



VOL.13, NO.2  
JULY '87

# CAPTAIN'S LOG

Airline and Airliner quarterly



Deutsche Zeppelin-Reederei

The LZ 127 'Graf Zeppelin' first crossed the South Atlantic non-stop on 18 MAY 30 and on 20 MAR 32, she began scheduled services between Friedrichshafen, Germany and Recife, Brazil. Here she is seen riding at anchor at Recife.

(Lufthansa photo)

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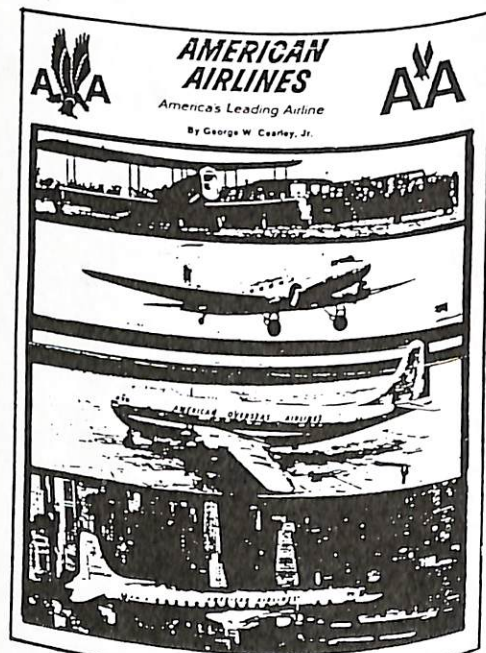
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# CAPTAIN'S LOG

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Cover of time table depicting the 'Graf Zeppelin' over Sugarloaf Mountain, Rio de Janeiro, Brazil. Dated MAY 35, the schedule is for the fourth year of scheduled sailings between Germany and Brazil. (Photo Courtesy Richard Koran)

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# TAKE-OFF TALK

This issue of the CAPTAIN'S LOG features passenger airships and in particular the German Zeppelins from 1910 to the 'Hindenburg' disaster in 1937.

Zeppelins were regularly carrying passengers on cross-country voyages and inter-city flights years before the airplane. Yet, despite their high public profile, popularity and great comfort, I believe scheduled passenger airship services would not have lasted much longer than they did, even if the 'Hindenburg' had not crashed in flames and even if World War 2 had not broken out.

The signs leading to their

demise as carriers of fare-paying passengers were everywhere. The world's leading airlines were operating the DC-2, DC-3 and other modern and fast all-metal aircraft on even their long routes: Pan American and Imperial Airways were operating long over-water services with flying boats and were preparing for transatlantic services, also with flying boats, not airships; several major European airlines such as KLM, Air France and Luft Hansa had been operating land aircraft and flying boats on scheduled service deep into Asia, Africa and South America for years; the long-range DC-4,

Constellation and several European four-engined aircraft were on the drawing boards and the list goes on and on.

In the 1910s and early '20s, when aircraft were little more than fragile contraptions with limited range and carrying capacity, devoid of even the most basic comforts, the majestic Zeppelins captured people's imagination. But by the mid-'30s airships were outperformed by aircraft and offered no advantages other than higher comfort.

Several of our editors have also included Zeppelin material in their columns. I thank them for that.

## OUR NEW STAFF MEMBER

We have a new section editor. Richard W. Luckin of Denver, Colorado, will be producing the dining service column. Keith Armes, the editor for the past five and a half years, has done a great job. However, he has been hard pressed lately to find enough time to continue the column. We'll miss him.

Mr. Luckin has introduced himself in his first column (see p. 31) and I can attest to his expertise on the subject. The book 'Dining on

Rails' which he and his wife published four years ago, is superb! He has also shown me photographs of several airline dinnerware pieces in his collection.

Above all, he is really enthusiastic about doing the column. Even before I was finished putting this issue together, I received from him already his material for the next issue, due out in late August or early September. Let me tell you, that is the kind of enthusiasm editors of volunteer magazines dream of.

## CONTRIBUTIONS ARE WELCOME

I have now finished the last of the four projects I was working on when I became Log editor in the fall of 1985: Boeing 247, Lockheed Twins, Helicopters and Zeppelins. I finished them as soon as I could so the work already done would not go to waste.

Now that they are finished, I will have considerable space available in the future for contributions from our readers at large. Several such contributions were used in the

previous two issues. I have a number of others in hand and they will be used in the near future. I can use more!

Please remember we are a HISTORICAL society! Articles and photos of historic interest have a better chance of being published soon than material on today's operations.

However, 'historic' is not confined to pre-World War 2 only. For example: I have an article on the last operational Hawker Siddeley (nee Armstrong Whitworth) Argosy freighter in

Europe, recently retired. This was an early-1960s aircraft. The way I see it, its retirement makes it a historic subject. Our airline schedule editor George Cearley is working on a comprehensive look at the Boeing 707/720 up to 1963: also definitely historic material. These are only two examples, but you'll get the idea.

