 Aloha 737-200

- AVIATION POSTCARD COLLECTOR
- APC A58 Yemen Airways DC-3
  - APC A59 Kuwait Airways A310

- DPR/WORLD OF TRANSPORT
- 42 Dan Air London 737-300

- EDITIONS PI
- 420 Tnis Air A300
  - 421 AirCal 737-300
  - 422 AmericaWest 737-300
  - 425 PanAm 737-200
  - 427 Iraqi Airways IL-76M

**ON BUYING POSTCARDS**

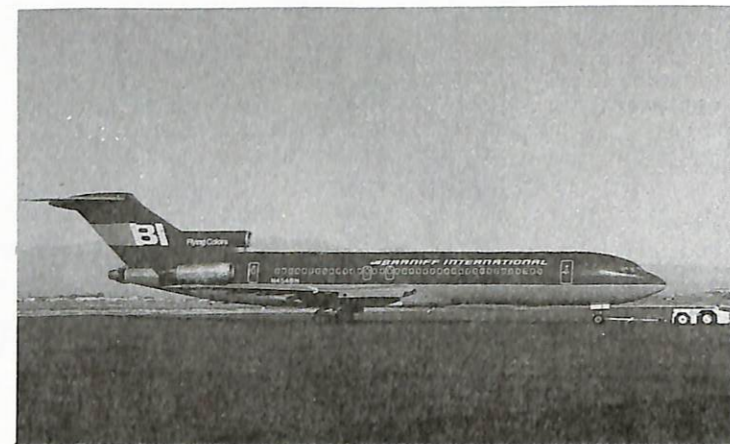
Most collectors know that obtaining postcards for their collections can be a frustrating experience. The easiest source continues to be publishers which specialize in producing postcards for collectors. In addition, I have found antique shows and flea markets to be an excellent hunting ground for older issues. You might want to consider joining a local postcard club or subscribing to BARR's Postcard News. Most professional dealers will send postcards to you on approval once they know what you are looking for. It is important to establish your credit with the dealer beforehand. You have probably wondered how much to pay for a postcard. My rule of thumb is simple - if I want the card, and the price is agreeable in my mind, I'll buy



#10. DC-8-61CF, of Evergreen International, N810EV (P. Rentsch photo)



#11. United Air Lines 747-215SP, ex-PanAm, N143UA (John Wegg photo)



#12. Boeing 727-227, N454BN of Braniff International in red and gold colors. (John Proctor photo)

it. If I feel the card is overpriced, I'll walk by it. Chances are I'll find the same card later for the price I want to pay. If the card is truly unique and I just have to have it, I'll be willing to pay more. My innate Yankee stinginess fought against my desire for a New York, Rio and Buenos Aires (N.Y.R.B.A.) Line Commodore flying boat card recently. The card won and I shelled out \$15.

Always try to bargain with the seller. It usually works. In

future issues I'll dwell on other areas of our fascinating hobby. If you have a favorite subject you would like me to talk about, please drop me a line.



# WINGS & THINGS

by RICHARD KORAN

It seems collectors must save their pennies and brown-bag it to lunch for weeks on end to feed their habit of collecting wings, pins and badges. They chase these elusive items down through the mail and search for hours in dusty junk shops, antique stores and flea markets for the desirable collectible. They study wings, inspect wings and hoard wings. But many collectors do absolutely nothing to protect their collection from time, the elements and other problems.

Wings and badges, like many collectibles, are subject to conditions that not only affect their appearance, but also their value when considering a trade or resale. Often a large amount of money is spent on a wing, only to have it shoved into a pocket for the trip home, bouncing around with the loose change. Wings acquired through the mails are sometimes jammed into a mailing packet with no protection - even a number of wings tossed into the same packet, unprotected from knocking into each other, chipping enamel and scratching the finish. At other times, wings are sent along glued, of all things, to a piece of cardboard - or taped to cardboard! Great for cloth and bullion wings! And how about that favorite wing being mailed in a standard paper envelope, giving the post office a better than average chance to flatten it out for good. Somehow, in the future, the value of a wing or badge will diminish to say the least, if care is not taken.

All collectors cringe at the thought of receiving a really desirable wing or badge from an air carrier or collector in a "plain brown wrapper", somewhat worse for wear. Most of the airlines send their wings out with some form of protection and we can take solace from that. Collectors, though, should know to take special precautions themselves when mailing an item to another collector. Certain precautions should be taken by collectors to ensure that the piece that is owned, will remain in the same condition as when it was acquired. Museum professionals are taught one should do

nothing to an item that will encourage its deterioration. Preservation is the byword.

This, then, leads to the inevitable questions: to polish or not to polish - how to display an item - what to display it in, or on - how to handle the item? Polishing a wing or badge is really up to the individual collector. Medal collectors handle their items with care and treat them so as to keep them in the best condition. Coin collectors don't do anything to theirs. I clean mine for display, only because I would not wear a tarnished wing on my own uniform. It is a personal thing with me to look sharp, brought on by years in both the military and airline business. Tarnish on silver will damage the surface over a period of time, as can be seen when closely inspecting a silver piece that has a pitted surface.

As for taking care of a wing or badge, high quality silver cleaners and soft cloth are most helpful and desirable. The cleaners help to clean most metal wings, if only getting rid of accumulated dirt in the feathered areas or in little out of the way spots. For obvious reasons, cleaning solutions or paste products will not work on cloth and bullion wings. Light rubbing with a swab on a bullion wing will sometimes help clean the gold or silver wire somewhat but care must be taken so the backing material will not be soiled.

Handling a wing or badge a great deal often places hand oils on the surfaces of the items and these will cause tarnish and pitting. Chemical reactions take place when the surfaces are touched if the wings are not protected or the old protective layer has worn off with time. After a "show and tell" session with your wings and badges, lightly rubbing the item with a soft cloth will clean most touched and fingerprinted areas. Protecting wings and badges from air pollution is also important. Displaying your collection in some type of

glass covered case is sometimes recommended. Riker Specimen Mounts, or a similar type of mounting case, are a good way to do this. Framing the wings and badges for display on the wall is another means of protecting a fine collection. Or you could use cabinets with small, shallow drawers to display a collection and keep the wings from just being left out in the air. Blueprint cabinets have been used by military collectors for years. If these simple procedures are followed, the life of a wing or badge, its value and its potential for resale, will be greatly enhanced.

My thanks go to Peter S. Seibert and his article "What Happened to my Medal!?! (in The Medal Collector, the official publication of The Orders and Medals Society of America - JUN 86). Many of his thoughts and ideas have been incorporated in my "collecting comments".

Back in August, Ed Young wrote that he had heard from a captain with Cassar-Cooper and BAS Ltd. of Valetta, Malta, in response to his letter seeking wings. According to Ed, the captain "said that he found a 1946 British Air Services (Malta) Ltd. pilot's cap badge in his desk drawer and that, because it was the only thing left (of BAS-M) before it merged with two other airlines to form Air Malta in 1947, he thought that it should stay with the founder of the airline, namely himself." A few sentences later, Ed wrote he had received a second hat badge which had been located when the fellow cleaned out his desk! He sent me a photocopy of the striking badge with rampant griffin standing on top of the upper part of the world. At the bottom of the badge is a scroll with "British Air Services" thereon.

A little while ago I received a letter from a fellow collector in Britain, along with a photocopy of some wings he had acquired for me. One of the wings struck me as being very similar to some badge or logo I had seen before, but I just

Text continued on page 24



Medal commemorating the KLM Christmas mail flight of the "Pelikaan (Pelican)" in 1933 - fine collectible. This medal comes in a box marked N.V. Stichtsche Begeer Utrecht (maker of the item). The pelican (bird) is shown flying the route taken by the Pelikaan (plane) from Holland to the Dutch East Indies. The reverse of the medal has a sun burst and signatures of the three crew members for the flight. Medal's diameter is 1.5 in. (3.81 cm).



KLM 1919-1949 commemorative medal shows Lockheed Constellation flying over the legendary phantom Dutch sailing ship "De Vliegende Hollander (The Flying Dutchman)". Medal was presented to members of KLM's board of directors on occasion of airline's 30th anniversary. It is almost 2.5 in. (6.3 cm) in diameter and came in a box with the old KLM logo on the lid, and the dates 1919-1949.



KLM money clip from among items sent by retired KLM F/E Bob Nellensteijn. This item uses old KLM logo in center of the circle. The same logo and circle form the basis for KLM key chain. Logo and circle on the clip are in great shape. It makes me wonder if clip was used much, as its condition is outstanding. Clip is just over two inches (5 cm) long.



Capt. Gordon P. Olley's miniature military medals were worn frequently on his uniform jacket while he flew the Empire routes for Imperial Airways. My source says Capt. Olley wore these medals just below his IA wings when back in the cabin talking with the passengers. These medals are for his service with the Royal Flying Corps and Royal Air Force during World War 1 and are, from the left: Military Medal for "Bravery in the Field", British War Medal (silver) and British Victory Medal, 1914-19 (bronze). Capt. Olley's full-size medals will be passed on to his grandson.



Heavy KLM 1919-1969 anniversary medal shows birds on the obverse side. A modernistic design of people and stars is on the reverse of this piece, which commemorates the airline's 50th jubilee. A striking collectible.



Nordair of Canada hat badge is a striking piece. Overall gold, high surfaces are brightly finished and low portions are somewhat subdued. This hat badge has double screwbacks for wear on flight crew hat and is hallmarked "Rideau".



British Air Services (Malta) Ltd. A beautiful wing, 1946-47. Silver finish over brass and blue enamel in the center. The finish on the griffin has worn off with wear. A large pin on the back for wear on the uniform, and no hallmarks.



Imperial Airways pilot wing believed to have been made in Egypt. The second wing of Capt. Gordon P. Olley which I have been able to acquire, along with his miniature military medals also illustrated in this issue. The wing is a cast piece and has a gold finish (quite worn). It is different from Olley's first wing in that this badge uses a pin back for wear on the uniform. My source says this wing was worn frequently by Olley, along with his military medals. Note the slope of the wings, necessitated by the casting process.



Deutsche Lufthansa Ost (East) pilot wing. Hector Cabezas of Frankfurt, West-Germany, says the East-German airline assumed the name Deutsche Lufthansa in 1956 when it inaugurated regularly scheduled services. Successful legal action was brought by West-Germany's Deutsche Lufthansa, barring the East-German carrier from using the name Lufthansa. The carrier was absorbed into the East-German airline Interflug in 1963, which had been founded in 1958 to operate to West-European countries. This pilot wing has an overall gold finish. Pin back for uniform wear and no hallmarks. The center device is a blue glassine with a gold crane.



An American Airways flight coupon for a flight between Detroit and Chicago, dated 05 JUL 33 on the back! The coupon is a very light green with the American Airways logo done in light blue. I found this at a weekend flea market in Royal Oak, Michigan.



Presidential Airways kiddie wing in dull silver with "bright" upper shoulders. The center is red with the Presidential logo done in dark blue. Letters "Presidential Material" also in blue. This wing is a Stoffel Seals product.



Central Air Transport Corporation. According to Ron Davies's book A History of the World's Airlines, C.A.T.C. had been formed by the Chinese government in March 1943 to replace the German-sponsored Eurasia company. C.A.T.C. was eventually acquired by Civil Air Transport (CAT) in the late 1940s, along with China National Aviation Corporation (C.N.A.C.). Deep blue CATC enamel letters and circle surround the Chinese characters done in red enamel, on white. Hallmarked Russel Uniform Co., New York. The wing is finished in gold and has a pin back.



MAC Air, also believed to fly under the name McArthur Aviation Company, is an operation based on Long Island, using Mooney aircraft for flight training and charter operations. The wing is gold finished with a white enamel center. The letters "MAC" are in red and the "bird" is blue and yellow. Used in the mid-1960s, the wing is clutch back for wear on the uniform.



Hawaiian Airlines pilot wing. Formerly Inter-Island Airlines, the airline became Hawaiian Airlines in 1941. DC-3s flew inter-island services, fulfilling a need throughout the Hawaiian Islands. The center logo is in enamel with the colors, from top to bottom, a red/orange, white and blue. The "ball" in the center is also red/orange. The wings are finished in gold and use a pin back. Hallmarked Russell Uniform Co., New York, N.Y.

could not put my finger on it. Sensing a similarity between the "winged creature" on the pilot wing in front of me on the copy sheet from the U.K. and the "winged creature" on the badge in Ed Young's collection, I dug out his "show and tell" sheet and sure enough, they matched! Good fortune for me! I now have that wing and it is illustrated along with this column. Perhaps I'll have an opportunity to photograph the BAS hat badge for a future issue of the Log.



New York Airways operated scheduled helicopter services in the New York metropolitan area, linking LGA, JFK and EWR airports with the downtown area. This wing was mistakenly left out of the helicopter issue, Log 12/3. Wing is silver with pin-back for wear. The center device is white enamel with a light blue "wedge".

A few months ago I received a letter from my KLM friend who spends his summers in Holland and winters in the south of Spain. Bob Nellensteijn, a retired KLM flight engineer, wrote that he had cleaned out his desk drawers and that a box was being sent to me via New York. Bob said I could keep whatever I wanted and could throw away whatever did not appeal to me. Well, nothing got thrown away, Bob!

I felt like the kid in the candystore - two old KLM and Air Ceylon hat badges, a couple of old ID badges for suitcases, including Bob's very old and worn bag tag, an old KLM key chain, a KLM money clip, a few KLM medals, and numerous (!) pins of all kinds. The three medals - commemorative items - are illustrated with this column: the Christmas flight of the Pelikaan (Pelican) of DEC 33, the 1919-1949 KLM 30th anniversary medal and the KLM 1919-1969 KLM 50th anniversary medal.

Editor Joop Gerritsma, while in Hartford, promised me to provide me with some details on the Pelikaan medal and I will attempt to condense his comments here. According to Gerritsma, KLM was at that time operating two flights per week between Amsterdam and Batavia in the Dutch East Indies (now Jakarta, Indonesia) for mail and passengers. The service had started in the late 1920s with Fokker F.VIIb trimotors, taking 90 flying hours. By 1933 F.XII and F.XVIII trimotors were operating the service, taking 81 flying hours, over 10 days, with crew and passengers sleeping in hotels along the way because night flying over such long distances was considered too uncomfortable for the folks.

However, an ex-military pilot and then flying instructor with the National Flying School

(NLS) in Holland, Lt. Dick Asjes (Res.) concluded there had to be a faster and cheaper way to fly the mail than the heavily-subsidized KLM service and he promoted the concept of using small, fast aircraft for mail only to produce better results.

Joop explained that a three-engined aircraft called the Pander S-4 Postjager was born. (Joop said Postjager is often translated into English as "Mailfighter", but in his opinion this is wrong and should be "Mailrusher", because the aircraft was designed to rush the mails to their destination, not shoot them down.)

The S-4 was a sleek, wooden aircraft capable of speeds of 290-300 km/h (about 187 mph) and would fly the mail route in about 50 hours. Fokker, in turn, designed and built the F.XX trimotor, an equally sleek and fast aircraft, in competition with the S-4. The F.XX could carry both the mail and a few passengers, whereas the S-4 would carry only mail.

On 09 DEC 33 Asjes, sponsored by an independent committee, was finally able to take the S-4 (registered PH-OST) up on its first fast (Christmas) mail flight to the Dutch East Indies, with a co-pilot provided by KLM (competition was relaxed in those days and deregulation was still unheard of!). Flying over Italy several hours later, the aircraft lost an engine (Wright Whirlwind) and landed, only to have to wait almost two weeks for a new engine to arrive from the U.S. In the meantime, KLM, not to be outdone, readied its brand-new F.XX "Zilvermeeuw" (Silvergull) for departure to the East Indies on 18 DEC 33. The engines (Wright Cyclones) were running and the aircraft was ready to taxi, when the centre

engine quit! Repairs would take 24 hours.

KLM boss Albert Plesman, who was present for this departure, was told the only suitable aircraft ready to take off was an F.XVIII, the PH-AIP Pelikaan (Pelican), one of five regular line aircraft of its type, which shared the service with the F.XII, eight of which were in KLM service. Plesman decided to substitute the Pelikaan for the Zilvermeeuw and after the mail had been transferred, the aircraft took off, several hours behind the F.XX schedule, and headed out at 190 km/h (118 mph) - which meant more hours in the air and shorter rest periods on the ground if the mail were to reach Batavia before Christmas. The weather was lousy and the winds less than favorable over much of the route, but Pelikaan reached its destination in 100 hours and 35 minutes (four days, four hours and 35 minutes) after leaving Amsterdam! The return flight departed Batavia on 26 DEC 33 and was uneventful, if just as fast, until the aircraft reached southern France where ice, sleet, snow and strong headwinds were encountered. Upon arriving over Holland, the aircraft found itself in a thick blanket of fog. But after one missed approach on the first try, Capt. Iwan Smirnoff and his crew set Pelikaan down at Amsterdam's Schiphol Airport on the second try. It was 31 DEC 33, New Year's Eve, and the Christmas mail had never reached its destination faster.

Joop's final (humorous???) note about the Postjager: "Besides a cramped cockpit, barely big enough for two people, let alone three, the aircraft had no washroom on board!" And I often think I have it tough hauling an AA "three-holer" (no pun intended!) around the countryside. Thanks, Joop.

# AIRCRAFT PROFILE

by JOOP GERRITSMa



Panair do Brasil had the largest L-18 fleet in South America. It took delivery of 14 in all, but never had more than 10 in service at the same time. Many ex-Panair L-18 remained in air-

line service in Brazil well after WW2 with smaller carriers. Panair's PP-BPK, seen here flying over water, was c/n 2117. (Lockheed photo).

Part 4

## L-18

# the LOCKHEED TWINS

Lockheed is known to have had a project called L-16 following the L-14, but it remained unbuilt and I have no further details on it. The next Lockheed twin airliner then is the L-18, called the Lodestar. It was essentially a stretched L-14 with bigger engines. In external appearance the L-18 differed much less from the L-14 than did the L-14 from the L-10. In fact, the prototype of the L-18 was a modified Northwest Airlines L-14-H2 airframe and two more L-14s were converted to L-18s before the first L-18 proper was completed.

The first flight of the L-18 prototype (NX17835) took place on 21 SEP 39. Already during its test flights, the L-18 proved to be the fastest aircraft in its class. Because of this superior speed many travellers would later prefer the L-18 over the DC-2 and -3.

### A CLOSER LOOK AT THE L-18

The L-18 was, like the L-14, a mid-wing aircraft of monocoque fuselage construction and the same elliptical cross section. The wing was of single-spar, three piece construction, fitted with the same large Fowler flaps and built-in

leading-edge slots which gave the L-14 its superior slow-flying characteristics. The main wheels of the tail wheel undercarriage retracted backward into the engine nacelles.

Seven main versions of the L-18 were available:

- L-18-07: 730 hp Pratt & Whitney Hornet S1E2-6
- L-18-08: 900 hp P&W R-1830 Twin Wasp SC-3G
- L-18-10: 900 hp P&W R-1830 Twin Wasp S1C3G
- L-18-14: 1,050 hp P&W R-1830 Twin Wasp S4C4-G
- L-18-40: 900 hp Wright GR-1820 Cyclone G102A
- L-18-50: 1,000 hp Wright GR-1820 Cyclone G202A
- L-18-56: 1,200 hp Wright GR-1820 Cyclone G205A

Of these seven, the L-18-56 was the most numerous, both in commercial service and in military use.

All versions had three bladed, controllable-pitch, fully feathering metal propellers.

The Lodestar entered airline service in MAR 40 (with Mid Continent) and by the end of the year 55 aircraft had been delivered to airlines in the

U.S., Canada and Latin America. But when the U.S. was drawn into World War 2, the 103 Lodestars on the production line for commercial operators were completed as military transports. Another approximately 35 airline Lodestars were taken over by the U.S. Army Air Corps (USAAC) in 1942.