In the previous issue we started a 'Preservation' column, to run whenever material is available. It depends heavily on your contributions.

## A FINAL NOTE

In his words of wisdom in the previous few issues, Paul Collins has been saying how wonderful a job I am doing with the Log. That is nice, of course, and I appreciate it. But I am afraid Paul is missing a very important fact: I am not doing this all by myself. I have a team of very dedicated and expert section editors who provide me with their material. Without them there would not be a CAPTAIN'S LOG. They deserve as much, if not more, of the credit. Their names are on the inside front cover and I urge you to remember them. Drop them a note when you like the material they are presenting or when you have a question or suggestion.

Paul's praise reminded me of a quote I read in the DEC 86 issue of Readers' Digest magazine.

It says:

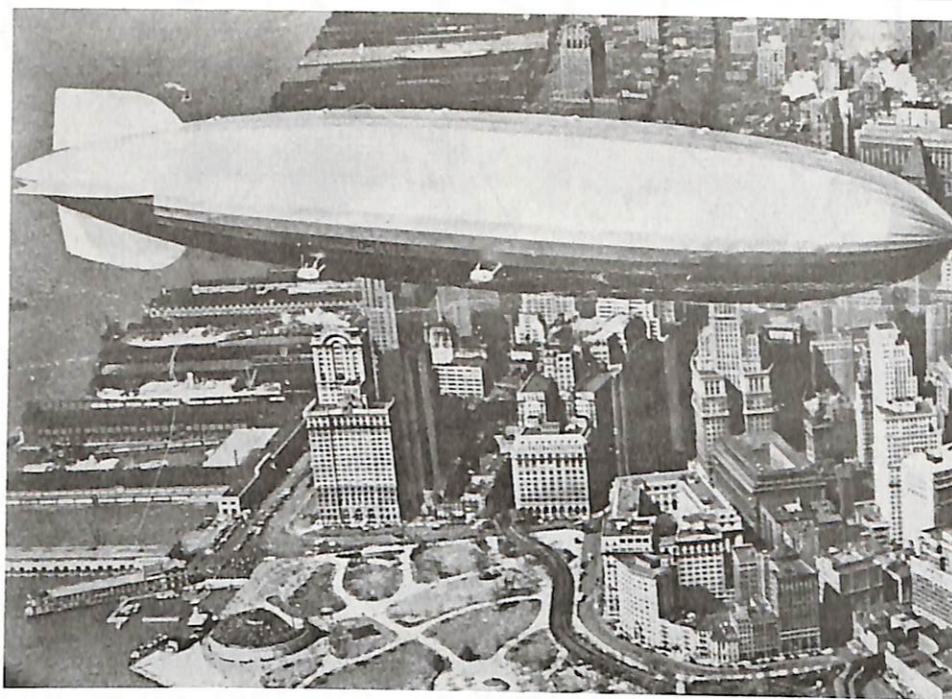
"In the office of Alex Haley, author of 'Roots' and other best sellers, hangs a picture of a turtle sitting on a fence. Whenever Haley looks at it, he is reminded of a lesson in humility that was taught to him by his friend John Gaines: 'If you see a turtle on top of a fence post, you know he has had some help.'"

"Says Haley, 'Any time I start thinking, 'Wow, isn't this marvellous what I have done,' I look at the picture and remember how this turtle - me - got up on that post.'"

That is all for now. May all your departures and arrivals be on time.

# AIRCRAFT PROFILE

by JOOP GERRITSMAN



LZ-129 'Hindenburg' over New York in 1936.

Long before the first fare-paying airplane passengers hesitantly bundled up in warm clothes to brave the cold open cockpits and bomb bays of old warplanes to travel by air, German Zeppelin airships were carrying passengers in great comfort over considerable distances. They were, in fact, the first true 'air liners' in the world and their operator was the world's first airline.

## ZEPPELINS ocean liners of the air

They were not fast, these huge dirigibles. But no one complained, because their amenities rivalled those of ocean liners. Even the largest passenger aircraft today cannot offer the luxuries of the 'Graf Zeppelin' and the 'Hindenburg' with their private cabins (\$400 per person for a two-bed cabin on the Atlantic crossing in 1936, \$450 in 1937).

### UNIQUE STORY

The Zeppelin story is unique because it is the only episode in the history of aviation

which is complete, with a beginning and an end. It began in 1900 and ended in 1937 in a huge fireball, when the newest and largest Zeppelin, the mighty 'Hindenburg', burst into flames and crashed on landing after her first transatlantic voyage of the season. 36 people died and all airship travel was halted immediately.

### THE FIRST ZEPPELINS

The first Zeppelin made her maiden flight on 02 JUL 1900. Destined for warfare by its designer, Graf (Count) Ferdinand Von Zeppelin, it had

been built and was flown from Manzell on the Bodensee (called Lake Constance in neighboring Switzerland). This LZ-1 was not accepted by the army and she was broken up the following year, after only three flights lasting a total of two hours and one minute.

It nearly bankrupted the count and it was 1906 before he could build the LZ-2. She was destroyed while landing during a storm on her second flight. Of the next three ships, two were delivered to the military and the third also burned on landing, during a pre-delivery trial flight.

### THE WORLD'S FIRST 'AIR LINER'

The LZ-7 'Deutschland' became the first airline Zeppelin when she entered service with DELAG (Deutsche Luftschiffahrts A.G. - German Airship Transport Company) in 1910. Her career was only short, but she made DELAG the world's first operating passenger airline.

In 1928 DELAG carried the world's first fare-paying transatlantic passengers and its successor, the Deutsche Zeppelin Reederei began scheduled transatlantic services in 1936, three years before PAA started flying boat services between the new and the old worlds.

DELAG was founded on 16 NOV 1909 at Frankfurt-am-Main to promote airship travel. The company was a subsidiary of Luftschiffbau Zeppelin, which had been established at Friedrichshafen on the Bodensee on 08 SEP 1908. Both firms were financially backed by the Hamburg-Amerika shipping line. Luftschiffbau Zeppelin was the successor of the Aktiengesellschaft zur Förderung der Motorluftschiffahrt (Corporation for the Promotion of Powered Airship Travel). This company had built the first five Zeppelins.

DELAG passenger services operated from Friedrichshafen, Baden-Baden and Dusseldorf, but NOT on a regular schedule. They were local pleasure flights and occasional inter-city cruises, weather permitting.

In the following three years, the number of cities with airship sheds steadily increased. (Airship terminology uses 'shed', not 'hangar'.)

By 1913 DELAG Zeppelins were regularly sailing from 10 bases and also operated a circular

route from Friedrichshafen to Baden-Baden, Frankfurt-am-Main, Düsseldorf, Hamburg, Potsdam, Leipzig, Gotha and back to Friedrichshafen (see map). Six more landing sites were being prepared that year as communities all over Germany hastened to become part of the dawning air-age.

The early Zeppelins carried about 20 passengers on these short trips in a train car-like cabin faired into a keel running the entire length of the ship.

The start of World War 2 in 1914 halted DELAG's operations. By this time, it had carried 33,722 passengers and crew on a total of 1,588 flights. Total distance flown was 107,205 miles (172,535 km) in 3,139 hours.

DELAG's three airships were turned over to the military at the start of the war. It total the company had taken delivery of seven airships. Four had been destroyed in accidents, but no passengers had ever been killed or injured.