### MOST L-18S WEAR UNIFORMS

Lockheed built a total of 624 Lodestars and 480 of these were completed as troop transports for delivery to the U.S. military. When more and more C-47 Dakotas became available as the war wore on, numbers of L-18s were released to commercial operators for wartime military contract operations, and many of the remainder became available on the civil market after the war was over.

In civil and semi-civil service the L-18 operated in many corners of the world during the war and into the late 1940s. But by the end of the decade that followed, they had pretty well all disappeared everywhere, making room for the more plentiful DC-3.

Lodestars were operated as 14-17 passenger aircraft, but

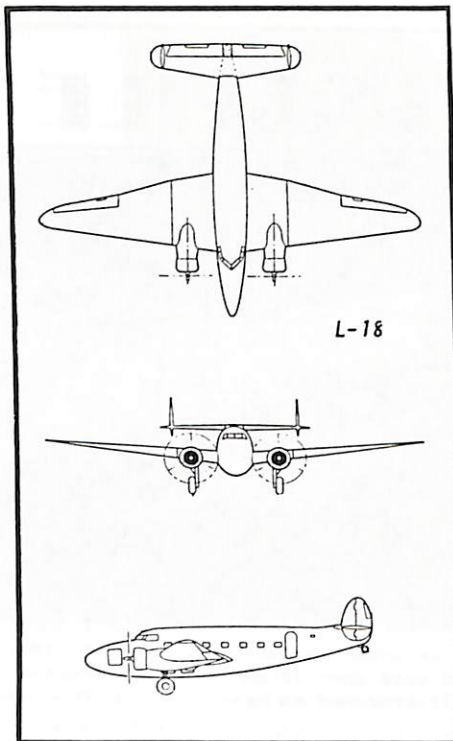
National Airlines converted at least one to carry 26 passengers on bench seats along the cabin walls for operation with its subsidiary, Caribbean-Atlantic Airlines of Puerto Rico in 1945.

Lockheed also developed a naval bomber and patrol aircraft from the L-18 for the Royal Air Force and this type also served with the USAAC/USAAF. None saw airline service that I know of, but several were converted to high-speed corporate transports after WW2 as the Learstar (see next Log issue). A few of these Learstars even saw airline service with specialized small-package operators.

#### INTO U.S. SERVICE

Seven U.S. airlines operated the L-18 on scheduled air services before and during WW2. The first one of these was Mid-Continent Airlines, which placed it on its services from Minneapolis to St. Louis via Rochester (Minnesota); on Des Moines - Ottumwa and Des Moines - Kansas City in MAR 40. National Airlines followed when its first L-18 went on the Jacksonville - Orlando - Tampa - St. Petersburg - Miami service on 15 DEC 41 and on the Jacksonville - Tallahassee - Pensacola - New Orleans service shortly thereafter.

The first three of National's L-18s were L-18-50s, delivered new by Lockheed. Although they carried seven fewer passengers than the DC-3 operated by National's main competitor in Florida, Eastern Air Lines, they served the carrier well in the competitive environment. National operated a total of 11 Lodestars, but the other eight were all surplus military aircraft, built to military specifications and operating mainly on the airline's military contract services. During WW2 National converted two of these "military" Lodestars to freighters for domestic cargo operations for the USAAC's Air Transport Command. In OCT 44 the airline began operations on its newly-awarded Jacksonville - New York route with the L-18, although the aircraft was definitely too small for the route. But it was the best the carrier had available. However, when Eastern replaced its DC-3 on the route with DC-4s after WW2, National was forced to replace its L-18s with the DC-4 as well. Within Florida, National's L-18s remained in service for



another decade and a half, despite competition from DC-3s and Convairs operated by other carriers. In 1958 the airline still had 11 Lodestars in service, operating them mainly on the Miami - Key West and the Jacksonville - Valdosta - Tallahassee - Marianna - Panama City - Pensacola routes. Two years later National's new CV-440s took over these routes.

Continental Airlines bought three L-18s (at \$100,000 each) in 1940. Their 900 hp engines quickly proved too small for operations out of mile-high Denver (Colorado) and Lockheed installed 1,200 hp engines instead. By the middle of 1941 Continental had an all-L-18 fleet of six aircraft. In the following year three of these were appropriated by the War Department, leaving Continental with a severely truncated fleet of only three aircraft to operate its civil routes with. On 15 DEC 44 Continental operated its last L-18 service, between San Antonio and Denver. The next day DC-3s took over. During their service with the carrier, Continental's L-18s flew 14,000 hours and travelled more than 2.5 million miles (four million km).

Western Air Lines also operated the L-18, but it was left with only one (and three DC-3s) after the War Department's appropriations were complete. Western's "military" Lodestars

operated a ferry service from Great Falls (Montana) to Fairbanks and Nome (both in Alaska) for the War Department during WW2. The L-18s were used to bring ferry pilots back to Great Falls from Nome, where they had turned their military fighters and bombers over to Russian pilots.

United Air Lines also operated the L-18, but I have not been able to find any information about fleet size, dates and routes. I have seen only one photo of a UAL L-18 with a clearly legible aircraft registration (NC25633, see this issue) and one photo of a UAL L-18 with the name "City of Fresno" on the nose. I don't even know whether or not this is the same aircraft. The "official" UAL history, 'High Horizons' by Frank J. Taylor, mentions the Lodestar only once, in an aside in which it says other (unnamed) airlines had bought it.

TWA, "The Transcontinental Line", also operated an L-18, NC33604, fleet no. 241. The aircraft carried the text "RESEARCH LABORATORY" on the fuselage below the windows and behind the wing.

Pacific Alaska Airways (a PAA subsidiary) began L-18 operations on 11 MAR 41 on the Seattle - Juneau - Whitehorse - Fairbanks route, replacing its L-10 on the service. Another Alaskan airline, Alaska Star Airlines, took delivery of one L-18 in 1943 for its important tri-weekly Fairbanks - Anchorage service, linking Alaska's two largest cities. Alaska Star was renamed Alaska Airlines on 06 JUN 44.

#### FOREIGN SERVICE: CANADA

Trans-Canada Air Lines ordered L-18s and received the first of six L-18-10s on 07 JAN 41. A second order for six was delivered in AUG, SEP and OCT 42. As with the airline's L-14s several years earlier, the Lodestars proved to be underpowered and the R-1830-SC3-G engines were replaced by the R-1830-S1C3-G in the first six aircraft, turning them into L-18-08As. The second six were also ordered as L-18-10s, but were built to military specifications and were re-engined by TCA before going into service. TCA bought three more Lodestars from Canadian Pacific Air Lines in 1944.



(LEFT) Alaska Star's L-18 was delivered in 1943 for the important tri-weekly Fairbanks - Anchorage service. Arrival of the aircraft at the airline's base at Merrill Field was a social occasion for the entire community. (Lockheed photo)

These had been military C-57s before service with CPA and were re-engined as L-18-08As before delivery to TCA. TCA operated its Lodestars until 1947/49, when they were replaced by DC-3s.

Yukon Southern Air Transport operated two L-18-40s on its northern routes from APR to SEP 41, before returning them to the U.S.A.

Canadian Pacific Air Lines, which had sold its first three L-18s to TCA in 1944 before operating them, started L-18 services in 1948 with military surplus aircraft. CPA would ultimately own 11. They operated mainly on short routes in Western Canada and on the prairies until replaced by DC-3s in 1950.

As late as 1967/68 a small Montreal-based airline, Royalair, operated a Lodestar on a scheduled service from Montreal to Toronto via several intermediate points along the St. Lawrence Seaway system. The airline went out of business in 1969 and the Lodestar became a roadside coffee bar.

FOREIGN SERVICE: SOUTH AMERICA  
The L-18 saw considerable service in South America,

(LEFT) - National Airlines operated the largest fleet of airline Lodestars in the U.S. and flew them long after other major airlines had switched to Convairs. NC 25687, c/n 2039, was the airline's first and is in the pre-World War 2 Buccaneer Route Livery. (Lockheed photo)

domestic services as well as to Asuncion in Paraguay

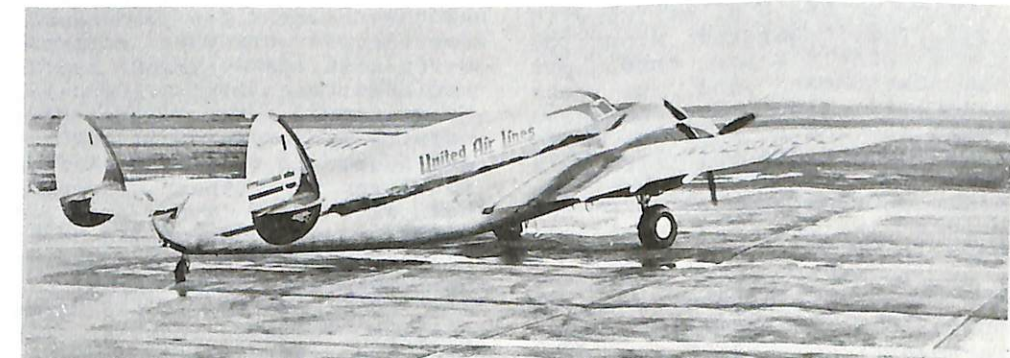
Another Brazilian airline, Navegacao Aerea Brasileira, acquired two L-18s in 1944. It operated them over its northeastern network, linking Rio de Janeiro with Recife and Belem. The airline lost three of its L-18s in mishaps and never operated more than two at any one time.

Lodestars remained in service in Brazil for another 10 years after the end of WW2. Viacao Aerea Bahiana used two ex-Panair aircraft in Bahia State between FEB 46 and the carrier's demise in 1948; SAVAG started services in the south in JAN 47 with three ex-Panair L-18s, using them until getting DC-3s in 1952; Linhas Aereas Wright flew between Rio de Janeiro and Santos from 01 APR 47 with two L-18s, until it was taken over by REAL one year later; Universal had two ex-Panair L-18s on its Rio de Janeiro - Belo Horizonte service from early 1948 until bankruptcy later that year following the crash of one of its Lodestars.

The first L-18 in Bolivia went into service in 1941 on Lloyd Aereo Boliviano's domestic routes, feeding the Panagra trunk route through the capital of La Paz.

The Venezuelan domestic airline Linea Aeropostal Venezolana had five ex-USAAC Lodestars from 1942 on.

(BELOW) United Airline's NC25633. (UAL photo via Drew Eubanks).



Two airlines in Chile also operated the L-18 on their services. LAN-Chile had six, augmenting its L-10 fleet. The first went into operation on 01 SEP 43 on the airline's trans-Andean service. They operated there until replaced by Martin 2-0-2s in 1947. CINTA, a small private airline in Chile, operated three L-18s on domestic services for about two years in the mid 1950s, alongside two L-10s, until the airline merged with another carrier.

In Argentina, Norsur started operations on several domestic routes in MAR 58 with eight ex-National Airlines L-18s; PLAS leased two from Norsur for its Santa Fe - Rosario - Buenos Aires route, and Lineas Aereas de Cuyo operated the L-18 on its service from Mendoza to Buenos Aires via some smaller centres. None of these Argentinean L-18 operations lasted beyond the early 1960s.

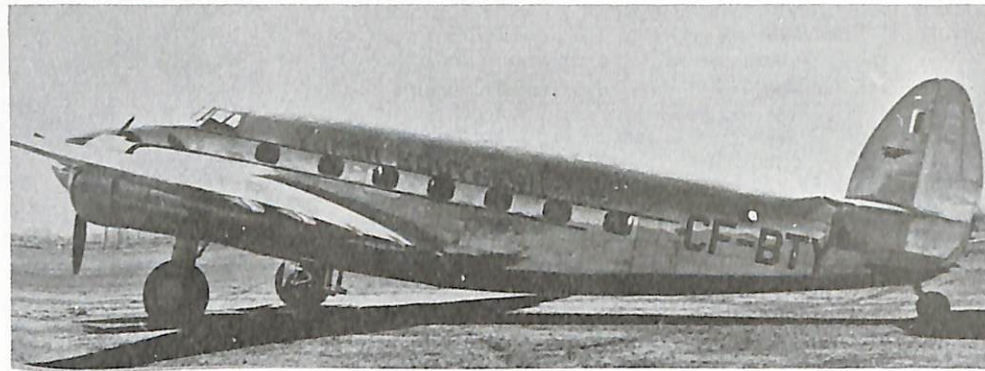
#### FOREIGN SERVICE: CENTRAL AMERICA & THE CARIBBEAN

The L-18 served extensively on the far-flung and strategically important network of TACA de Honduras. The airline received its first Lodestar in 1940 and by early 1947 still operated six out of the 16 it had in total. All were ex-military aircraft.

The first L-18 to enter service with British West Indian Airlines was also the very first one built, c/n 1954. It was acquired from TACA in 1940 and was placed on the Port of Spain (Trinidad) - Tobago - Bridgetown (Barbados) service on 27 NOV 40. Four more ex-USAAF joined the fleet during WW2 and BWIA operated the type on its Caribbean services until the early 1950s, when they were replaced by DC-3s and Vickers Vikings.

KLM (West Indies) had two Lodestars, released to the airline by the U.S. military in 1943. They operated alongside the airline's L-14s throughout the Caribbean and to the countries along the northern coast of South America. They also inaugurated the airline's wartime Miami service via Kingston (Jamaica), Port au Prince (Haiti) and Camaguey (Cuba) in 1943.

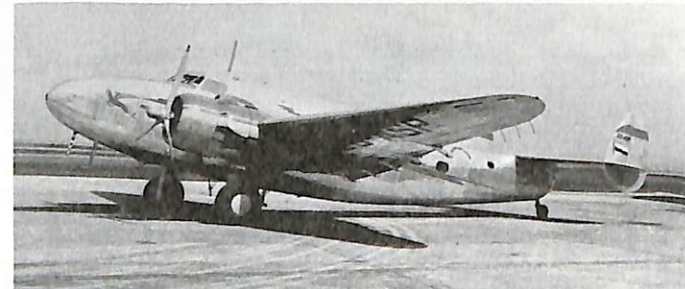
Two other airlines which operated the L-18 on their services throughout the Caribbean region are



ABOVE: Yukon Southern L-18-40 CF-BTY, was ex-Pacific Alaska's NC18818. (CP Air photo)

TOP RIGHT: Norsur L-18-50, LV-GHC, at Santa Fe, Argentina, 27 NOV 59. (P.F. Laux photo)

BOTTOM RIGHT: ZS-ASP is one of 28 South African Airways Lodestars. (SAA photo)



Caribbean-Atlantic Airlines (Caribair) of Puerto Rico and Quisqueya of Haiti. Caribair leased two from National Airlines for one year beginning in APR 45 for its internal Puerto Rican services and services to neighboring islands. One of these was the 26-passenger version converted by National Airlines and mentioned earlier. Quisqueya operated one L-18 from 1948 to 1951 on inter-island services.

#### FOREIGN SERVICE: EUROPE

The L-18 did not reach Europe until 1951, when Karhumaki Airways (Kar Air) of Finland, bought two for domestic services. They replaced seven-seat deHavilland Rapide biplanes. Kar Air L-18s also inaugurated the airline's service to Sweden on 21 JUN 51 and operated frequent charter services to other European countries. They even operated as far south as Egypt, in North Africa, a distance equivalent to Anchorage - Los Angeles. Kar Air withdrew its L-18s from passenger service in 1954, but one remained as a survey aircraft until 1972.

Airtaco of Sweden, forerunner of today's Linjeflyg, operated four L-18s on newspaper delivery flights throughout the country in the mid-1950s. They continued in service with Linjeflyg after the name change from Airtaco in 1957, but they were gone by the end of the decade. Svedair, also of Sweden, operated two Lodestars on domestic and international charter services during the late 1950s and early 1960s. More recently, Sir Air of Finland had one on a variety of charter services, but it has now been disposed of.

#### FOREIGN SERVICE: AFRICA

In Africa, airlines such as BOAC, SABENA and South African Airways depended heavily on the L-18 to maintain their services in support of the Allied war effort.

South African Airways had ordered 28 L-18s as early as 1940. The first was delivered in OCT of that year. In the following year the entire fleet was taken over by the government and nine were assigned to BOAC for its North

African and Middle East operations. SAA operated its 19 remaining L-18s on military and government services up and down Africa's east coast. The airline did not begin civil L-18 services until 01 DEC 44, when the war was all but over. But even then the aircraft in the beginning operated domestic priority services for the government only.

BOAC inaugurated a regular Cairo - Malta priority passenger and freight service on 06 MAY 42, followed five days later by the inauguration of a Cairo - Aden - Karachi connecting service, all with the L-18. The airline also operated other services in Africa and the Middle East with its Lodestars during and after WW2. It did in fact not withdraw the L-18 from service until 01 JUL 47, when the DC-3 took over the last L-18 service: Cairo - Nairobi. In total BOAC operated 38 Lodestars (but not all at the

same time). These included 15 L-18-07 and 23 L-18-08 and their military equivalents.

SABENA of Belgium operated the L-18 on its wartime network based on Leopoldville in the Belgian Congo. The first two were aircraft blocked in New York harbor by the U.S. government. They were seized while they were being readied for delivery to Regie Air Afrique, a French airline operating from the French Congo under directions from the pro-German Vichy government in France. The two aircraft were instead turned over to SABENA, which desperately needed new equipment to replace the pre-WW2 Fokker and Junkers trimotors operating its military contract services in the Congo and southern Africa. Five more ex-USAAF Lodestars (C-60s) were also delivered to SABENA. All seven operated mainly between the Congo and South Africa and in SEP 44 they inaugurated a Congo - Lisbon

service. In Lisbon passengers were able to connect to Britain on DC-3 services operated by KLM for BOAC. SABENA continued to operate the L-18 until 1949 when the last three were sold to East African Airways.

East African Airways had started L-18 operations on 22 FEB 48 with an ex-BOAC aircraft. EAA inaugurated its first international service, from Nairobi to Dar-es-Salaam, with the L-18 on 21 MAR 48, and inaugurated a Nairobi - London service, also with the L-18, on 15 APR 48.

#### FOREIGN SERVICE; AUSTRALIA

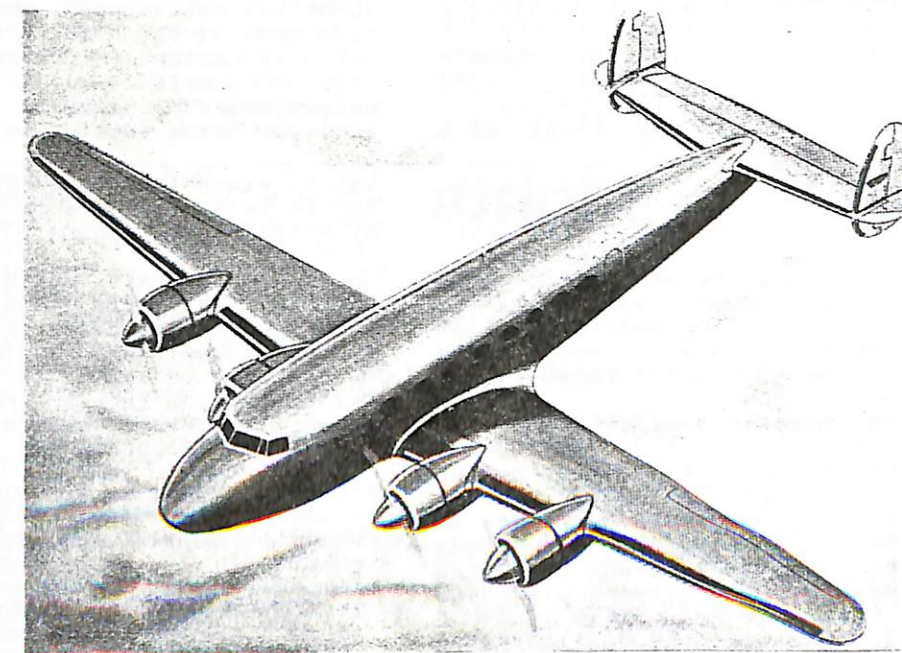
QANTAS and Ansett jointly operated two L-18s on military contract flights in New Guinea, beginning on 22 NOV 42. Trans Australia Airlines operated L-18s on domestic services in the southeast for a short while after WW2. I do not have any details of these TAA operations.