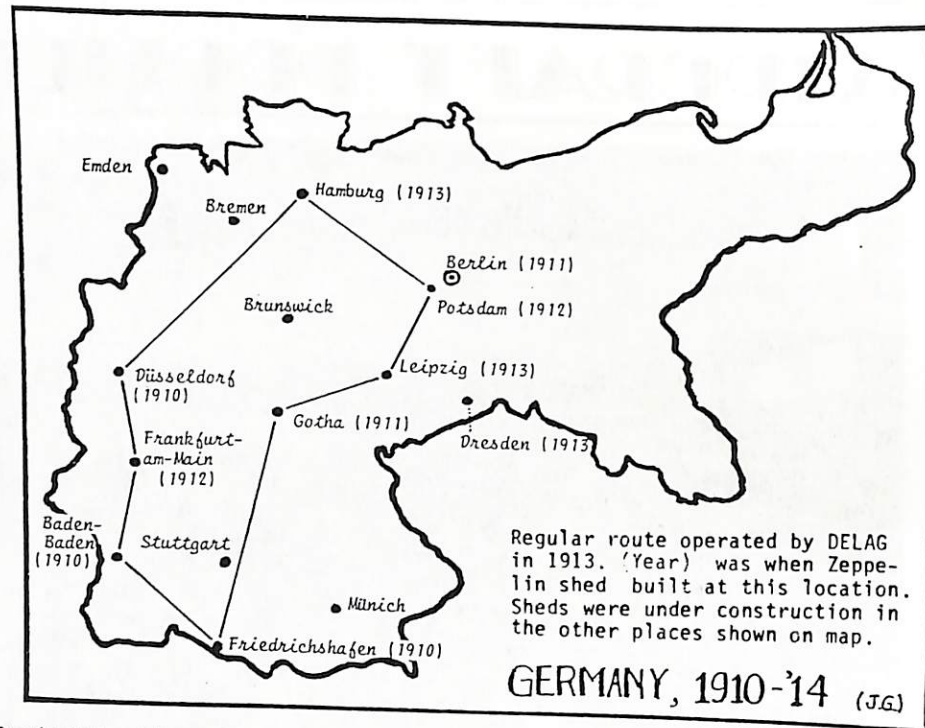
#### THE DEUTSCHLAND DESTROYED

The first DELAG Zeppelin, the LZ-7, had made six successful local flights from Dusseldorf before it made its first - and last - major voyage. She sailed on 28 JUN 1910 for a three-hour publicity tour with 23 journalists on board. But nine hours later, lost over the Teutoburger Forest in worsening weather and unable to return to base because of strong headwinds, the Deutschland crashed into the trees, without loss of life.

DELAG's operations were shut down until 21 AUG when LZ-6 was delivered. Built in 1909 for the army but not accepted, the ship was hurriedly converted to carry passengers after the crash of LZ-7. It made almost daily flights from Baden-Baden until on 14 SEP it too was destroyed when fire broke out in its hangar. The ship had flown only 66 hours in DELAG service. Once again the company was without airships to operate.

While in service, the LZ-6 was under the command of Dr. Hugo Eckener, an associate of Graf Zeppelin and to gain fame as head of the Zeppelin company after the count's death.

The LZ-8 first flew on 30 MAR 1911. Paid for largely with money received from the insurance company for the crash of the LZ-7, Deutschland, she was called 'Ersatz Deutschland' ('ersatz' means substitute) but carried only the name



Regular route operated by DELAG in 1913. (Year) was when Zeppelin shed built at this location. Sheds were under construction in the other places shown on map.

'Deutschland' on her bow. She differed little from her predecessors in general appearance and entered service on 11 APR. Bad luck struck once again when a cross wind grabbed her as she was being walked out of the shed at Frankfurt-am-Main on 16 MAY, only one month after joining DELAG. Impaled on the shed, the ship's hull was broken but the passengers escaped unharmd.

Germans are no quitters in technical and commercial undertakings, and on 15 JUL of the same year, 1911, DELAG received the LZ-10 'Schwaben' (Swallow).

She sailed from Baden-Baden throughout the summer and returned to service in March of 1912 (there were no winter operations). The story is beginning to sound repetitive, because the Schwaben also came to an untimely end. This time static electricity induced during a storm, was the cause of a fire in the ship's gas cells, which were filled with highly inflammable hydrogen gas, as it lay at its base at Dusseldorf. The date was 28 JUN 12, two years to the day after the Deutschland had perished in a storm.

The Schwaben was the first passenger air craft to carry a steward. His name was Heinrich Kubis and he served cold meals and a selection of German wines and champagnes.

The next DELAG Zeppelin, the LZ-11 'Viktoria Luise', entered service on 04 MAR 1912. She would become the best-known

and most widely travelled of the pre-WWI DELAG Zeppelins.

DELAG now had two airships in its fleet when for four months it had both the Viktoria Luise and the Schwaben. The two ships opened the 1912 season with a formation cruise from Mannheim to Heidelberg before settling down for their series of summer pleasure flights and inter-city cruises. Viktoria Luise sailed from Hamburg and Schwaben from Baden-Baden. Twenty or more passengers were carried on each flight and on most flights a meal was served in the air.

In AUG 1912 the LZ-13 Hansa joined her sister ship Viktoria Luise at the Hamburg base until 1914, when the Viktoria Luise was transferred back to Frankfurt-am-Main and the Hansa went to Potsdam. The Hansa was the first DELAG Zeppelin to make a foreign voyage, when it flew to Copenhagen, Denmark.

One more Zeppelin joined DELAG before the war. The LZ-17 'Sachsen' (Saxony) started operations from Leipzig in early June 1913 and for the entire summer and the spring of 1914, DELAG had a three-ship fleet. When operations were halted on 31 JUL 1914, all three were turned over to the army.

For first service dates, number of sailings, passengers carried and fates of these early Zeppelins, see Table 1

Even before World War 1 the Zeppelin company proposed a transatlantic airship of 2.83 million cubic foot volume (80,137 m3), more than four

times the size of the of the Viktoria Luise. The time was not ripe yet and the ship was not built.

During the war, Zeppelins

proved their worth for long-distance flights when the German Navy's L-57 flew more than 4,000 miles (6,400 km) nonstop. Starting from Bulgaria, she was to make a supply flight to German troops in East Africa. The ship was near Khartoum (then in southern Egypt, now capital of the Sudan) when she was called back home. She returned and arrived back in Bulgaria 4,200 miles (6,760 km) after her departure. After 97 hours in the air, she had fuel left on board for another 64 hours of flying. This endurance of 160 hours was enough to fly from Germany to the west coast of the USA.

This naval ship was one of 95 military airships built by Luftschiffbau Zeppelin during WW1. They came out of the Friedrichshafen sheds at a rate of one every two to three weeks and were used by the army and navy for over-water reconnaissance and on bombing raids over the south of England.

At the end of the war, Luftschiffbau Zeppelin was working on an even larger airship. This 3.8 million cu.ft. (107,604m3) giant had been ordered by the navy for completion in 1921 or 1922 and was called the LZ-125 'Amerika'. The navy wanted the ship to achieve a military presence over the USA, even if only a symbolic one. The ship was not built.

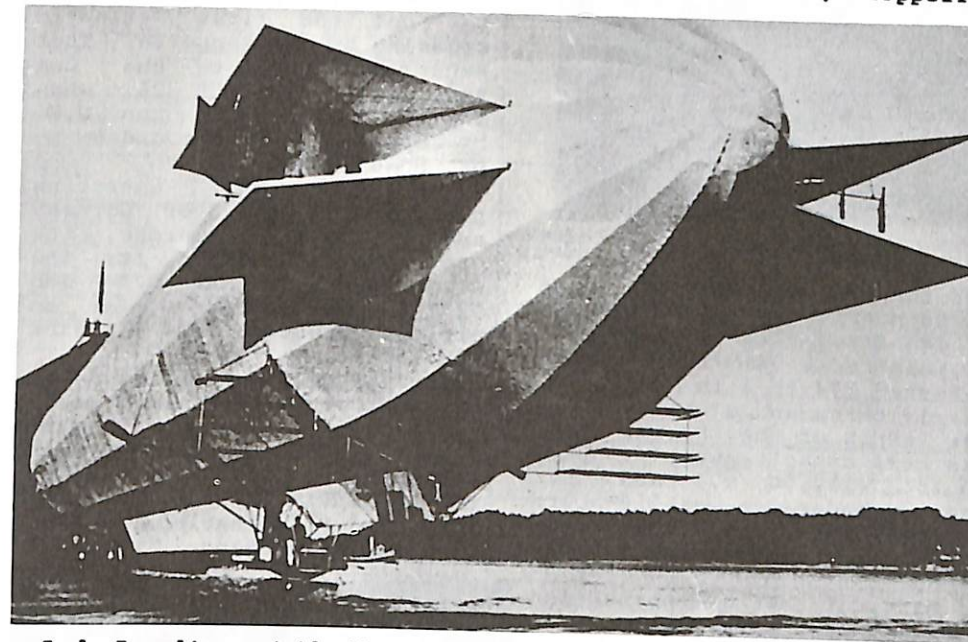
#### DELAG OPERATIONS RESUME

DELAG resumed operations on 24 AUG 1919 with the LZ-120 'Bodensee', built specifically for passenger operations. Scheduled daily sailings between Berlin and Friedrichshafen were now offered. Before the war the 375 mile (600 km) trip took 16 hours by train, but with much of the rail network and road system destroyed as a result of the war, the surface journey now took 24 hours. The Zeppelins made the one-way trip in only seven hours. The northbound flights (to Berlin) operated on odd dates and southbound flights on even dates.

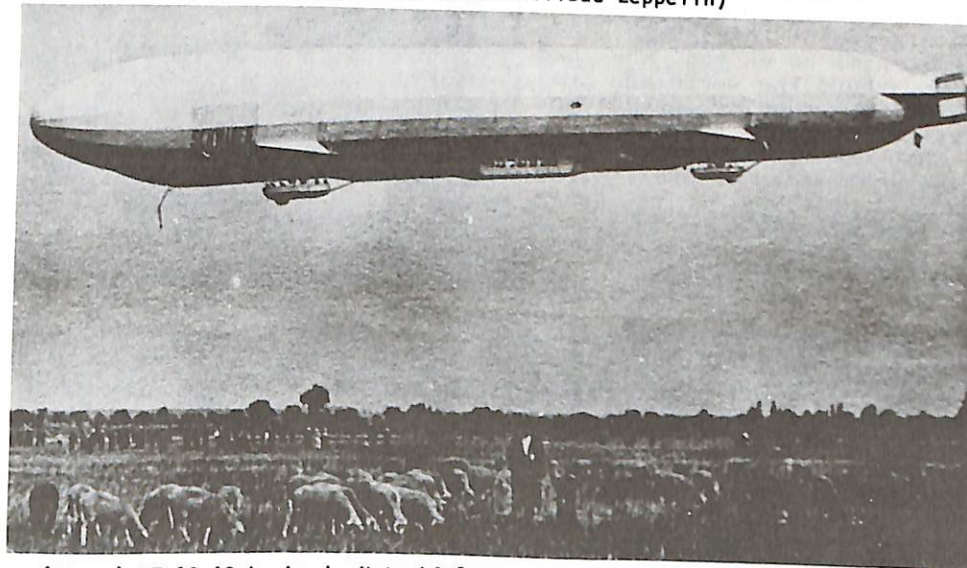
The Bodensee made a flight to Stockholm on 08 OCT 19 and there were plans for regularly scheduled international services to Sweden, Switzerland, Italy and Spain, but they never started. Plans for a regular Spain - Argentina service were also shelved.