## L-44

In 1939 Lockheed initiated the design for the L-44, a four-engined successor to the L-14/18. Named the Excalibur, it was intended for trunk routes on which the L-14/18 and the DC-2 and -3 had to make many refuelling stops because of their range limitations. The new aircraft was to have a pressurized fuselage for operations at high altitude, based on the experience gained with the XC-35.

Artists' impressions, factory drawings and mock up photographs show greatly different proposals. The first one known to me was for a 21-passenger aircraft with single fin and rudder. Later projects were for 26 to 30 passengers. Twin fins and rudders as on the L-14/18 were also proposed somewhere along the line. Later still a 36-passenger plane with a triple tail was projected. There are also sources which mention 40- and even 50-passenger aircraft, but I believe these are projects which would later evolve as the L-49 Constellation.

Nose configurations for the L-44 were shown with a conventional stepped windscreen and with a faired-in windscreen. The L-44's overall size was said to be that of the



The L-44 was a proposed four-engined development of the L-14/L-18 series. This is but one of the several configurations under consideration at the time. (Lockheed photo).

DC-3, but this must have been for the lower-capacity projects only. If any of the 36-, 40- or 50-seat projects would have been built, the fuselage by necessity would have been much larger than that of the DC-3.

South African Airways ordered two L-44s and Pan American Airways wanted three. KLM Royal Dutch Airlines is said to have been discussing an order for four with Lockheed. The aircraft would have been used on the airline's service from

Amsterdam to the Dutch East Indies and perhaps on a service to the Dutch West Indies, which was then under consideration.

We know now that nothing came of the L-44, particularly because the much more promising L-49 Constellation came along, sponsored by Pan American. But that is another story!



# XC-35

The XC-35 was basically a highly-modified L-10E Electra built for the specific purpose of testing cabin pressurization and the high-altitude engine supercharging systems then being developed by the U.S. Army Air Corps under Major Carl F. Greene, chief of the Aircraft Laboratory at Wright Field, the USAAC's research and development center.

The XC-35 made its first flight on 07 MAY 37 and was delivered to the Air Corps by Lockheed three months later. It carried the military serial number 36-353. The principal outward difference with the regular L-10 was the fat circular fuselage and the narrow "slit"-type windows instead of the normal large rectangular windows of the airliner.

During its test flights the XC-35 reached altitudes of up to 28,000 ft (8,340 m). For the first time in aviation history it was possible for aircrew to fly in the sub stratosphere without having to wear oxygen masks and heavy flying suits. It was also the first time

pressurization had been tried on a complete fuselage, rather than in a cockpit section alone.

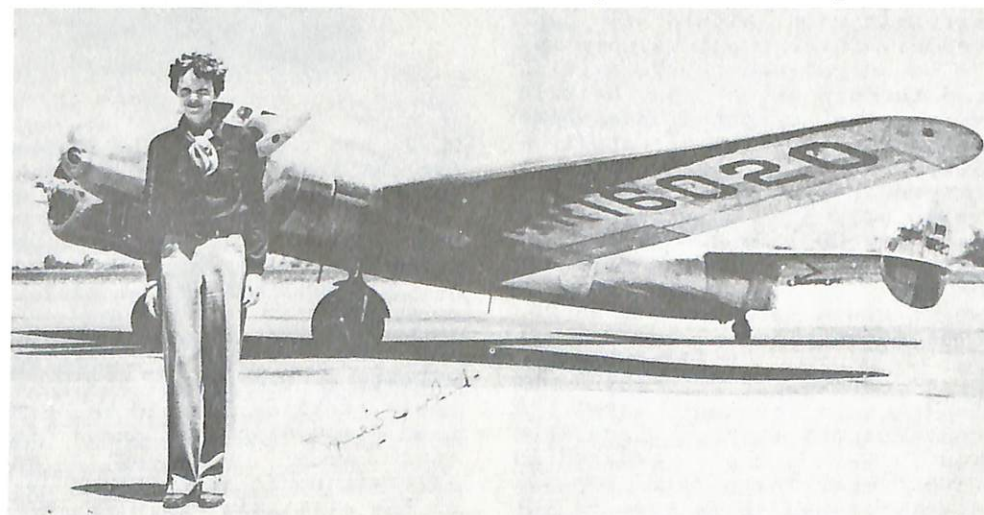
On 13 FEB 38 the XC-35 demonstrated both its capabilities and the future path of air travel in a dramatic fashion. It flew Assistant Secretary of War Louis A. Johnson from Chicago to Washington, D.C., where his presence was urgently required. Air traffic in much of the midwest had come to a standstill because of bad weather, but flying "above the weather" at 22,000 ft (6,700 m) pilot Major Stanley M. Umstead got the XC-35 with Johnson on board to Washington in record time, reaching a speed of 300 mph (480 km/h) with the aid of a 100 mph (160 km/h) tailwind. However, tailwind or not, had the XC-35 not been able to climb above the weather, Johnson would not have made it to Washington that day.

As said, the fuselage of the XC-35 was extensively modified from that of the L-10. It was built of thicker formers and skin panels and was hermetically sealed. The circular cross section allowed

was so extensive, the Electra had to be returned to Lockheed at Burbank for repairs.

On 21 MAY Earhart again left Oakland, but this time the flight plan called for a west to east direction to avoid the hurricane season in the Caribbean upon return home. The flight proceeded smoothly to Miami via Tucson, and then

*Amelia Earhart and her Electra, NR16020, with which she attempted to fly around the world in 1937, but with which she disappeared over the Pacific. She and her navigator, Fred Noonan, were never seen or heard of again. (Aviation Collectors Series postcard via Stanley Baumwald).*



A photo of the XC-35 appears in the LOG of June 86, 12/1, on page 17.

a pressure differential between the cabin and the outside of 10 pounds per square inch (0.7 kg/cm<sup>2</sup>). This made possible a service ceiling of 32,000 ft (9,760 m) and it showed that pressurization of entire cabins is practical and would enable aircraft to fly above the weather 95% of the time.

Flying at such altitudes presented new and unforeseen problems. Ice formed on cockpit windows and new heating devices had to be developed; flight instruments had to be adapted to functioning at these high altitudes and low temperatures; thin air required special superchargers to provide the engines with enough air to operate.

Pressurization soon proved so valuable for both military and commercial applications in aviation, the USAAC in 1937 was awarded the Collier Trophy for its work with the XC-35. The Collier Trophy is the highest award in the U.S. for technical achievement in aeronautical development.

through the Caribbean and along the north coast of South America, across the south Atlantic, through central Africa, the Middle East and southern Asia. The aircraft reached Lae, New Guinea on 29 JUN.

"The next leg, to Howland Island, would be the most challenging and the most

dangerous of the flight," wrote Vincent Loomis and Jeff Ethel in their 1985 book 'Amelia Earhart - The Final Story', published by Random House, New York.

It was on this Lae - Howland leg that Earhart, Noonan and their Electra vanished (Manning was not along for this trip). No one knows for sure what happened, but it is generally accepted that the aircraft was substantially off-course when it ran out of fuel and Earhart was forced to ditch it in the ocean near a small atoll north of Howland. The date was 02 JUL 37. Despite a massive search effort by the U.S. Navy and by civilian ships, Earhart and Noonan were not found. There is strong evidence they were captured by the Japanese, who believed they were on a spying mission of Japanese positions in the Pacific. Earhart and Noonan died in Japanese captivity.

## CHAMBERLAIN'S L-10 FLIGHTS

One, and perhaps two, of British Airways' L-10A fleet came into the news in 1938 when British Prime Minister Neville Chamberlain used it (or them) to fly to Germany to meet with Adolf Hitler in efforts to prevent a war in Europe.

On 15-16 SEP 38 Chamberlain flew from London to Munich and back in a BA L-10A to discuss with Hitler the German claim to Sudetenland, a part of Czechoslovakia with a mainly German population. It is believed the Prime Minister flew on L-10A G-AEPR.

Chamberlain flew again to Germany on 29 SEP 38 (his third trip). The "September Crisis" over Sudetenland was in full swing then and he flew to Munich in L-10A G-AEPR. He returned in a BA L-14 the next day (see later).

## WELL-KNOWN TCA ELECTRAS

Two of Trans-Canada Airlines' five L-10 Electras came into the news long after their airline careers had ended. One even made a cross-Canada flight in 1986!

CF-TCA, c/n 1112, was the third TCA Electra (and its first one bought new from Lockheed). It was delivered to the airline on 01 OCT 37 and served with the Royal Canadian Air Force during World War 2. It had passed through a number of



Original 1937 Trans-Canada Air Lines L-10A, CF-TCC c/n 1116, was restored by Air Canada and flew across Canada to EXPO 86 in Vancouver in 1986. (Pierre Langlois photo).

Canadian and U.S. private owners when it made a belly landing at Willow Run, Detroit, in 1961 or 62. The aircraft was then bought and restored by Lee Koepke, a North Central Airlines mechanic. As N97237 it was flown around the world from 07 JUN to 10 JUL 67 by Ann Pellegrino, Col. W. Payne, Lee Koepke and navigator W. Polhemus. The flight was made in honor of Amelia Earhart. Between Nauru and Howland Island, Pellegrino dropped a wreath on the waters of the Pacific, roughly at the spot when Earhart and Noonan are believed to have gone down.

Air Canada bought this Electra from Koepke, restored it to the original TCA colors and presented it to the National Aviation Museum in Ottawa in MAR 68, where it is on display. In the summer of 1986 the aircraft was taken to Vancouver by road to be the focal point of the Air Canada anniversary exhibit at EXPO 86.

The fifth former TCA Electra, CF-TCC, c/n 116, also went to the RCAF in 1939. In 1956 it was bought by Matane Air Services from the Canadian government and operated on the airline's operations in the Province of Quebec until 1966, when it was sold to the U.S.

Air Canada leased this Electra in 1962, painted it all white and decked it with the original TCA logos for a flight across Canada to celebrate TCA/Air Canada's 25th anniversary. The various legs of the trip were flown by TCA Electra pilots of the 1937-39 era and the cabin crew was made up of former stewardesses from the same time.

After its sale to the U.S., CF-TCC dropped out of sight until it was spotted at a Confederate Air Force air show

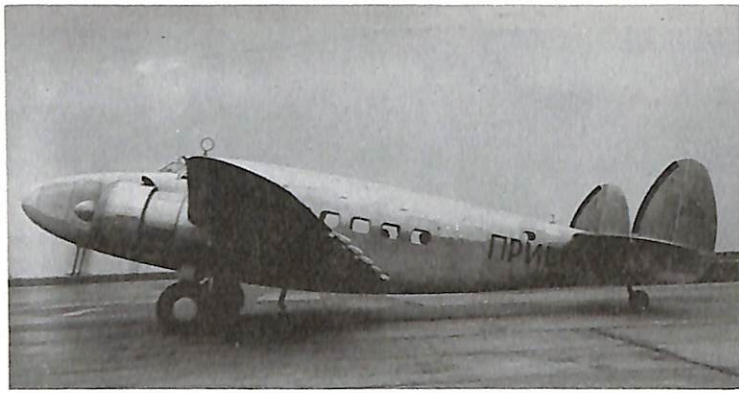
at Harlingen, Texas, by former Air Canada employee Ernie Sykes 10 years ago. After many years of negotiations, Air Canada bought the aircraft in 1983 as part of the preparations for its Golden anniversary celebrations in 1986. The airline was founded, as Trans Canada Airlines, in 1937, but the 50th anniversary was celebrated in 1986 to coincide with EXPO 86 in Vancouver.

CF-TCC arrived back in Winnipeg, Manitoba, on 14 JAN 84 and after a painstaking restoration process, took to the air again early in 1986. In APR and MAY of that year the aircraft flew across Canada along much of the original 1939 TCA route. It arrived at Vancouver on 10 MAY and took part in the various EXPO 86 aviation events.

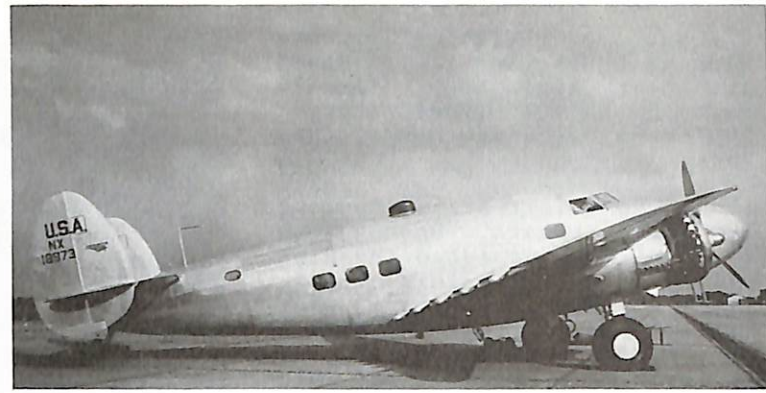
## TRANS-ATLANTIC ELECTRA

On 06 MAY 37 the German airship "Hindenburg" crashed in flames upon landing at Naval Air Station Lakehurst, New Jersey following an Atlantic crossing on a scheduled passenger service. The next day L10E NR16059 flew across the Atlantic to Europe with newsreel film of the disaster. Later that same month it returned to the U.S. carrying the first photographs of the Coronation of King George VI of England, who succeeded to the throne after his brother, King Edward VIII, had abdicated to marry an American divorcee.

Do remember that this was before the age of instant communication around the world courtesy of dozens of communications satellites which constantly hover above us. Justly, Lockheed was awarded the Harmon Trophy for 1937 for these two remarkable flights.



L-14 NC2333 of H.S. Vanderbilt which picked up stranded Russian pilots in New Brunswick, Canada, and took them to New York. (Bill Thompson photo).



Howard Hughes' specially-equipped round-the-world record L-14, NX18937. Note that four of the cabin windows have been covered up in area of long-range fuel tanks. (Bill Thompson photo).

This particular trans-Atlantic Electra had been built for Harold S. Vanderbilt, but it was no longer owned by the multi-millionaire when it made its trans-Atlantic return flight. Its career was not over yet after the feat just mentioned. Beginning on 19 AUG 37 the same aircraft began an extensive search in the Arctic, piloted by famous polar flyer Sir Hubert Wilkins. The purpose was to find the Russian pilot Sigismund Levanevsky and his crew, who went missing on a flight from the Soviet Union to the U.S.A. Following the unsuccessful search, the aircraft was sold to the Soviet Union and was registered USSR N-214 in MAR 38.

#### LOCKHEED L-12 FLIGHTS

In 1937 an L-12A owned by the Canadian Department of Transport operated the first dawn to dusk flight across Canada. Flying from Montreal to Vancouver on 31 JUL with several stops en-route, the flight was made to survey a regular cross-Canada air service by TCA, then being planned by the Canadian government. The government considered such a service vital to forge links between Canadians in East and West, much the same as the U.S. Post Office Department mail contracts had linked the four corners of the United States together a decade earlier.

Among the 12 crew and passengers on board for the flight were Canadian Transport Minister C.D. Howe and TCA president H.J. Symington. The aircraft was piloted by two of the first TCA pilots, J.H. Tudorpe and J.D. Hunter. This L-12A, CF-CCT, c/n 1219, is now on permanent display at the National Aviation Museum in Ottawa.

In Britain, Sidney Cotton used a specially modified L-12A to make several unauthorized reconnaissance flights over Nazi Germany in 1939. He obtained photographs of the German fleet which the Royal Air Force had been unable to get. After WW2, Cotton used another L-12A to explore the development of blindflying equipment.

#### LOCKHEED L-14 FLIGHTS

British Prime Minister Neville Chamberlain flew from London to Cologne and back on BA L-14 G-AFGN for his second meeting with Hitler on 22-24 SEP 38. This L-14 was the airline's first and had been delivered only on 03 SEP. On 29 SEP Chamberlain made another trip to Germany (on a BA L-10, see above) and returned the next day on L-14 G-AFGN.

#### HOWARD HUGHES

Howard Hughes can be described as having been an eccentric by anyone's standards, but it is often forgotten that in his early years he was an innovative aviation pioneer of the first order. On 10 JUL 38 Hughes and four crew members took off from New York in a specially modified L-14, NX18937, with the aim of setting a new round the world

flying record. Three days, 19 hours and 10 seconds later they landed back in New York - mission accomplished! They had covered 14,791 mi (23,799 km) and had also set a new record for the fastest time between New York and Paris - 16 hours, 31 minutes. Their flight had taken them from New York to Paris, Moscow, Omsk, Yakutsk, Fairbanks, Minneapolis and back to New York. The record they set stood until 1947, when it was bettered to three days, six hours, 56 minutes by a USAF A-26 bomber/attack plane.

#### VANDERBILT ... AGAIN

On 27-28 APR 39 another Twin with a Harold S. Vanderbilt connection came into the news. L-14 NC2333 owned by him, went searching for another Russian air crew which had gone missing on a flight from their own country to New York. Brig. Gen. Vladimir Kokkinaki and Major Mikhail Gordienko had been flying their DB-3 bomber prototype on an attempt at Moscow - New York flight when they ran out of fuel in unexpected adverse weather. They bellylanded in a swamp on Miscou Island, New Brunswick, Canada and were picked up and flown to New York by the Vanderbilt L-14. Their DB-3 was dismantled and sent back to the Soviet Union by boat.



Red, white and blue trimmed L-18 SE-BZE of Swedair was a familiar sight all over Western Europe in the 1950s. Here at Amsterdam, Holland, 09 MAY 59. (Joop Gerritsma photo)

# AIRLINE PLAYING CARDS

by THOMAS DRAGGES

I would like to open with passing on complaints I have received from some members.

People are telling me they are sending out up to 20 letters at a time and are receiving responses to only about one-fourth of them. I know I have been guilty of not answering letters too from time to time. But please try to answer when someone writes you asking for information, to trade or whatever. I know I hate it when the airlines don't answer me. I feel it is poor public relations on their part, but on the other hand, they are trying to save money. Maybe we should send them an SASE or some stamps.

Now on to a couple of new cards that have turned up: Ozark has issued a new set in their Cities series. It is called the Rockies. One deck is in blue print and the other in black. Both read, "Make tracks. Fly Ozark to the Rockies." The picture shows snow-covered mountains, a blue sky and a small airplane (barely visible) flying by.

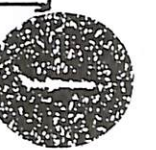
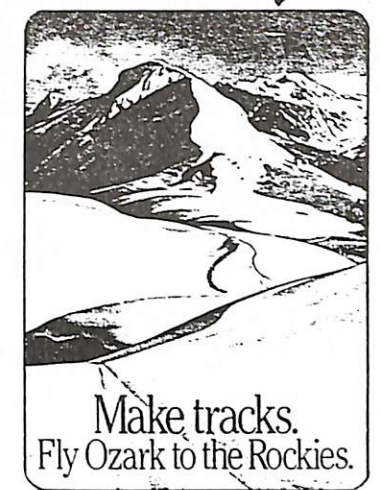
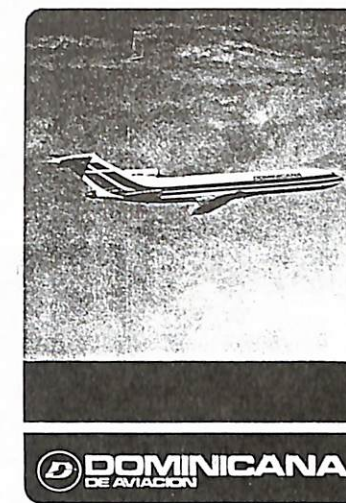
(Since Ozark is in the process of being integrated into TWA, this might well be the last deck of cards issued under the Ozark name!)