Bodensee made 103 flights between 24 AUG 1919 and the end of the season on 05 DEC.

The larger LZ-121 Nordstern was intended for the Swedish service and was completed late



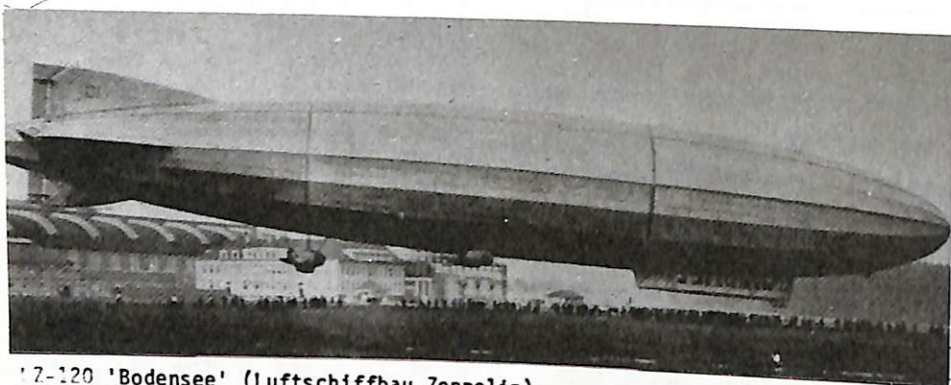
Early Zeppelin, probably LZ-3, being launched from the Friedrichshafen floating shed. (Luftschiffbau Zeppelin)



(ABOVE) LZ-10 'Schwaben'. Note biplane tail.



LZ-11 'Viktoria Luise'. (Both Luftschiffbau Zeppelin)



'120 'Bodensee' (Luftschiffbau Zeppelin)

in 1919, but she never operated with DELAG.

At the Armistice signed on 11 NOV 18, the Germans were prohibited by the Allied countries from operating aircraft, and the Inter-Allied Commission of Control decided Zeppelins fit the definition of aircraft. It ordered that the Bodensee and the Nordstern were not to be flown again. Instead, they were turned over to the Italian and French navies respectively on the grounds that they had been built from war materials. Both ships continued to operate for some time with the military in the two countries.

The commission also ordered Luftschiffbau Zeppelin not to build any more airships larger than one million cubic feet (28,317m<sup>3</sup>), which was too small for intercontinental voyages. Especially the British, eager to start their own world-wide passenger airship operations (see separate story), wanted the Zeppelin competition eliminated. But the U.S. government said it was entitled to war reparations and negotiated to have Zeppelin build a new airship for the U.S. Navy (at German expense). The ship had a gas cell capacity of 2.5 million cu. ft. (70,790 m<sup>3</sup>) and was basically an enlarged Bodensee. Designated LZ-126, she became the U.S. Navy's ZR-III 'Los Angeles'.

The Treaty of Locarno of 1925 lifted restrictions on building civil airships and civil aircraft and Luftschiffbau Zeppelin began the design of what would become the most famous of all airships built.

#### THE GRAF ZEPPELIN

LZ-127 was completed in the summer of 1928 and on 08 JUL, the 90th anniversary of Count Von Zeppelin's birthday was christened 'Graf Zeppelin' by his daughter, the Countess Von Brandenstein - Zeppelin. Count

Von Zeppelin himself had died on 08 MAR 17.

The first flight, on 18 SEP 28, lasted 36 hours! She measured 774 ft 3 in (236 m), nearly three and a half times the length of the Boeing 747. Gas cell capacity was 3,955,240 cu.ft. (112,000 m<sup>3</sup>) and her maximum endurance was 118 hours in the air. Power came from five Maybach engines of 530 hp each.

Much of her construction cost had been raised through a nationwide public subscription, evidence of German pride in their Zeppelins. The Graf would not disappoint them. Before her career came to an end, she had flown around the world and was operating regular passenger services to South America.

When the Graf sailed from Friedrichshafen on her first transatlantic voyage to Lakehurst on 11 OCT 28, she carried 10 fare-paying passengers, 10 guests and a crew of 40.

However, she had not been

built to be a passenger ship. Her intended task was to train crews in long-range airship navigation and to gather information about transocean travel.

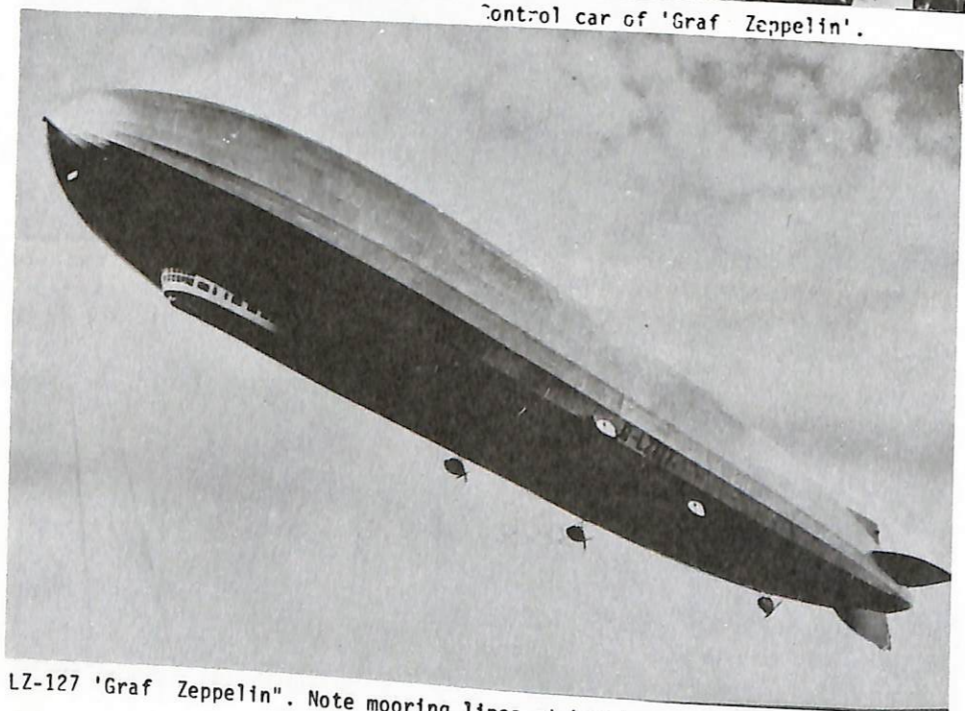
The U.S. voyage in OCT 28 was not the first Atlantic crossing by a Zeppelin. That honor had gone to the Los Angeles on 12-15 OCT 26, when she was delivered to the U.S. by Zeppelin crews commanded by Dr. Hugo Eckener.

In between operating publicity flights over Germany and the rest of Europe, the Graf made a sailing for the Middle-East in MAR 29 and cruised over the Dead Sea at an altitude 1,000 ft (300 m) below sea level!

On 08 AUG 29 she started on her best-remembered and most-publicized voyage: a 21,251 mile (34,200 km) cruise from Lakehurst to Lakehurst, around the world via Friedrichshafen, Tokyo and Los Angeles. Twenty fare-paying passengers and 41



Control car of 'Graf Zeppelin'.



LZ-127 'Graf Zeppelin'. Note mooring lines at her bow. (Deutsche Lufthansa).

Type	LZ-6	LZ-7	LZ-8	LZ-10	LZ-11	LZ-13	LZ-17	LZ-120	LZ-121	LZ-127	LZ-129	R100	R101
Length ft in m	472 5 144	485 6 148	as LZ-7	459 4 140	485 7 148	as LZ-11	492 1 150	396 4 120.8	429 130.8	774 236	803 9 245	709 9 216.47	777 236.82
Hull ft in diam. m	42 8 13	46 14	as LZ-7	46 14	46 14	as LZ-11	47 7 14.5	61.4 18.7	61 4 18.7	100 30.5	135 2 41.2	133 40.56	about as R100
Gas ca- cu ft capacity m <sup>3</sup>	565,000 16,000	681,575 19,300	as LZ-7	628,500 17,800	638,132 18,700	as LZ-11	737,010 20,870	706,290 20,000	794,577 22,500	3,955,240 112,000	7,062,900 200,000	5,156,000 146,600	about as R100
Engines, hp	1x145 Maybach & 2x115 Daimler	3x125 Daimler	as LZ-7	3x145 Daimler	3 x 150 Maybach	as LZ-11	as LZ-11	4x260 Maybach	as LZ-120	5x550 Maybach	4 x 1,000 Daimler Benz	6 x 650 Rolls Royce	6 x 650 diesel engines
Cruise speed mph km/h	29 47	33 53	as LZ-2	47 76	50 89	as LZ-11	45 72	75 121(a)	75 121	71.5 115	77 125		
Range mi km		1,000 1,600	as LZ-7	?	40 hours	as LZ-11	?	1,365 2,200	1,365 2,200	118 hours	8,420 13,550	2,500 4,000	2,500 4,000
Useful lbs lift kg	9,260 4,200	14,990 6,800	as LZ-7	8,820 4,000	14,330 6,500	as LZ-11	18,077 8,200	22,000 10,000	25,353 11,500	156,800 71,123	251,542 114,097	127,680 57,967	78,400 35,515
Pass capacity		24	24	24	25	25	24	24	24	24	50 & 72	30	100(?)
First flight		19JUN10	30MAR11	26JUN11	19FEB12	30JUL12	03MAY13	20AUG19	08JUN21	18SEP28	04MAR36	30NOV29	14OCT29
No. of revenue flights made		7	33	218	489	399	419	103	None	590			
No. of revenue flight hours	66	20.5	47	480	981	840	741	531	None	17,178			
Total # of pass carried	726	142	129	1,553	2,995	2,187	2,465	2,253 + mail, cargo	None	13,100 + mail, cargo			
Total revenue mi distance km flown	1,946 3,130	643 1,035	1,480 2,380	16,976 -27,320	?	27,600 44,727	31,850 51,258	?	None	1,053,395 1,695,272			
Fate	Destr. in fire 14 SEP 1910	Crash in storm on 1st cruise 28JUN10	?	Destr by storm on ground 28JUN12	To army in 1914 Dismantled 1915	Withdr. from service in 1916	To army in 1914 Dismantled 1917	Italian navy 1915 Dismantled 1927	To French navy 1919 Dismantled 1926	Dismantled in 1940	Crashed 06MAY36	Dismantled after crash of R101	Crashed 05OCT30