The other card comes from Dominicana. I don't know whether or not this is a current deck or not. The card pictures one of the airline's Boeing 727s in the top three-fourths, while the bottom fourth consists of three horizontal bars, red, white and blue with white letters in the blue (bottom) bar.

I am once again asking you to let me know about new decks which are issued, and if possible, please send a sample, so we can tell other collectors about them and perhaps show them as well.

#### SAVE A CONNIE

How would you like to help the group "Save-A-Connie"? They will issue for sale a deck of cards showing their L-1049G Super Constellation. The money



Detail of aircraft (see text) 375 times enlarged.

raised will be put toward the restoration of the aircraft to flying condition. Once completed, this aircraft will be used as a flying museum. For more information on the group and on where to purchase your

deck of cards, write to:

Save-A-Connie  
P.O. Box 9144  
Riverside, MO 64168  
U.S.A.

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P.O. Box 51284  
INDIANAPOLIS, IN 46251 - 0284  
USA

# THE SLIDE COLLECTOR

by RICHARD J. FEDORCO

In this issue I'd like to present a small tribute to World Airways which left scheduled service recently. Among the photos are three different color schemes worn by World, including the most recent one. For the modelers I have also enclosed a forward detail of Virgin Atlantic's newest 747, "Scarlet Lady" and of Northwest's new 757 "City of Anchorage", fleet no. 509.

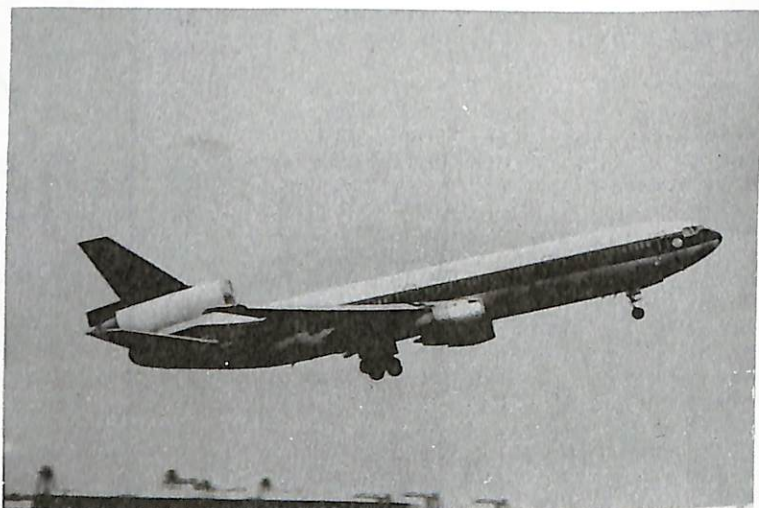
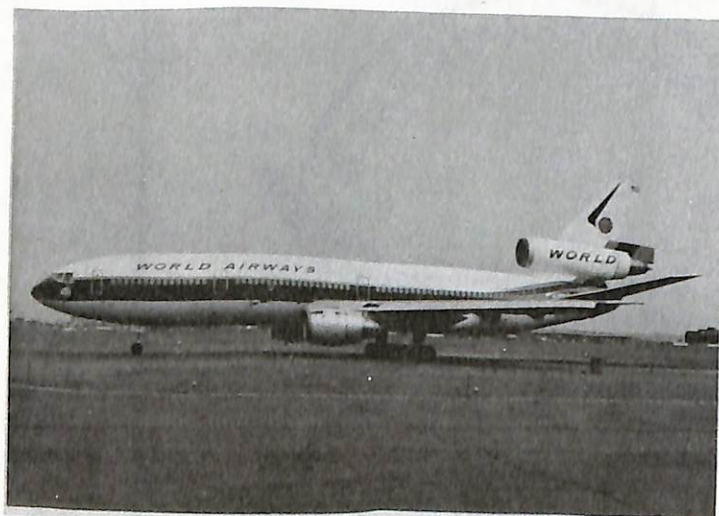
I hope you do enjoy the photos and if you feel you are holding anything you would like to contribute, please don't hesitate to send it to me. My address is on the front inside cover of the issue.

For the future I am planning photo selections on the 737-300, a farewell to Frontier (I'll need both older and recent schemes) and a selection on commuters.

Just one more thing: I also welcome and will answer any comments or questions on how to improve your photography of airliners.



(ABOVE): World AW DC-10-10 N1827U, c/n 46626, leased from United, in the airline's most-recent color scheme.  
 (BELOW, LEFT): Unidentified World DC-10-30CF in long-standing colors.  
 (BELOW, RIGHT): DC-10-30CF N108WA, c/n 46837, after return from lease to Malaysian.  
 (BOTTOM, LEFT): Virgin Atlantic's "Scarlet Lady" nose detail (see text).  
 (BOTTOM, RIGHT): Northwest's 757 "City of Anchorage" N509US, c/n23198.



## SHOT AT NEWARK:



(ABOVE): Delta L-1011-385-1 TriStar 1, N729DA, c/n 193C-1180.



(ABOVE): PeopleExpress 737-130 N412PE, c/n 19029.



(ABOVE): Eastern 757-225 N503EA, c/n 22193.



### A PAIR FROM USAIR:

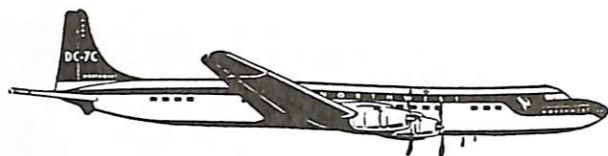
(ABOVE): 737-287 Advanced N321AU, c/n 22889.  
 (BELOW): 727-264 Advanced N774AL, c/n 22984.



# AROUND THE WORLD

## of Airline Schedules

Copyright, 1986  
George Walker Cearley, Jr.



The schedule article includes a history of the Douglas DC-7 series with associated timetable illustrations as well as a section on the supersonic Concorde on its 10th anniversary of scheduled service.

### Douglas DC-7

The Douglas DC-7 was built as a result of a proposal to Douglas Aircraft Co. by American Airlines to build a stretched and more powerful version of the DC-6B. American wanted an airliner to compete with the new Lockheed L-1049 "Super Constellation" and one that could fly nonstop across the North American continent in both a westerly and easterly direction.

The DC-7 was the first of the Douglas four-engine airliners to utilize the turbo-compound engine, being powered by four 3250 hp Wright R-3350-988-TC18-DA1 turbo-compound engines. This newly developed engine captured exhaust gases to provide extra power to turn the propeller drive shaft. Three small turbines were used to put power directly into the engine crankshaft. These power turbines, known as power recovery turbines (or PRT's), added 20% more power through the crankshaft, and reduced exhaust noise levels. Each engine carried a price tag of \$72,000. Attached engine carried a price tag of \$10,000 each. The four-bladed propeller was unique to the DC-7, the DC-4 and DC-6 series having three-bladed propellers. The cowl flaps at the aft end of the cowlings and those on the DC-6 series were streamlined over forward of the nacelles were streamlined over those on the DC-6 series. Also, new titanium alloys were utilized around the engine nacelles.

Maximum speed of the DC-7 was 410 mph at 22,000 ft. with a cruising speed of 365 mph at 23,500 ft. Fuselage length was 108 ft. 11 in., wingspan 117 ft. 6 in., and height 28 ft. 7 in. Wing area was 1,463 sq. ft.

The use of the Wright turbo-compound engine made possible a sizable increase in gross weight over the earlier DC-6B. Empty weight was 66,306 lbs. and weight fully loaded was 122,200 lbs. Fully loaded weight on the DC-6B was 106,000 lbs.

The first DC-7 was flown from the Douglas Aircraft Co. plant at Santa Monica on May 18, 1953. Initial customers included American Airlines, Delta Air Lines, National Airlines, and United Air Lines. In all, 120 DC-7's were built. On November 29, 1953, American inaugurated the world's first DC-7 service and the first transcontinental nonstop service in both directions, with flights between New York and Los Angeles. Prior to that, TWA had inaugurated nonstop eastbound service between Los Angeles and New York in October, 1953. The American DC-7 made the flight between New York and Los Angeles in just over eight hours.

National was the second airline to inaugurate DC-7 service, introducing the type on December 15, 1953, between New York (Idlewild) and Miami. The flights, known as "The DC-7 Star", were completed in 30 hours, 30 minutes, and featured filet mignon dinners, music and flowers aloft, and red carpet arrivals and departures. Cockpit crew members on the inaugural flight included Capt. S. Landers, co-pilot J. Watson, and flight engineer, G. Cunningham.

Delta, the third airline to offer DC-7 service, inaugurated its flights on April 1, 1954, operating three daily nonstops between Chicago and Miami. Two daytime flights were made, "Royal Biscayne" and "Royal Poinciana", and one night coach "DC-7 Owl Comet".

United was the fourth airline to inaugurate DC-7 service, the first flight being made on June 18, 1954, as "The Continental", nonstop between Idlewild and Los Angeles. Unlike the DC-7's of other carriers, United's did not have a separate forward cabin, visible on the outside by the separate pair of windows on the forward fuselage. This area on United's planes was used as a special cabin luggage compartment. All luggage was thus carried on the main deck just forward of the passenger cabin. The idea was to facilitate baggage delivery to passengers on arrival. There were no windows in this area used for baggage in the cabin of the United DC-7's. A pair of windows was placed in DC-7's of other carriers in this same area, and again on those of other carriers this area had passenger seating.

### Douglas DC-7B

The DC-7B represented an intercontinental version of the standard DC-7. It had more fuel tankage for longer range operations. Each plane was powered by four Wright R-3350-972-TC18-DA4 turbo-compound engines, an upgraded version of the turbo-compound engine on the standard DC-7. The DC-7B had the same height, length, and span of the standard DC-7.

DC-7B's were ordered by American, Continental, Delta, Eastern, National, Panagra, Pan American, and South African. On DC-7B's operated by Pan American and South African on ultra long range flights, even more fuel tanks were installed as "saddle tanks" in large longerons extending aft from engine nacelles, like those on the DC-7C. These DC-7B's of Pan American and South African with the saddle tanks have erroneously been labelled as the only true DC-7B's while those of the other carriers (not having these even further additions in fuel tankage) have been referred to as hybrid DC-7/DC-7B's. However, all carriers' planes are DC-7B's and were certificated as such. All carry more fuel than the standard DC-7. It's simply that those of Pan American and South African carried even greater amounts than the others.

A total of 97 DC-7B's were built.

### Douglas DC-7C

The DC-7C represented the ultimate stretch and development of the DC-4/DC-6/DC-7 series. Wingspan was 10 ft. greater than that of the DC-7 and DC-7B. A five foot extension was added near the wing root on either wing, making it possible to position engines farther from the passenger cabin and reduce noise levels.

Added fuel tankage for longer range operation was provided for in the added wing center section and in "saddle tanks" in longerons aft of engine nacelles like those on the DC-7B's of Pan American and South African.

Each DC-7C was powered by four 3,400 hp Wright R-3350-988-TC18-EA4 turbo-compound engines, a further advanced version of the engine on the DC-7B. The DC-7C had a wing span of 127 ft. 6 in., length of 112 ft. 3 in. and height of 31 ft. 10 in. Fuselage length and tail height were increased over that of the DC-7 and DC-7B.

The DC-7C grew out of proposals by Pan American for a plane with greater range and passenger capacity to fly the Atlantic Ocean nonstop in both directions. The DC-7C had a greater range than the DC-7B but was somewhat slower. Customers other than Pan American included Braniff, Northwest, BOAC, KLM, SAS, Alitalia, Mexicana, TAI, Swissair, Japan, Sabena, and Pan Air do Brasil. A total of 121 DC-7C's were built.

City	SSC	SSC	SSC	SSC	SSC	SSC	SSC	SSC	SSC	SSC	SSC	SSC	SSC	SSC	SSC	SSC	SSC	SSC	SSC
London	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170
New York	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170

ABOVE LEFT: BRITISH AIRWAYS SCHEDULES BETWEEN THE U.S. AND GREAT BRITAIN EFFECTIVE JANUARY 1, 1978, SHOWING SUPERSONIC CONCORDE SERVICE BETWEEN NEW YORK-LONDON AND WASHINGTON-LONDON AS OF THAT DATE. AT RIGHT: AIR FRANCE-BRANIFF AIRWAYS AND BRITISH AIRWAYS-BRANIFF AIRWAYS CONCORDE INTERCHANGE SCHEDULES EFFECTIVE APRIL 27, 1980. THESE WERE THE FINAL SCHEDULES ISSUED FOR THE TEXAS-EUROPE INTERCHANGE AS THE OPERATION WAS TERMINATED ONE MONTH LATER ON MAY 31, 1980. BELOW RIGHT: AIR FRANCE AND AIR FRANCE-BRANIFF AIRWAYS TRANSATLANTIC SCHEDULES EFFECTIVE WINTER 1979/1980 SHOWING CONCORDE SERVICE BETWEEN PARIS-NEW YORK, PARIS-WASHINGTON-MEXICO, AND PARIS-WASHINGTON-DALLAS/FT. WORTH.

INTERCHANGE SCHEDULES (THROUGH AIRPLANES)		THIS PAGE ISSUED FOR INFORMATION PURPOSES ONLY					
PARIS - WASHINGTON, D. C. - DALLAS/FORT WORTH							
AIR FRANCE		BRANIFF AIRWAYS					
LONDON - WASHINGTON, D. C. - DALLAS/FORT WORTH							
BRITISH AIRWAYS		BRANIFF AIRWAYS					
WESTBOUND (Read Down)		EASTBOUND (Read Up)					
Hours From GMT	SSC 63 R	SSC 189 R	Equipment Flight Number Class of Service	SSC 54 R	SSC 188 R	Days of Operation	Airport Code
+2	M20 00		Lv PARIS..... Ar	23 35			CDG
+1		M18 30	Lv LONDON..... Ar		22 00		LHR
-4			WASHINGTON... Ar				IAD
		18 00	Ar Dulles (Airport)..... Lv	M13 45	13 05		
		18 15	Ar Terminal..... Lv	13 30	12 50		
		19 10	Lv Dulles (Airport)..... Ar	13 00	12 00		
		M19 25	Lv Terminal..... Ar	12 45	11 45		
-5		21 00	Ar DALLAS/FT. WORTH..... Lv	M09 30	M08 30		DFW

### New York - Washington - Dallas/Fort worth - Houston - Mexico

City	AF 402 AB3 F/Y	AF 402 727 F/Y	IT 162 CRV Y	AF 001 SSC R	IT 262 CRV Y	AF 077 707 F/Y/M	AF 017 747 F/Y/M	AF 053 SSC R	AF 067 747 F/Y M	AF 003 SSC R	AF 067 747 F/Y M	AF 067 747 F/Y M	AF 053 SSC R	AF 067 747 F/Y M	AF 053 SSC R	
Nice	dp	0730	0730			1030										
Lyon	dp			0710		1055										
Paris Charles de Gaulle	ar	0855	0855	0815		1200	1150									
Paris Charles de Gaulle	dp				1100		1300	1715		2000	1015	2000	1015	1015	2000	1015
New York Kennedy Int. Airport	ar				0840	1455	1910									
Washington Dulles	ar								1805	1855				1805	1855	1805
Dallas/Fort worth	ar									2100					2100	
Houston	ar										1355	1510	1355	1510	1355	1510
Mexico	ar										1715	2050	1715	1715	1715	2050

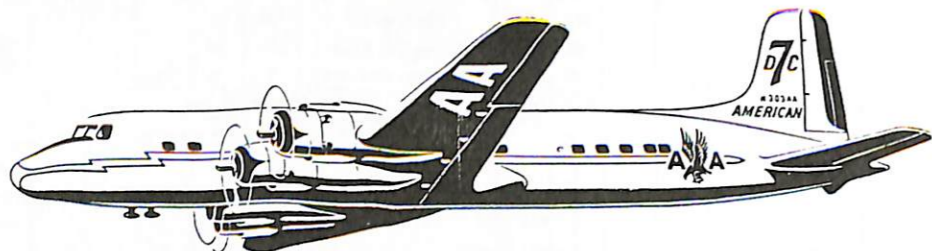
FIRST NONSTOP SERVICE—COAST TO COAST

american airlines

# THE NONSTOP Mercury

American's new DC-7 Flagship flies you cross-country in under 8 hours—three hours less than present flight times between New York and Los Angeles. This unmatched travel time is made possible by the 365 mph cruising speed of the fastest piston-powered transport in the world. With the new DC-7, American sets a new standard for service between Los Angeles and New York.

Add to the speed of the DC-7 Flagship, many new developments designed specifically for your comfort—special soundproofing, newly designed seats, and an air conditioning system that works on the ground as well as in the air. Make your reservations now on the finest, fastest Flagship ever, The Nonstop Mercury.



NEW YORK—LOS ANGELES UNDER 8 HOURS

### THE NONSTOP MERCURYS

FLIGHT #1  
Lv NEW YORK -----1:00pm EST  
Ar LOS ANGELES -----5:55pm PST

FLIGHT #2  
Lv LOS ANGELES -----9:00am PST  
Ar NEW YORK -----7:15pm EST

ABOVE: AMERICAN AD FROM FALL 1953 ON NEW DC-7 FIRST CLASS "MERCURY" SERVICE. AMERICAN WAS THE SPONSOR OF AND FIRST CARRIER TO OPERATE THE DC-7. TOP RIGHT: NATIONAL TIMETABLE FOR SEPTEMBER 1955 FEATURES DC-7 ON COVER WITH PASSENGERS DEPLANING VIA A RED CARPET. NATIONAL WAS THE SECOND AIRLINE TO FLY THE DC-7 IN SCHEDULED SERVICE. AT RIGHT: DELTA DC-7 FLIGHTS AS OF APRIL 25, 1954, THREE AND ONE HALF WEEKS AFTER DELTA BEGAN OPERATIONS WITH THE DC-7 ON APRIL 1 NONSTOP BETWEEN CHICAGO AND MIAMI. BY LATE APRIL SERVICE HAD ALREADY BEEN ADDED AT ST. LOUIS, ATLANTA, CINCINNATI, AND HOUSTON.

## Members of the Royal Family

Royal Peinciana					Royal Ranger					Royal Biscayne				
DC-7 749	DC-7 761	DC-7 701	DC-7 75	DC-7 79	Read Down	Read Up	DC-7 736	DC-7 700	DC-7 760	DC-7 748	DC-7 78			
9:30	11:50	1:55	10:00	1:20	Lv. CHICAGO (CDT) Ar.	10:52	1:00	8:31	8:57	5:45				
	12:54				Ar. ST. LOUIS Lv.			7:25						
	1:20				Lv. ST. LOUIS Ar.			7:03						
10:34					Ar. CINCINNATI (EST) Lv.									
11:00					Lv. CINCINNATI Ar.									
12:25			11:59		Ar. ATLANTA Lv.	8:45			6:50					
12:50					Lv. ATLANTA Ar.				6:24					
	2:38				Ar. HOUSTON (CST) Lv.			3:40						
2:53		5:35		5:00	Ar. MIAMI (EST) Lv.		9:00		4:15	1:45				

LIGHT TYPE: A. M.  
HEAVY TYPE: P. M.

# NATIONAL

AIRLINE OF THE STARS

## FLY NATIONAL... FINEST BY FAR!

Only on NATIONAL—DC-7 Speed combined with World-famed Luxury!

NEW YORK ★ FLORIDA ★ WASHINGTON ★ CUBA  
NEW ORLEANS ★ TEXAS ★ CALIFORNIA ★ DETROIT  
SEPTEMBER 1955

## The Royal DC-7 Biscayne

Fastest and Finest

# CHICAGO MIAMI

3 hrs. 40 min. NON-STOP

DC-7 703	DC-7 701	DC-7 79	DC-7 Schedule	DC-7 700*	DC-7 702	DC-7 78
10:00 a.m.	2:00 p.m.	12:20 a.m.	Lv. CHICAGO Ar. CST	1:00 p.m.	3:45 p.m.	4:45 a.m.
2:40 p.m.	6:40 p.m.	5:00 a.m.	Ar. MIAMI EST	Lv. 10:00 a.m.	3:45 p.m.	1:45 a.m.

\*Four times weekly SUN. MON. TUES. WED.

Announcing America's First DC-7 Aircoach—Economy and Luxury, Chicago-Miami

Fly DC-7 at North-South Excursion Fares beginning April 15

AMERICA'S FASTEST AND FINEST AIRLINER

TOP LEFT: AD FOR DC-7 INAUGURAL SERVICE ON DELTA FROM APRIL 1, 1954, TIMETABLE. DELTA BEGAN DC-7 "GOLDEN CROWN" SERVICE ON THIS DATE WITH THREE DAILY ROUND TRIPS BETWEEN CHICAGO AND MIAMI. TOP RIGHT: JUNE 1954 UNITED TIMETABLE SHOWS THAT AIRLINE'S INAUGURAL DC-7 SERVICE EFFECTIVE JUNE 18 BETWEEN NEW YORK AND LOS ANGELES. UNITED WAS THE FOURTH CARRIER TO OFFER DC-7 FLIGHTS.

SYSTEM TIMETABLE JUNE, 1954 EFFECTIVE JUNE 1, 1954

# UNITED AIR LINES

Beginning June 18

## DC-7 Mainliners fly NONSTOP...

NEW YORK-LOS ANGELES

INFORMATION - RESERVATIONS  
400 Post St. or Palace Hotel  
San Francisco - YC 106 6 C-18

# Golden Falcon

## DC-7B

...newest, fastest, quietest, most luxurious airliner in the world!

### NON-STOP

New York to Miami	3 hrs. 30 min.	Atlanta to Miami	2 hrs. 50 min.*	Miami to Boston	4 hrs.
New York to W. Palm Beach	3 hrs. 20 min.	Atlanta to Tampa	93 min.	Miami to Tampa	55 min.
Chicago to Miami	3 hrs. 50 min.	Atlanta to Chicago	2 hrs. 14 min.	Tampa to Miami	55 min.
Chicago to Tampa	4 hrs. 8 min.*	Miami to New York	3 hrs. 30 min.	Tampa to Atlanta	99 min.
Chicago to Atlanta	2 hrs. 6 min.	Miami to Chicago	4 hrs. 5 min.	Tampa to Chicago	4 hrs. 29 min.*
Detroit to Miami	4 hrs.	Miami to Atlanta	2 hrs. 15 min.	W. Palm Beach to New York	3 hrs. 20 min.
Cleveland to Miami	3 hrs. 50 min.	Miami to Detroit	4 hrs. 10 min.		
Boston to Miami	4 hrs. 15 min.	Miami to Cleveland	3 hrs. 58 min.		

\*One Stop.

ALL FLIGHTS DAILY EXCEPT AS NOTED Effective January 1, 1956 All Times are Standard Time. Eastern Air Lines

AS OF JANUARY 1956 EASTERN AIR LINES OFFERED FIRST CLASS GOLDEN FALCON IN ALL THE MARKETS SHOWN ABOVE. EASTERN HAD INTRODUCED DC-7B'S IN 1955.

# PANAGRA

PAN AMERICAN GRACE AIRWAYS, INC.

## TO SOUTH AMERICA



*El Interamericano* DC-7B

# NOW!

## New York to South America

### ...without change of plane!



Only daily  
deluxe service!

*El Interamericano* DC-7Bs  
with radar!

New, superlatively fast DC-7B's, operating over the routes of NATIONAL, PAN AMERICAN and PANAGRA, speed you in record time from NEW YORK to:

PANAMA • GUAYAQUIL  
LIMA • SANTIAGO  
BUENOS AIRES

Also Daily DC-6B Service by *El Pacifico*  
—thrifty Tourist flights with savings up to 25%.  
From NEW YORK, without change of plane, serving:  
PANAMA • CALI • QUITO • GUAYAQUIL  
LIMA • LAPAZ • SANTIAGO • BUENOS AIRES

Pan American-Grace Airways **PANAGRA**

AT LEFT, ABOVE, AND BELOW: PANAGRA TIMETABLE, AD, AND DC-7B SCHEDULES FROM SEPTEMBER 1955 FOR SERVICES BETWEEN NEW YORK, FLORIDA, PANAMA, AND THE WEST COAST OF SOUTH AMERICA.

### SOUTH AFRICAN AIRWAYS

ZUID-AFRIKA - AUSTRALIË V.V.  
IN SAMENWERKING MET QANTAS

Altern Ma Sup Cons	Altern Za DC-7B	Super Cons	DC-7B
QF 632 F.Y.	SA 242 F.Y.	QF 631 F.Y.	SA 241 F.Y.
10.00	09.00	14.40	12.10
19.30	17.30	09.00	07.55
21.00	18.30	09.40	06.55
Do, Thu	Zon.	Sa, Sun	Woe.
09.40	06.15	02.00	00.25
11.20	07.45	00.40	23.25
19.40	15.15	18.45	18.30
21.30		17.25	Di.
Vi, Fri		12.15	
05.55		11.15	
07.00			
09.00		09.00	

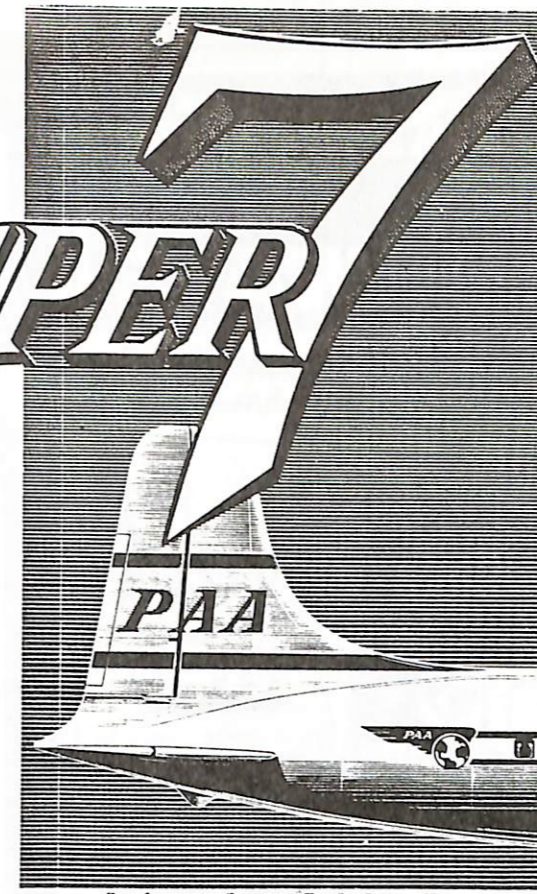
AT LEFT: SOUTH AFRICAN-QANTAS JOINT SERVICE ACROSS THE INDIAN OCEAN USING DC-7B'S OF SOUTH AFRICAN AND "SUPER CONSTELLATIONS" OF QANTAS. SCHEDULES ABOVE LEFT EFFECTIVE JUNE 1, 1962.

NAL National Airlines	EL INTERAMERICANO 701—DAILY—DE LUXE—701 Direct—Through Plane Service						
	DC7B	DC6B	DC7B	DC7B	DC6B	DC7B	DC7B
NEW YORK.....	EDT Lv 18:00	18:00	18:00	18:00	18:00	18:00	SU 18:00
WASHINGTON.....	EDT Ar 19:00	19:00	19:00	19:00	19:00	19:00	19:00
WASHINGTON.....	EDT Lv D19:20	D19:20	D19:20	D19:20	D19:20	D19:20	D19:20
MIAMI.....	EST Ar 21:20	21:45	21:20	21:20	21:45	21:20	21:20
PAA Pan American World Airways							
DIRECT	S22-05 TU 01:55	S22-30 WE 03:00	S22-05 TH 01:55	S22-15 FR 01:55	S22-05 SA 03:00	S22-05 SU 01:55	S22-05 MO 01:55
PANAGRA (Pan American-Grace Airways)							
PANAMA CITY/BALBOA*	75° Lv B02:35	B03:40	B02:35	B02:35	B03:40	B02:35	B02:35
BOGOTA, Colombia.....	75° Lv D		D	D		D	D
CALI, Colombia.....	75° Ar C		C	C		C	C
QUITO, Ecuador.....	75° Ar 7	06:45	7	7	06:45	7	7
QUITO, Ecuador.....	75° Lv B	B07:10	B	B	B07:10	B	B
GUAYAQUIL, Ecuador.....	75° Ar						
TALARA, Peru.....	75° Ar B	07:30	B	B	07:30	B	B
TALARA, Peru.....	75° Lv						
LIMA, Peru.....	75° Lv L08:10	L10:55	L08:10	L10:55	L08:10	L09:20	L09:20
LA PAZ, Bolivia.....	60° Ar						
LA PAZ, Bolivia.....	60° Lv						
SAO PAULO.....	45° Ar						
RIO DE JANEIRO.....	45° Ar						
ANTOFAGASTA, Chile.....	60° Ar		12:20	F			
ANTOFAGASTA, Chile.....	60° Lv		L12:45	F			
SANTIAGO, Chile.....	60° Ar		15:15	F			
SANTIAGO, Chile.....	60° Lv	14:00	17:20	F	17:20	14:00	15:10
SANTIAGO, Chile.....	60° Ar	14:40	D18:00	F	D18:00	14:40	D15:50
BUENOS AIRES, Argentina.....	45° Ar	18:10	21:50	F	21:50	18:10	19:20

EFFECTIVE SEPTEMBER 14, 1955.

# SUPER 7

WORLD'S  
NEWEST  
FASTEST  
AIRLINERS



PAN AMERICAN CLIPPERS FLY ON BULOVA TIME

## Non-Stop Tourist Service to Paris and London

SERVICE TO PARIS AND ON TO ROME IS EFFECTIVE JUNE 1; SERVICE TO LONDON AND ON TO FRANKFURT, JULY 15

### AND ONLY PAN AM'S GOT 'EM!

ABOVE: AD FROM JUNE 1955 TIMETABLE FOR PAN AMERICAN'S NEW "SUPER '7' CLIPPER" SERVICE ACROSS THE ATLANTIC OCEAN FROM NEW YORK TO EUROPE.

# Continental Air Lines

EFFECTIVE SEPTEMBER 29, 1957

## DC-7B CLUB COACH



LUXURY

*Gold Carpet*  
SERVICE  
CHICAGO-KANSAS CITY  
DENVER-LOS ANGELES

WESTBOND SCHEDULES	All Flights Operate Daily Except As Noted	Convair Coach TN 561	DC-6B CU 943	DC-7B Club Coach T 1	Convair 363	Convair 323	DC-7B Club Coach T 5	Convair 325	Convair 341	DC-7B Club Coach T 3	Convair 327	Convair CB 963
	Chicago* (Midway) (CDT)											
	Leave Airport Ticket Counter											
	Flight Departure (CDT) Lv			7:45			3:15			6:00		7:15
	ST. LOUIS* (CDT) Lv			8:00			3:30			6:15		7:30
	Kansas City (CST) Ar			8:40			Except Tues= days					7:50
	Tulsa " Lv			9:10								
	Wichita " Ar			12:45								
	Wichita (CST) Lv			B 7:15								
	COLORADO SPRINGS (MST) Ar			8:04								
	Denver " Lv			8:24								
	COLORADO SPRINGS " Ar			2:25								
	Denver " Lv			3:03								
	SANTA FE " Ar			9:15								
	Los Angeles* (Int'l) (PST) Lv			J 9:45								
	PORTLAND " Ar											
	SEATTLE-TACOMA (PST) Ar											

ABOVE AND AT TOP RIGHT: CONTINENTAL SCHEDULES FROM SEPTEMBER 29, 1957, SHOWING DC-7B "CLUB COACH" SERVICE OVER A NEW ROUTE GRANTED CONTINENTAL BY THE CAB BETWEEN CHICAGO-KANSAS CITY-DENVER-LOS ANGELES. SERVICE HAD BEGUN EARLIER THAT YEAR DURING SPRING 1957.

EFFECTIVE JUNE 1, 1955

# PAA

PAN AMERICAN WORLD AIRWAYS

SYSTEM TIME TABLE

passengers  
mail  
parcel post  
cargo

WORLD'S MOST EXPERIENCED AIRLINE

September 30, 1956

# BRANIFF AIRWAYS

Braniff's El Dorado  
Coming October 20th

## El Dorado

Braniff's fabulous version of the Douglas DC-7C — world's finest aircraft serving

**NEW YORK • WASHINGTON  
DALLAS • SAN ANTONIO**

**CHICAGO • DALLAS  
HOUSTON**

APRIL, 1957

# NORTHWEST AIRLINES

*Orient*

**NORTHWEST ANNOUNCES DC-7C SERVICE TO The ORIENT**

Effective April 28, 1957, NWA will fly DC-7C's, the finest, fastest long-range aircraft between Seattle-Tacoma and the Orient cities of Tokyo, Okinawa and Manila.

LOCAL TIMES	SUNDAY				MONDAY		TUESDAY			
	Y/F/DL KL642	Y/F/DL KL648	Y/F/B KL644	Y/F/DL KL682	Y/F/DL KL642	Y/F/B KL644	Y/F/DL KL642	Y/F/DL KL648	Y/F/B KL644	Y/F/DL KL682
HOUSTON...Lv				13:45						13:45
MONTREAL...Lv				21:05						21:05
NEW YORK...Lv	16:30	18:45 Mo	21:00	NON STOP	16:30	21:00	16:30	18:45 We	21:00	NON STOP
GLASGOW...Ar	NON STOP	10:00	NON STOP	NON STOP	NON STOP	NON STOP	NON STOP	10:00	NON STOP	NON STOP
AMSTERDAM...Ar	09:30	13:40	14:00	13:55	09:30	14:00	09:30	13:40	14:00	13:55

**FROM USA AND CANADA TO EUROPE**

WEDNESDAY		THURSDAY			FRIDAY				SATURDAY			LOCAL TIMES
Y/F/DL KL642	Y/F/B KL644	Y/F/DL KL642	Y/F/B KL644	Y/F/DL KL682	Y/F/DL KL642	Y/F/DL KL648	Y/F/B KL644	Y/F KL674	Y/F/DL KL642	Y/F KL672	Y/F/B KL644	
				13:45				21:05				EASTBOUND TRANSATLANTIC
				21:05						17:00		Lv HOUSTON
16:30	21:00	16:30	21:00	NON STOP	16:30	18:45 Sa	21:00	NON STOP	16:30	NON STOP	21:00	Lv MONTREAL
NON STOP	NON STOP	NON STOP	NON STOP	NON STOP	NON STOP	10:00	NON STOP	NON STOP	NON STOP	NON STOP	NON STOP	Lv NEW YORK
09:30	14:00	09:30	14:00	13:55	09:30	13:40	14:00	13:55	09:30	09:50	14:00	Ar GLASGOW
												Ar AMSTERDAM

KLM TRANSATLANTIC DC-7C "SEVEN SEAS" SERVICE EFFECTIVE NOVEMBER 1, 1959, BETWEEN NORTH AMERICA AND EUROPE. EACH PLANE WAS NAMED AFTER A DIFFERENT SEA ON THE EARTH. IN FALL 1958 KLM HAD BEGUN POLAR SERVICE WITH THE DC-7C BETWEEN AMSTERDAM-TOKYO-ANCHORAGE. SAS HAD BEEN THE FIRST DC-7C POLAR SERVICE OPERATOR IN FEBRUARY, 1957.

ABOVE: SCHEDULES OF PAN AMERICAN, BRANIFF, AND NORTHWEST, THREE EARLY OPERATORS OF THE DOUGLAS DC-7C. IN JUNE 1956 PAN AMERICAN INAUGURATED THE FIRST DC-7C SERVICE (ACROSS THE ATLANTIC). BRANIFF FOLLOWED ON OCTOBER 20TH WITH THE FIRST DOMESTIC DC-7C SERVICE, BETWEEN TEXAS-NEW YORK AND TEXAS-CHICAGO. NORTHWEST OFFERED ITS FIRST DC-7C "REGAL IMPERIAL" SERVICE BEGINNING APRIL 28, 1957, ACROSS THE PACIFIC.

Hours + GMT	READ DOWN	Aircraft	Class	Service	D.C.7C																		
					D BA510	FTE BA 550	FTE BA 548	TE BA 630	FTE BA 552	FTE BA 542	FE BA 640	FTE BA 558	FE BA 632	TE BA 628	FE BA 638	FE BA 644							
-4	NEW YORK	Monarch	Daily	dep. 17:00																			
-4	BOSTON	Daily	dep. 23:30																				
-4	MONTREAL	Daily	dep. 13:00																				
-2 1/2	GANDER	Daily	dep. 21:40																				
+1	GLASGOW (Prestwick)	Daily	dep. 22:25																				
+1	MANCHESTER/LIVERPOOL	Daily	dep. 15:00																				
+1	LONDON AIRPORT (North)	Daily	dep. 10:30																				

† BA 550 First We. service May 14th, First Fr. May 16th, First Sa. May 17th. † BA 548 First Tu. service May 27th. † BA 552 First Su. service May 11th, First Th. May 29th. † BA 542 First Mo. service May 12th. † BA 638 Last service May 3rd. † BA 644 First service May 10th.

FLIGHT NUMBER	AZ 516	AZ 508	AZ 508	AZ 518	AZ 512	AZ 510	AZ 508
CLASS	F/Y	F/Y	F/Y	F/Y	F/Y	F/Y	F/Y
AIRCRAFT	DC-7C	DC-7C	DC-7C	DC-7C	DC-7C	DC-7C	DC-7C
OPERATION DAYS	①	②	③	④	⑤	⑥	⑦
<b>THE SEVEN HILLS</b>							
NEW YORK d.	15.00	15.00	15.00	15.00	15.00	15.00	15.00
BOSTON... a.	16.00	T...	T...	16.00	T...	T...	T...
BOSTON... d.	16.40	D...	D...	16.40	D...	D...	D...
PARIS..... a.	②	③	④	T D ⑤	⑥	⑦	①
PARIS..... d.	T...	08.40	08.40	09.50	F/T	B	08.40
MILANO... a.	D...	F/T	F/T	F/T	B	B	F/T
MILANO (•) d.	B...	09.30	09.30	10.45			09.30
ROMA (•) a.	R	R	R	R			R
ROMA... d.	L	L	L	L	L	L	L
NAPOLI... a.	13.25	13.25	13.25	14.40	12.25	12.25	13.25
	14.15				13.15		
	15.05				14.05		
	②	③	④	⑤	⑥	⑦	①

**TAHITI - U.S.A.**

Heure locale - Local time = T.U. (GMT) ↓	TI 802	TI 88	TI 88	Heures Locales Local times	TI 89	TI 89	TI 801
	DC-8	DC-8	DC-7C		DC-7C	DC-8	DC-8
	F/Y	F/Y	F/Y		F/Y	F/Y	F/Y
	④ ⑤	③	④		⑦	④	③ ⑤
-10	c	b	a	d. PAPEETE a. (PPT)	a	b	c
	10 00	11 00	22 00		08 30	07 15	23 10
	JET DC-8 INTERCONTINENTAL	JET DC-8 INTERCONTINENTAL	⑥		⑦	JET DC-8 INTERCONTINENTAL	JET DC-8 INTERCONTINENTAL
-10	15 35		07 25 09 25	a. HONOLULU d. (HNL)	22 50 21 20		17 35
			△		△		
-8		21 50	20 15	a. LOS ANGELES d. (LAX)	14 00	02 20	
					⑥	④	

a Jusqu'au 30 AVRIL / Until APR. 30.  
b A partir du 1<sup>er</sup> MAI / Effective MAY 1st.  
c 1<sup>er</sup> MAI - 15 JUIN : ④ / MAY 1st - JUNE 15th : ⑤.  
A partir du 15 JUIN : ④ ⑤ / From JUNE 15th : ④ ⑤.  
b, c. — Sous réserve d'approbation gouvernementale. Subject to government approval.

TAI DC-8 AND DC-7C SERVICE BETWEEN TAHITI AND LOS ANGELES IN EARLY 1961.

ALITALIA DC-7C SERVICE BETWEEN NEW YORK, BOSTON, AND EUROPE AS OF JANUARY 1, 1959.

BOAC WAS A MAJOR OPERATOR OF THE DC-7C ACROSS THE ATLANTIC IN THE LATE 1950'S. ABOVE SCHEDULES, EFFECTIVE MAY 1, 1958. LATER THAT YEAR, IN OCTOBER, BOAC OFFERED THE FIRST TRANSATLANTIC PURE JET SERVICE WITH THE DE HAVILLAND COMET IV.







## the golden oldies

I've found it intriguing that interest in the collecting of safety instruction cards has increased ever steadily in the past few years as is clearly indicated by the areas of interest specified in the membership roster. From correspondence directed to me, I find it very gratifying that my articles may have, in fact, been credited with this growing interest.

Many of the new "interested parties" are recent additions to the membership of the World Airline Historical Society and therefore have always been perplexed as to the "oldest safety cards". Since my first article on safety cards (some three years ago) predates much of the new membership, I'll attempt to give some clarification to this age-old question.

Thus, we'll spend some time with this article in acknowledgement of some new findings since that first article.

Illustrated in Figure 1 is the cover and some of the text of Imperial Airways (London) Ltd.'s small yellow booklet entitled "Notes for your COMFORT & CONVENIENCE when travelling by air in Europe". Printed as form IA/X/65, this fascinating leaflet is dated 9/32 of which 100,000 were produced. Based on seating capacities and the subjects discussed in the leaflet, it can be logically assumed that these leaflets were issued at booking offices as well as aboard the aircraft.

Interestingly enough, most of the material content deals with all aspects of air travel in the infancy days of the airline industry. Such classic remarks found throughout include everything from "separate lavatories for men and women aboard the Hercules-Class airliners", to "the staff will give you some cotton wool to put in your ears in order to prevent slight (!) deafness", to "you too will be weighed; the dial of the weighing machine is seen only by the official", to mentions of stewards only and no smoking for the entire flight. (Considering the materials used for construction of these early airliners, that's not only a superb idea, but a very necessary one!)

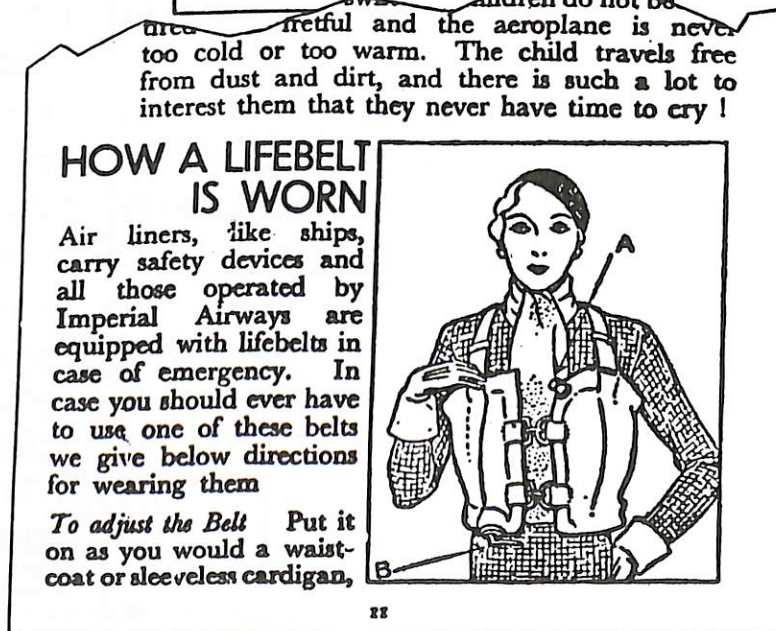
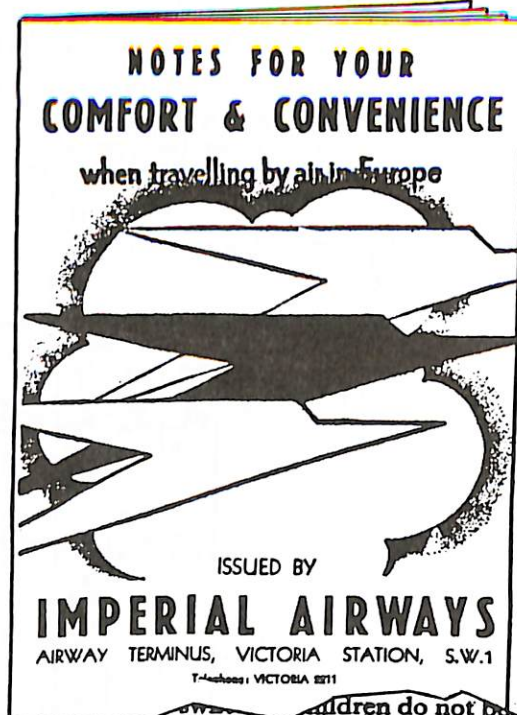


FIGURE 1

Cover of 1932 Imperial Airways leaflet including lifebelt instructions (enlarged inset). Note hairstyle and clothing on model clearly showing that era.

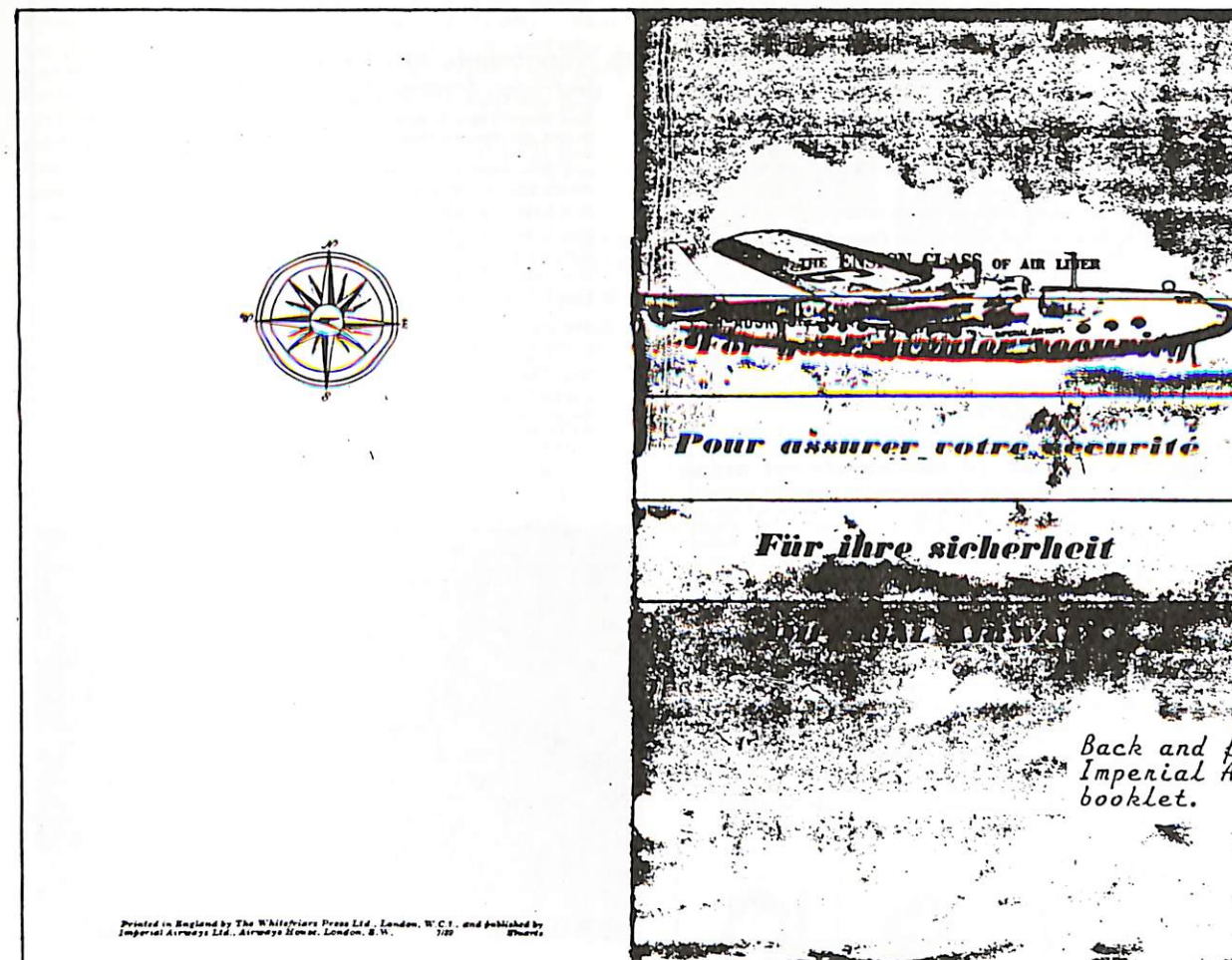


FIGURE 2

Back and front covers of 1939 Imperial Airways "Ensign" safety booklet.

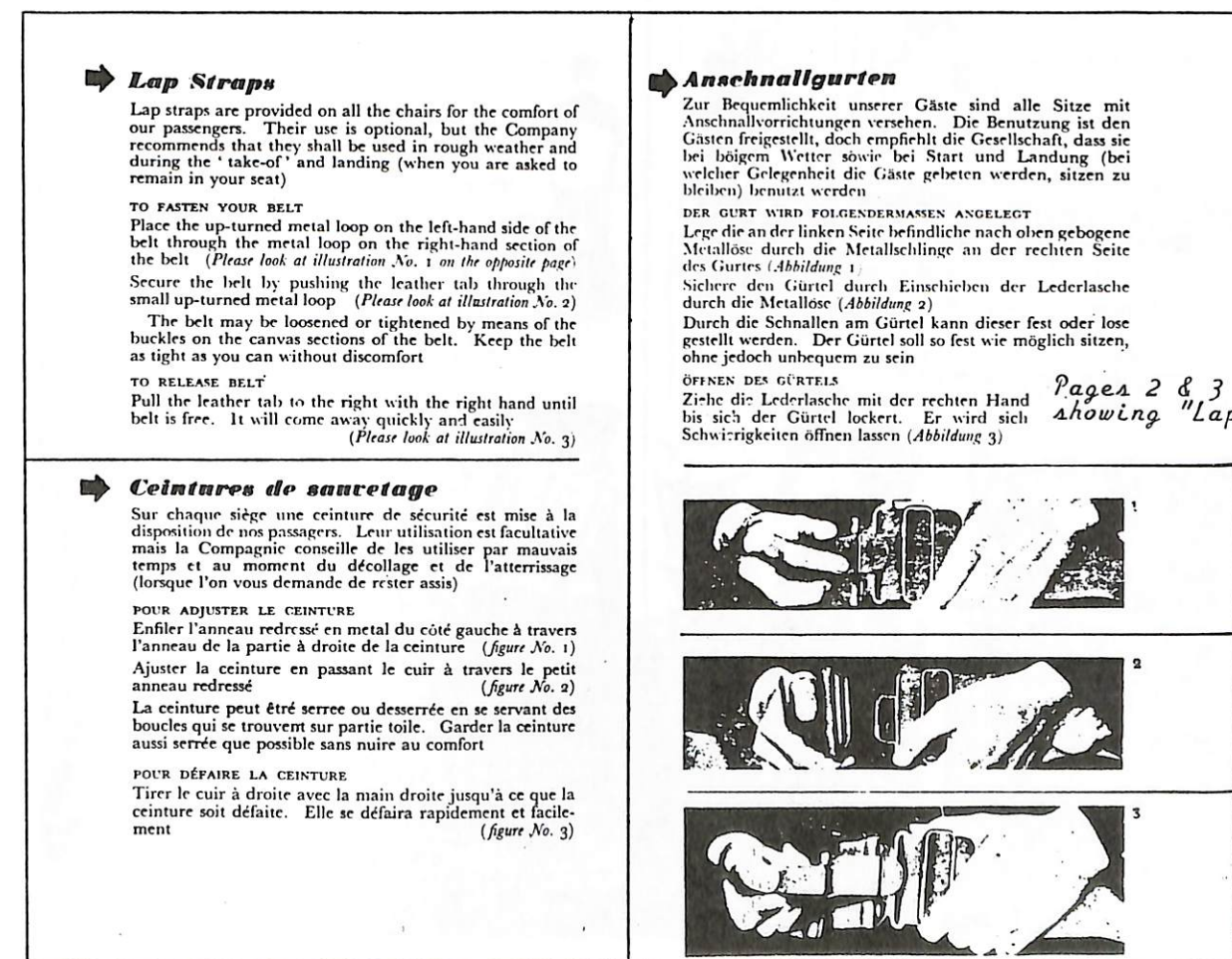


FIGURE 2

Pages 2 & 3 of "Ensign" booklet showing "Lap Strap" (seatbelt).

**Emergency exits in this air liner**

In the event of an emergency landing passengers should leave the liner, if possible, by the entrance doors, one in the left side looking forward in the observation corridor and one in the left side looking forward in the small rear cabin. If it is not possible to use these doors use the emergency exits which are provided in the following positions:—

- A hatch in the roof of the control cabin
- A hatch in the roof of the freight compartment reached by a ladder from the observation corridor
- A hatch in the roof at the rear of the midship cabin
- A hatch in the roof of the small rear cabin

In addition all cabin windows can be easily pushed out to form emergency exits. Use your elbow to do this. If an emergency landing is made in water you must not knock out the windows or try to get out by the doors, but only through the exits in the roof

**Les sorties de secours de cet avion**

Dans le cas d'un atterrissage forcé les passagers devront quitter l'avion, si possible, par les portes situées l'une à gauche, sens de la marche, dans le corridor observatoire et l'autre à gauche, sens de la marche, dans la petite cabine arrière. S'il n'est pas possible d'utiliser ces portes se servir des sorties de secours qui se trouvent aux positions suivantes:

- Une trappe au plafond de la cabine de pilotage
- Une trappe au plafond du compartiment au fret atteint par une échelle du corridor observatoire
- Une trappe au plafond à l'arrière de la cabine centrale
- Une trappe au plafond de la petite cabine arrière

En outre toutes les fenêtres peuvent être poussées en dehors de façon à en faire une sortie de secours. Utilisez votre coude pour faire ceci. Dans le cas d'un amersissage forcé, ne pas toucher aux fenêtres ou essayer de sortir par les portes mais passer uniquement par les issues au plafond

**Notausgang in diesem Flugzeug**

Im Fall einer Aussenlandung sollen die Gäste das Flugzeug nach Möglichkeit durch die Kabinentüren verlassen. Eine dieser Türen befindet sich auf der linken Seite am Beginn des Promenadenganges und eine auf der linken Seite in der kleinen Achterkabine. Sollte es unmöglich sein, diese Türen zu benutzen, so müssen die Notausgänge, die wie folgt verteilt sind, benutzt werden:

- Eine Luke in der Decke des Führerraumes
- Eine Luke in der Decke des Frachtraumes, welche durch eine Leiter vom Promenadendeck aus zu erreichen ist
- Eine Luke in der Decke am Ende der Mittelkabine
- Eine Luke in der Decke der kleinen Achterkabine

Außerdem können alle Kabinenfenster ohne Schwierigkeiten mit dem Ellenbogen heraus gestossen werden, so dass diese als Notausgänge benutzt werden können. Bei Wasserlandungen dürfen die Fenster nicht herausgestossen werden. Es darf auch nicht versucht werden, durch die Türen auszuweichen, sondern nur durch die Ausgänge in der Decke

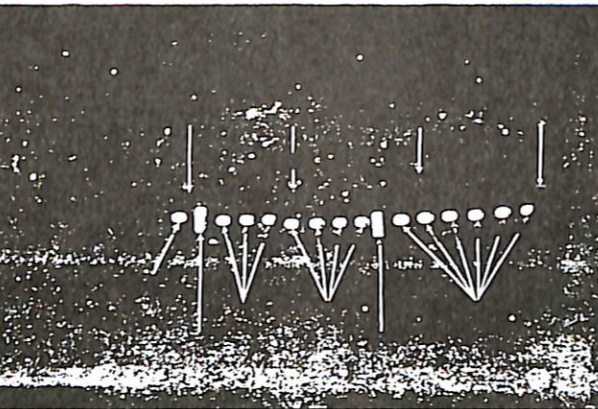


FIGURE 2

Pages 4 & 5 of "Ensign" booklet describing exit locations and operations.

**Lifebelts**

Lifebelts are fitted to all chairs for use in case of emergency, but you must not start putting them on until told by a member of the crew



nécessité mais ne pas s'en servir avant d'y être invité par un membre de l'équipage

**Ceinture de sécurité**

Des ceintures de sauvetage sont fixées à pour être utilisées en cas de

**Rettungswesten**

An allen Fluggastsitzen sind für den Notfall Rettungswesten angebracht. Diese sind aber nur nach Aufforderung durch ein Besatzungsmitglied anzulegen



1. Raise the front of the seat and take hold of the small tab at the front of the lifebelt with the right hand



2. Pull the seat forward and upward by means of the tab at the front of the belt



3. Retain hold of tab and place left arm through loop extending over the front and rear join of the lifebelt



4. Place right arm through remaining loop and fasten lifebelt at right-hand side, making sure that lifebelt fits comfortably

1. Soulever l'avant du siège et tirer sur la petite poignée à l'avant de la ceinture avec la main droite

2. Tirer le siège en avant et en le soulevant se servant de la poignée à l'avant de la ceinture

3. Maintenir la poignée et passer le bras gauche à travers la sangle qui joint les deux extrémités de la ceinture

4. Passer le bras droit par l'autre sangle et fixer la ceinture par la partie droite en assurant qu'elle ne vous gêne pas

1. Hebe die Vorderkante des Sitzes hoch und ergreife die kleine vorn an der Rettungsweste angebrachte Lasche mit der rechten Hand

2. Zeihe den Sitz an der Lasche nach vorn hoch

3. Halte die Lasche fest und stecke den linken Arm durch die linke Schlinge der Rettungsweste

4. Stecke den rechten Arm durch die rechte Schlinge und befestige die Weste an der rechten Seite so, dass sie bequem sitzt

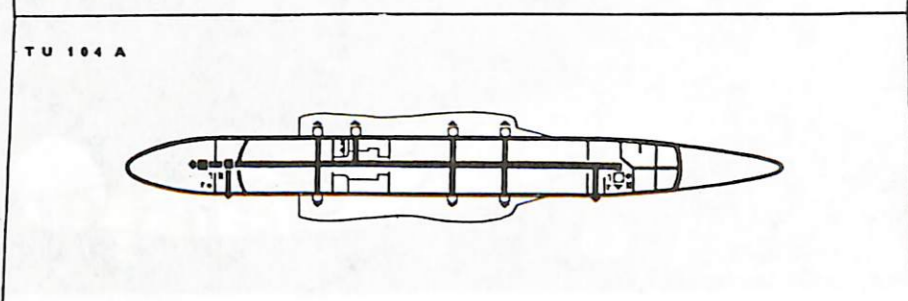
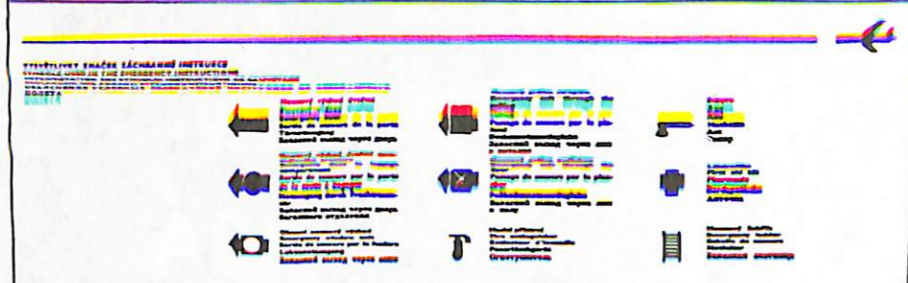
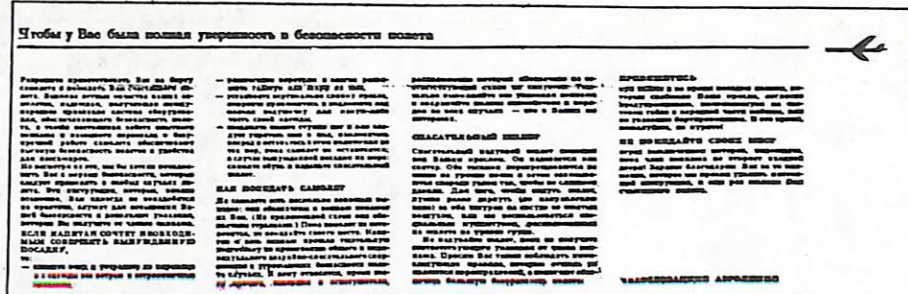
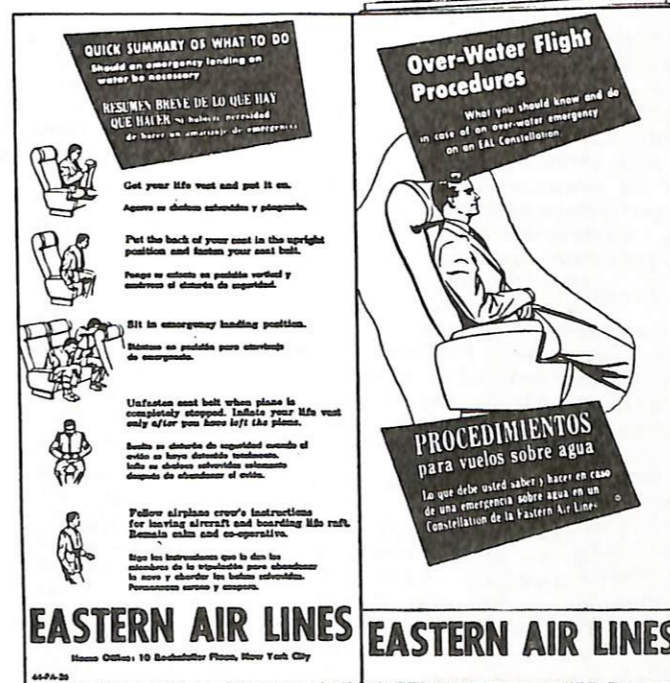
FIGURE 2

Pages 6 & 7 of "Ensign" booklet explaining the use of "Lifebelt" which today we call "Flotation Cushions". Just imagine having to use one of these today aboard a 747.

Another interesting find was also from Imperial Airways, dated 7/39. Due to the fact that it is solely a safety card, Figure 2 shows the entire leaflet. Printed on glossy paper with black and white photos and brown highlights, it addresses the Ensign-Class airliner. Note the simple (!) instructions for use of the seatbelt and the flotation cushions. Assuming one would withstand the impact, his chances of getting out of the seatbelt is very questionable.

Moving ahead about 20 years, Figure 3 shows one of two similar safety cards used aboard the Eastern Constellations; typical of the 1950s, yellow rather than red highlights, are used on form 44-PA-26. Additionally, it is one of the dinosaurs we collectors refer to as a "fleet card" since it contains the floorplans of several aircraft in the same brochure. Included are the "60-passenger Constellation" (alias L-749), the "Super Constellation" (L-1049G) and the "Super-C Constellation" (L-1049C). Although no revision dates/remarks can be found on either version, the earlier issue would be that for the Super-C with rafts stowed in the wings (the only difference between the two versions of this leaflet). The later show the rafts relocated into the cabin of the L-1049C as Eastern did following several inadvertent inflight inflations of wing-stored rafts. (Naturally, inflated liferafts dangling by a 300-lbs tension lanyard from the wing does not improve the Connie's aerodynamics!)

Jumping ahead yet another 10 years, we have Figure 4 illustrating a sample of CSA's early safety instruction folders. Highlighted with yellow, red and blue, is the accordion-fold leaflet used on the TU-104A. Also available is a similar card for the TU-124. Can anyone advise as to the existence of these leaflets for other CSA aircraft in use at the time, such as Britannia, IL-14 or IL-18?



BEZPEČNOSTNÍ PŘEDPISY PRO TU 104 A  
SAFETY INSTRUCTIONS FOR THE TU 104 A  
INSTRUCTIONS DE SÉCURITÉ POUR L'AVION TU 104 A  
SICHERHEITSVORSCHRIFTEN FÜR TU 104 A  
ПРАВИЛА ПО БЕЗОПАСНОСТИ ПОЛЕТА ДЛЯ ПАССАЖИРОВ САМОЛЕТА ТУ-104 А



FIGURE 4  
One side of the early CSA leaflets used on TU-104A. The other side contains text only (like top panel in Russian) in Czech, English, French and German.

FIGURE 3  
Front and back of early EAL Connie "Fleet-card". This leaflet is of the accordion-fold style. (Courtesy G. Ceanley)

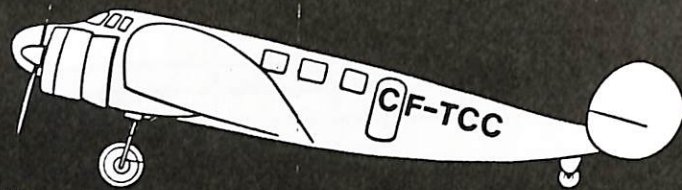
50

AIR CANADA'S  
50<sup>th</sup> ANNIVERSARY  
LE 50<sup>e</sup> ANNIVERSAIRE  
D'AIR CANADA

For your security  
Pour votre sécurité

L-10A

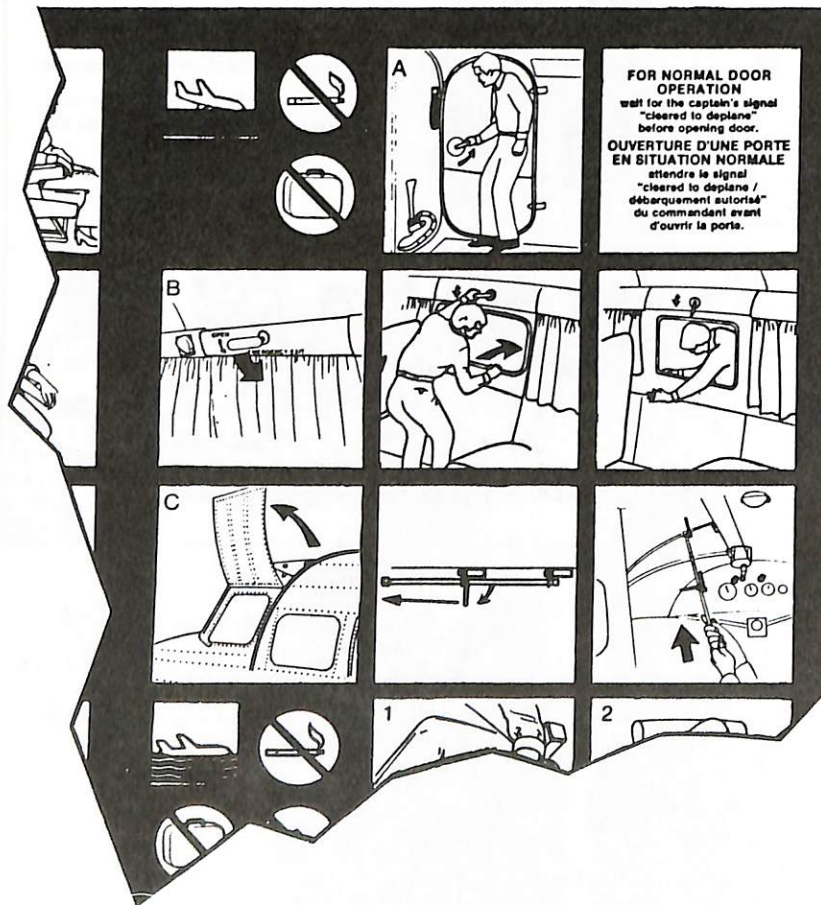
L-10A



L10A(4-86) - AIR CANADA 1986

FIGURE 5

Front and back of Air Canada's L-10A safety card used for the 1986 World's Fair. Inset is detail of exit operations. The lifevests, brace positions, etc. are of current Air Canada style.



Although Figure 5 is hardly an "oldie", this Air Canada L-10A Electra safety card is certainly a "classic". This unusually rare card in red and black, form #L10A (4-86), was only produced in limited quantities for the celebration of Air Canada's 50th Anniversary. Used aboard a beautifully restored CF-TCC, the cards were a necessary item since the L-10A transported passengers for publicity purposes across Canada to the 1986 Exposition in Vancouver. It is quite clear by the high-tech graphics that the card is of the present Air Canada style. It's certainly not a reprint of the original TCA L-10A cards, if in fact, safety cards were ever used on the aircraft during its prime.

In closing, please allow me to express my sincere thanks to the following individuals for allowing me to share these truly treasured "classics" with my readers: Mr. Brian Carver (British Airways), Mr. Ron Wilson (Historical Aviation Service) and Mr. Barry Wilkins (Air Canada).

# AIRCRAFT PROFILE

by JOOP GERRITSM



Two issues ago we looked at the development of 'The first modern airliner', the Boeing 247.

In this second part of the 247 story, we take a look at the airlines which operated the aircraft.

United Air Lines and its four immediate predecessor airlines were the largest operators of the 247. Together they took delivery of 59 airline versions and one executive version of the 62 standard 247s built, and of 10 of the 13 modernized 247Ds that followed. The four United companies are discussed here in the order of their founding dates:

## NATIONAL AIR TRANSPORT

NAT was the first company in the United States formed specifically to operate as an airline. Founded 21 MAY 25, it started operating Contract Air Mail route 3 (CAM 3) from Chicago to Dallas via Moline, St. Joseph, Kansas City, Wichita, Ponca City and Oklahoma City on 12 MAY 26 with 10 Curtiss Carrier Pigeons. Service on CAM 17, Chicago - New York via Bryan, Cleveland and Bellafontaine began on 01 SEP 27. The Carrier Pigeons were replaced by 18 Douglas M-2 and eight Travel Air mailplanes in that year.

Travel Air 6000 cabin planes inaugurated a daily Chicago - Kansas City passenger service on 01 FEB 28. On that day NAT also started Chicago - Dallas night mail services, saving a whole business day, but the passenger service was halted on

## The First Modern Airliner

### Part 2

01 OCT 28. In late 1926 NAT had acquired the first of 12 Ford Trimotors, but plans for Curtiss Condor sleeper planes were shelved after cancellation of the passenger service. On 07 MAY 30 NAT was bought by Boeing Air Transport and became part of United Aircraft and Transport.

## VARNEY AIR LINES

Varney Air Lines was founded by one of the most colorful American airline pioneers, Walter T. Varney, for the express purpose of bidding for CAM 5, a branch line of the proposed transcontinental mail service, from Pasco (Washington) on the Northern Pacific Railway, via Boise (Idaho) to Elko (Nevada). Varney offered thereby a fast air mail link between the east and the Pacific northwest, particularly Seattle. Service started on 06 APR 26 with six

United's "Flying Lab," 247D NX13365, c/n 1958, was the last 247 built. Seen at Chicago Municipal, 1940. (Sid Davies photo via Drew Eubanks).

Swallow biplanes, but was suspended almost immediately. It was resumed on 06 JUN 26 using more-powerful aircraft. Salt Lake City (Utah) replaced Elko as the southern terminal in 1927. Five Stearman Special mailplanes were bought in 1928 and another year later Spokane and Seattle were added to the network. On 30 JUN 30 the airline was bought by United Air Transport for \$2 million. Walter Varney used this money to start airline ventures in California and Mexico, but that is another story!

## PACIFIC AIR TRANSPORT

PAT was founded by another airline pioneer of considerable fame: Vern C. Gorst, a bus operator in Oregon, on 08 JAN 26. Service on CAM 8, Los Angeles - San Francisco - Seattle, was inaugurated on 15 SEP 28 with 10 Ryan monoplanes. Boeing Air Transport acquired control of PAT on 01 JAN 28 and the airline bought six Boeing 40B mail/passenger planes. It continued to operate under its own name, even after a complete merger with BAT on 17 DEC 28. Both BAT and PAT became divisions of United Aircraft and Transport on 01 FEB 29. Two years later, in MAR 31, PAT bought the Los Angeles - Seattle passenger service from West Coast Air Transport and in the four months that followed, placed six Ford Trimotors in service on the route.

#### BOEING AIR TRANSPORT

BAT was founded by William E. Boeing to carry mail on CAM 18, the 1,918 mi (3,086 km) Chicago - Omaha - Cheyenne - Salt Lake City - San Francisco route. Service started on 01 JUL 27 with 24 Boeing 40A mail and passenger planes especially designed for BAT by Claire Egtvedt. The service took 20 hours one-way and the mail travelled by train between New York and Chicago, for a total transit time of 48 hours. That was cut to 32 hours on 01 SEP 27 when National Air Transport began New York - Chicago mail serves.

On 30 OCT 28 BAT became part of the holding company Boeing Airplane and Transport Company when this was founded and on the same day the first of 11 Boeing 80 biplane trimotors for 12 passengers entered service. One of these was operated as an airborne post office, with full mail sorting facilities on board. It operated on the Salt Lake City - Oakland night mail segment of the transcontinental service.

Pacific Air Transport was taken over on 17 DEC 28, but a much bigger merger on 01 FEB 29 saw Boeing and Pratt & Whitney form the United Aircraft and Transport Company, of which BAT (and PAT) became a part. On 30 JUN 29 UAT/BAT took over Stout Air Services, thereby pushing its network east to Cleveland from Chicago. Stout was at that time operating Ford Trimotors.

By the spring of 1931 the four airlines together had become known as United Air Lines and on 01 JUL of that year United Air Lines was officially organized as a holding company for National, Varney, Pacific and Boeing (the airline!). UAL called itself proudly the "World's Largest Air Transport

System". Its network stretched from New York to Dallas, to Seattle and San Francisco. However, all four airlines continued to operate under their own names.

#### RENTSCHLER'S BIG GAMBLE!

In 1932 Fred Rentschler made his big gamble. The president of United Aircraft, Rentschler ordered 60 Boeing 247s to replace every aircraft in the fleet of the four United companies to place the combination firmly in the No. 1 position in U.S. air transport. Only 59 were airliners. The other one was an executive aircraft for United Air Transport

The first 247 built was delivered, to PAT, on 05 APR 33 but was immediately returned to Boeing for development flying. Boeing Air Transport operated the first 247 service, on 22 MAY 33, with the second 247. This aircraft had actually been delivered before the first one, on 30 MAR. It was placed on the Chicago - San Francisco route. The last of the order for 60 was delivered, to NAT, only five months later, 25 AUG 33.

When deliveries were complete, Boeing had 20, Pacific eight, National 22 (one of its order for 23 crashed on the delivery flight) and Varney seven. All Varney 247s went to BAT when that airline fully absorbed Varney on 30 SEP 33.

#### UNITED AIR LINES FORMED

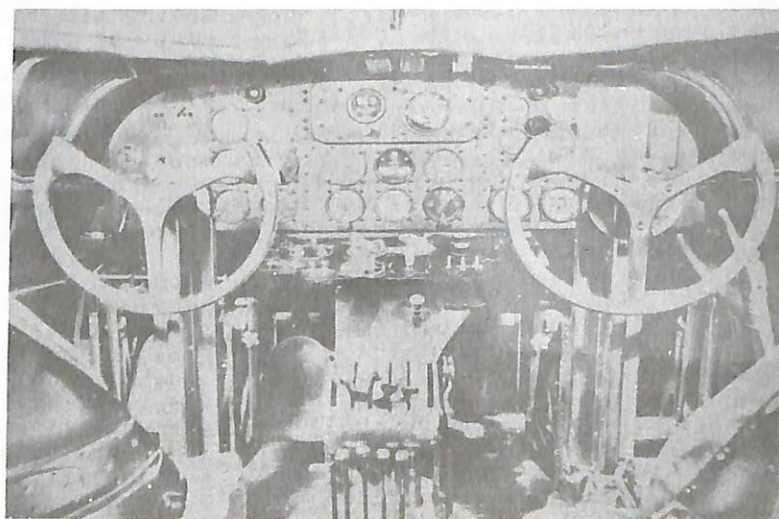
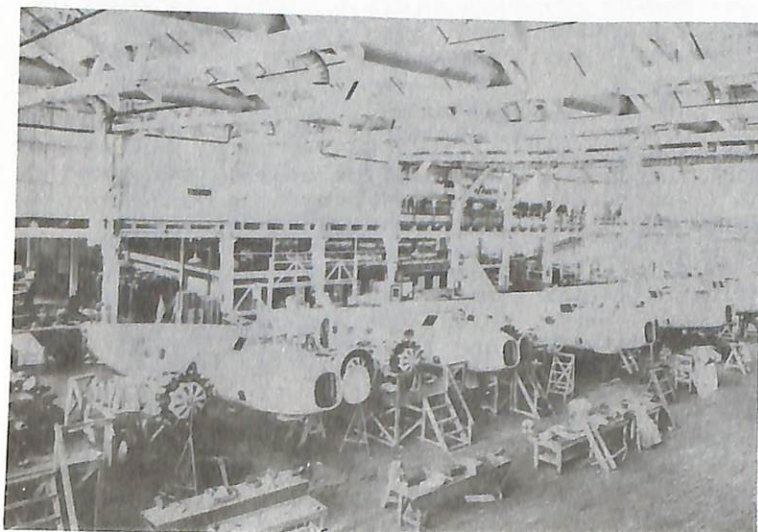
United Air Lines became an operational airline on 01 MAY 34 and the names of the four founding airlines disappeared. UAL inherited 52 247s: 25 from BAT (including six ex-Varney), 19 from NAT and eight from PAT. Before UAL was formed as an

operating airline, seven 247s had crashed: three of NAT, two of BAT (one of which was an ex-Varney aircraft), one of PAT and one of Varney (while in BAT service). One NAT 247 had been static tested to destruction by the USAAF under 160% design load in early 1934.

With the appearance of the DC-2 and especially the DC-3 the 247 was obsolete less than a year after it entered service. It was outperformed in every aspect that counted: speed, passenger comfort, operating economics. Boeing tried to salvage what it could by bringing out the upgraded 247D, but although this aircraft was much faster, there was nothing Boeing could do about the 10-passenger cabin, which remained cramped compared to that of the Douglas models. Between 21 SEP and 22 NOV 34 UAL took delivery of 10 'D' models direct from Boeing (the builder), and it sold or leased the same number of 'straight' 247 to smaller airlines. In 1936-37 it sold or leased out another 26, as it took delivery of more and more DC-3s. The remaining 247s continued in service on less competitive routes until taken over by the USAAF in mid-1942.

However, one 247 remained in service with UAL until 1945. This was "The Flying Lab". In the 1930s UAL was very active in developing new navigation aids and radio equipment for airline operations. In 1937 it assigned a 247D (NC13365, c/n 1958, the last 247D built) to its Flight Research Department. This was the only 247 not taken over by

(LEFT) Production of the 247 at Boeing in Seattle; (RIGHT) Cockpit of the 247. (Both photos via Drew Eubanks).



the military in 1942. Converted back into an airliner, it was sold to LAMSA of Mexico in 1945.

#### WESTERN AIR LINES

Western Air Lines and its predecessors, Western Air Express and General Air Lines, operated 33 different 247s between DEC 34 and JUL 42, when the remaining ones went to the USAAF. They were the largest 247 operator after United, but only one was bought from Boeing. That was the second to last 247D built. Eight were bought second hand from United and the others were leased at various times from United. WAE had been founded on 13 JUL 25 and had developed a mail and passenger network in the southwestern U.S. before it was forced to merge with Transcontinental Air Transport on 24 JUL 30 under pressure of Postmaster General Walter F. Brown. But WAE's founder, Harris 'Pop' Hanshue, continued operating CAM 4, Salt Lake City - Los Angeles, and CAM 12, Cheyenne - Pueblo via Denver and Colorado Springs, both profitable branch lines off the United system. Hanshue operated DC-2s under the name General Air Lines, but financial pressures forced him to sell them to Eastern Air Lines and in DEC 34 GAL leased two 247s from United. On 01 JAN 35 GAL again became Western Air Express. More 247s were leased and the network was expanded. Several 247s were still in the fleet when the airline became Western Air Lines on 17 APR 41.

#### PENNSYLVANIA AIRLINES & PENNSYLVANIA-CENTRAL AIRLINES

Pennsylvania A.L. and successor Pennsylvania Central operated at least 17 247s, all leased from United, between 01 APR 35 and JUL 42, when the remaining ones went to the USAAF. Several others had earlier been sold to the Canadian government for service with the RAF. Clifford Ball started Pittsburg - Cleveland services on 27 APR 27. In NOV 30 he was bought out by Pittsburg Aviation Industries and his airline became Pennsylvania Air Lines. Six 247s had been leased from United before 01 NOV 36, when the airline merged with Central Air Lines to form P.C.A. Eleven more 247s joined the fleet in the next three years to operate services west of Washington, D.C. and in the Great Lakes region. DC-3s replaced 247s on most services from JAN 40 on.

fly-the scenic routes paralleling the Rockies

FREQUENT-FAST SCHEDULES...WITH MODERN EQUIPMENT

(Schedule cover via George Cearley Jr.)

#### WYOMING AIR SERVICE & INLAND AIR LINES

Wyoming began operations between Great Falls and Cheyenne in MAY 30. Denver - Billings services started in APR 31. In APR 38 the airline was renamed Inland Air Lines and it acquired the two Boeing Monomails that had been built. Between 01 MAY 35 and mid-1942, Wyoming and Inland had at least six 247s, all leased from United.

#### NATIONAL PARKS AIRWAYS

NPA placed three 247s, leased from United, in service in Utah and Montana in NOV 34 (one) and DEC 35 (two more). About one year later they were bought from UAL. On 01 AUG 37 NPA was taken over by Western Air Express.

#### WILMINGTON-CATALINA AIRLINES

This small carrier operated amphibians on its only route, Wilmington (near Los Angeles) - Santa Catalina Island, from its inception in 1931 to SEP 42, when services ended under wartime restrictions. Although a runway on the island was not built until mid-1941 and the airline ordered two Lodestars from Lockheed, it is said to have leased two 247s from

Western Air Express and United (one each) in 1938. Both aircraft later went to AVIANCA of Columbia and I do not know how long they operated with Wilmington.

#### INTER-AMERICAN

Inter-American Air Travel & Supply is listed as the owner in 1936 and 1937 of two 247s and two 247Ds in an extensive 247 production list in the Winter 64 issue of the JOURNAL of the American Aviation Historical Society. All four ended up with AVIANCA of Columbia at unknown dates. I believe Inter-American was a trading company and not an operating airline.

#### DURING WORLD WAR 2

The same issue of the AAHS JOURNAL says Eastern Air Lines, Northwest Airlines and Pan American Airways each had one 247 registered in their names during 1942. The article on the 247 in the JOURNAL does not explain what these airlines used the aircraft for and I believe they were used as trainers under USAAF contract.

#### SERVICE IN ALASKA

Three Alaskan airlines operated 247s during and shortly after

WW2. White Pass Airways of Skagway had one in about 1940-41, Wien Alaska Airlines two from 1943-44 to 1946 and Woodley Airways two from mid-1944 to FEB 46, after the airline had become Pacific Northern Airlines.

**ZIMMERLY & EMPIRE A.L.**

Zimmely Air Lines was one of the half dozen or so small U.S. airlines which operated 247s after WW2.

Bert Zimmerly started operations with three ex-Canadian Pacific Air Lines 247s in the State of Idaho on 28 JUL 45. The airline's name was changed to Empire Air Lines when it received its CAB certificate in MAY 48. DC-3s replaced the 247s in MAR 48 and the carrier was taken over by West Coast Airlines in AUG 52. OTHER SMALL U.S. AIRLINES

The Winter 1964 issue of the AAHS JOURNAL lists several small U.S. airlines which operated the 247 after WW2:

Columbia Airlines: 2 in 1945;  
Zigzag Airways: 1 in about 1948 (I have seen photo proof of this aircraft);  
International Air Service of Latana, Florida: 1 in 1956 & 57;  
Sky Tours/Island Airlines of Port Clinton, Ohio, operating on the Port Clinton - Bass Islands service: 1 in 1954 and beyond (I have seen photo proof of this aircraft);  
Central Aircraft of Yakima, Wash.: 1 in about 1956;  
Travelair Taxi of Cleveland, Ohio: 1 in 1963.

**OPERATIONS IN MEXICO**

More airlines (16) operated more 247s (18) in Mexico than in any other country outside the U.S. Many of these were sold and resold many times among the small airlines in the country.

The first three 247s in Mexico were not intended for airline operations at all. Instead, they were awaiting shipment to the Republican forces in the Spanish Civil War when they were seized by the Mexican government in Santa Cruz in MAR 37. Next, they were auctioned off to pay part of the debts the Republicans owed Mexico.

Other ex-United 247s reached Mexico before WW2 and more arrived near the end of the war as the USAAF declared them surplus.

There is no evidence to suggest that the 18 Mexican 247s were

XA-DIV, c/n 1693, was one of five 247s operated by LAMSA, Mexico. It was formerly with Boeing A.T., United A.L., Western Air Express (all as NC13312) and the USAAF. As X8-JEB and XA-GLW, it survived to FEB 52. (UAL photo).

One of three 247s of Mexicana de Aviacion, XA-BFK, c/n 1738, was NC13356 of Varney, Boeing A.T., United, Pennsylvania A.L. It was in Mexico until 1950.



used on other than short local services and on various cargo and charter operations. The following airlines are known to have operated 247s, with number and year of first acquisition:

- Aero Transportes: 5, AUG 44
- Aeronaves de Mexico: 1-3, 1941
- Aeronaves de Michoacan: 4, 1948
- Aeronaves Oaxaca: 2, 19?? (A)
- Aerovias Reformas: 3, 1940s
- Lineas Aereas Guerrero Oaxaca: 2, 1946
- (This could be the same company as (A))
- Lineas Aereas Mexicanas S.A. (LAMSA): 5, JUL 44
- Lineas Aereas Mineras: 1, JUL 45
- Lineas Areas de Pacifico: 1, '50 (B)
- Lineas Aereas Piche: 1, JUL 49
- Lineas Aereas Unidas: several through merger of (A), (B) and (C) in 1950
- Cia. Mexicana de Aviacion: 3, 1936
- Servicios Aereos Chiapas: 2, '51
- Servicios Aereos Nacionales: 2, about 1950 (C)
- Servicios Aereos Panini: 4 or 5, NOV 44
- Taxis Aereas Nacionales: 2, '48 (This could be an earlier name for Servicios Aereos Nacionales)

One of the Servicios Aereos Chiapas aircraft, c/n 1735, is known to have survived to at least 1959. A few others are known to have survived into the early 1950s. However, the plentiful numbers and ready availability of the DC-3 and Beech 18 after WW2 put most 247s out of service quickly.

**SOUTH AMERICAN OPERATORS**

SCADTA of Columbia received a 247 in DEC 35 (or DEC 37 - my sources differ) and it acquired at least six more before being renamed AVIANCA in JUN 40. More followed and it is believed the airline operated 13 to 15 different 247s. Several are

known to have survived in service until at least late 1945, when replaced by DC-3s.

In Brazil both VARIG and SAVA had each one 247. VARIG's entered service in 1944 and SAVA's in 1950 (!). A Victor Inchausti of Panama owned a 247D in 1957-58. This was c/n 1951, HP-232. I have seen photo proof of its existence. I believe (but have no proof!) it was operated as a private aircraft, not as an airliner.

**THE 247 IN CANADA**

Six 247s and one 247D saw airline service in Canada. All but one were ex-Royal Canadian Air Force and most had previously operated with Pennsylvania-Central Air Lines. British Yukon Navigation of Vancouver bought a 247 in OCT 41 for services to the Yukon Territory. Yukon and Southern Air Transport of Edmonton, Alberta, bought two (DEC 41 and MAR 42), also for services to the Yukon. In AUG 42 it also bought the British Yukon 247. Quebec Airways bought two (FEB and JUN 42) and Maritime Central Airways of Prince Edward Island one (NOV 41). All but the MCA 247 went to Canadian Pacific A.L. when it took over Yukon Southern and Quebec A.W. CPAL also bought a 247D from the RCAF in MAY 42.

**LUFT HANSA BUYS THREE**

The last two 247s built, c/n 1944 and 1945, went to the German airline Deutsche Luft Hansa (two words in pre-WW2 style!) in 1934. These are often called 247Ds, but they are not. The confusion probably resulted because the two aircraft were built immediately ahead of the 13 true 247Ds and had 1900-series construction numbers, as the 247Ds did, rather than 1700-series numbers

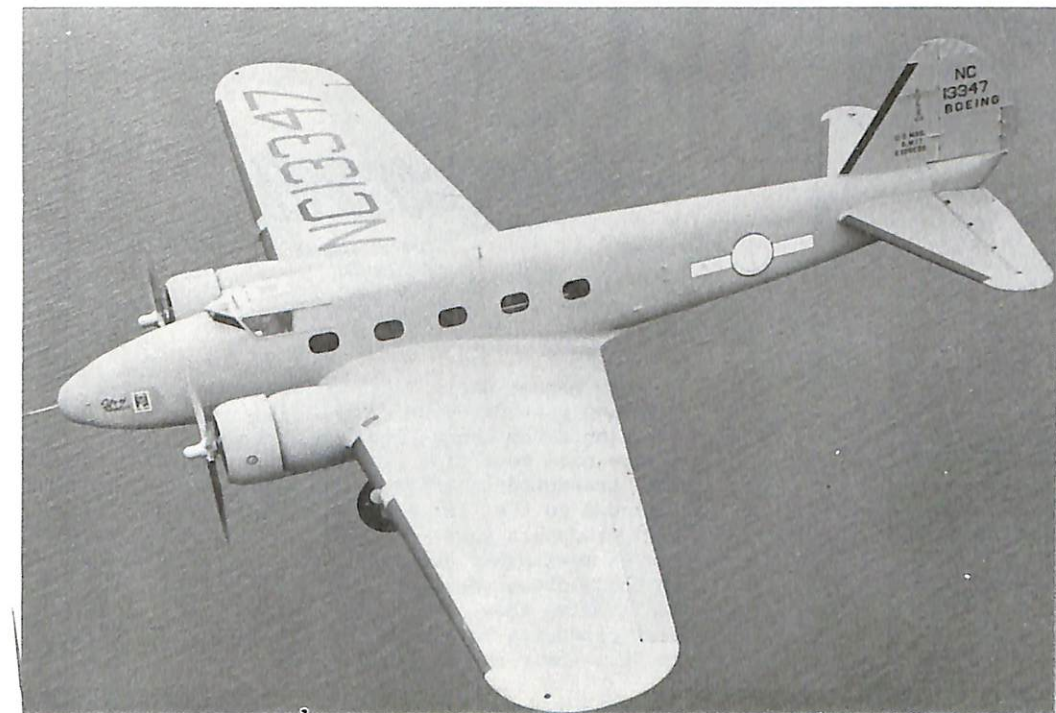


D-AGAR, c/n 1944, the first of two 247s for Deutsche Luft Hansa, at Schiphol Airport, Amsterdam. Despite swept-back windshiled, this is a 247 and not a 247D - see text. (KLM photo via Joop Gerritsma)

following the 1600 and 1700 series numbers of the other 60 247s. However, the two did have the aft-sloping windshield of the 247D, but the engines, cowlings and rudders of the 247. It is believed the two aircraft were used by the German aircraft industry to familiarize itself with modern aircraft construction techniques in preparation for building warplanes in the late 1930s. Evidence seems to support the contention they never operated scheduled services with Luft Hansa and

perhaps were flown only experimentally by the carrier. However, the Winter 64 AAHS JOURNAL says a German newspaper article of 1935 claimed the 247s were operated on the Berlin - Moscow service. A third 247 was testflown for DLH by Boeing in SEP 34. This was the first 'true' 247D, c/n 1946, but it was never delivered and was later sold to Phillips Petroleum as an executive transport. It was the only 247D to go to Canada. Following RCAF duty it ended up with CPAL (see above).

The last airworthy 247 in the U.S.A., NC13347, c/n 1729 of the Pacific Northwest Aviation Historical Foundation at Renton. Originally delivered to Pacific Air Transport, the aircraft also saw service in Canada and in Costa Rica (?) before returning to the U.S.A. It was a crop duster when the PNAHF rescued it for restoration to United Air Lines colors. (Photo via Drew Eubanks)



It was not at all strange that the first 247D was intended for Luft Hansa and not for United. DLH's chief test pilot, a Dr. Schatski, had flown the airline's two 247s and recommended that directional stability be improved. Boeing then developed a different fin and rudder and lengthened the engine nacelles to meet this recommendation.

**MILITARY SERVICE**

In 1942 the U.S. government bought 27 247s, mainly from United and Western, for the U.S. Army Air Force. They were officially taken on strength in JUN and JUL 42 and were designated C-73. They operated with Air Transport Command as liaison and transport aircraft and their engines were replaced by 600 hp Pratt & Whitney R-1340-53 units, the same as those in the T-6 Texan/Harvard trainer and widely available in military stocks. Two of the USAAF aircraft became instructional airframes during the war, four were destroyed in incidents and one was sold to a broker after the war. The other 20 were released back to airline service as the war was winding down and the Beech C-45 (Beech 18) became widely available for the services the Boeings had been operating. As we saw before, most of the ex-USAAF C-73s went to small Mexican and other Latin American carriers.

The Canadian government, Department of Munitions, bought seven 247Ds (actually converted 247s) from PCA (Pennsylvania-Central) in mid-1940, as well as the Phillips 247D. Used for communications, they were disposed of in late 1941 and early 1942. One was scrapped, one went to the RAF in 1941 and the other six were sold to Canadian airlines

**IN SERVICE WITH THE RAF**  
In 1941 the British Royal Air Force acquired one 247D (modified 247) from the RCAF. This was c/n 1726, formerly with PCA. It remained with the RAF until 1948 and was used for radio and electronics systems research. For a while it was based with the Telecommunications Flying Unit and in OCT 44 made the world's first automatic landing, using ILS signals and special radar equipment to monitor and adjust the autopilot. Later the aircraft operated with the RAF's Blind Landing Experimental Unit.

....from the left hand seat....

by  
Paul F. Collins

With this issue of the LOG, we close the book on the twelfth year of operations of the World Airline Historical Society. We've come a long way in the years since the first LOG was mailed out in the spring of 1975. We started out with about 20 members receiving that first issue. This issue will be going to about 1300 members, all around the world. Member number 1886 was just signed up prior to my typing this column. I am looking forward to signing up member number 2000 before this year is over!

Along with new members, last year we obtained a new Editor. Since taking over the job, Joop Gerritsma has been doing a super job. With each issue he has strived to improve the contents and quality of the LOG. This issue is no exception. With Joop doing such a complete job handling the editorial end, it has made it easier for me to handle the day-to-day operations of the Society. I look forward to working with Joop for a number of years to come.

I mentioned in the last column that I was working on a constitution and by-laws. Well, I'm still working on them. I had hoped to have a rough draft finished by the end of last year so I could send it around to several members that were interested in checking it over. I will try to get it finished before the first quarter of this year has past and get a copy out to those members. It looks, at this time, like the finished product may show up at the convention this year for discussion. If this is the case, please be sure you plan on attending the Society business meeting.

Enclosed with this issue of the LOG you will find information on Airliners International '87 to be held in Indianapolis July 16 through 19. You may already have received this information from the convention committee. Those of you that have attended any of the last three conventions should be on the convention mailing list. I would like to remind you that if you have any questions about the convention and any activities that will take place during the convention, please direct such questions to the convention committee and not to Society HQ. We do, however, look forward to seeing you in Indy at the Adam's Mark in July.

Also enclosed with this issue is another form to use when ordering your Society jacket and hat. Four dozen jackets were received at HQ a week before Christmas and all orders on hand at that time were sent out. Sorry for the delay, but I had to wait to order the jackets so we got a price break on the total jackets ordered. We still have a number of jackets on hand in various sizes. If you want one, shipped same day order received, you best get it in as soon as possible. As soon as those jackets on hand are sold, it will probably be about two-three months before additional items are ordered. At present we have plenty of hats on hand, if your just interested in that item.

The SAVE A CONNIE project is coming along very well I understand. This is a worthwhile project and one we as members of the Society should

try to support. The SAC committee is selling a number of Connie related material, so please write them and ask for their list of material. Address: SAVE A CONNIE, P.O. Box 914, Riverside, MO 64168.

I can't think of anything else that needs to be covered at this time. Should you have any problem with the Society or need any questions answered, please feel free to write. I will TRY to answer your letter in a timely manner. Until next time, happy collecting....

*Paul*

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Society member Chris Nottingham is now offering post cards under the name of Aviation Hobby Canada Ltd. AHCL has a very nice selection of cards that are well presented in their latest catalog. Included on the list are a number of card producers that you do not normally see on most other dealers list. Write to the address above and ask how you can receive this list. AHC Ltd. is also producing post cards. Tell them you saw their advert in the LOG!

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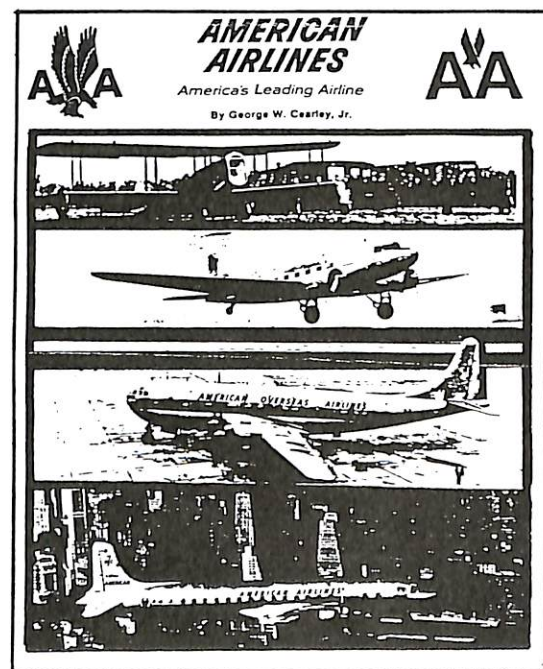
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