Table 1. Main characteristics of the airline Zeppelins. Please note that the column 'Total # of passengers carried' includes ONLY fare-paying passengers. Crew are excluded. If they are included, the totals in this column would have been much higher because the ships carried as many or more crew than passengers on most flights.

#### SAILINGS OF THE AIRSHIP "GRAF ZEPPELIN" IN 1935

Friedrichshafen	Pernambuco	Rio de Janeiro	Aeroplane connection of the Syndicato Condor Ltda.		Rio de Janeiro	Pernambuco	Friedrichshafen
Monday evening dep.	Thursday afternoon arr.	Saturday morning arr.	Buenos Aires		Saturday morning dep.	Sunday evening dep.	Thursday afternoon arr.
			Sunday afternoon arr.	Thursday morning dep.			
June 15th	June 18th	June 20th	June 21st	June 18th	June 20th	June 21st	June 25th
June 29th	July 2nd	July 4th	July 5th	July 2nd	July 4th	July 5th	July 9th
July 15th	July 18th	July 20th	July 21st	July 18th	July 20th	July 21st	July 25th
July 29th	August 1st	August 3rd	August 4th	August 1st	August 3rd	August 4th	August 8th
August 12th	August 15th	August 17th	August 18th	August 15th	August 17th	August 18th	August 22nd
August 26th	August 29th	August 31st	Sept. 1st	August 29th	August 31st	Sept. 1st	Sept. 5th
Sept. 9th	Sept. 12th	Sept. 14th	Sept. 15th	Sept. 12th	Sept. 14th	Sept. 15th	Sept. 19th
Sept. 23rd	Sept. 26th	Sept. 28th	Sept. 29th	Sept. 26th	Sept. 28th	Sept. 29th	Oct. 3rd
Oct. 7th	Oct. 10th	Oct. 12th	Oct. 13th	Oct. 10th	Oct. 12th	Oct. 13th	Oct. 17th
Oct. 21st	Oct. 24th	Oct. 26th	Oct. 27th	Oct. 24th	Oct. 26th	Oct. 27th	Oct. 31st

Subject to alteration, especially as regards the last departure. For aeroplane connections in Europe see back.

#### Fares (inclusive of meals and gratuities):

Friedrichshafen-Rio de Janeiro	RM 1500.-
Friedrichshafen-Pernambuco	RM 1400.-
Friedrichshafen-Seville	RM 350.-
Rio de Janeiro-Buenos Aires (Aeroplane Connection)	RM 400.-

Season. During the high season (September 20 to November 10 Southbound; April 10 to May 15 Northbound) minimum fares are increased by RM 100.-.

Tourists making a round trip on the "Graf Zeppelin" on the same voyage are granted a rebate of 20% on the minimum fares during the off-season only.

Return tickets are issued at a reduction of 10%.

Families paying four or more full fares obtain a rebate of 15% on the single or 10% on the reduced round trip fares.

Children, if ordinary berth is not required, up to 6 years pay one-quarter fare; up to 12 years half fare.

Baggage. Free transportation up to 120 kilos is included in the fare. 20 kilos of this baggage allowance may be carried by the airship and the balance of 100 kilos by a steamer of the Hamburg-South America Line.

crew were on board, as well as mail. The entire flight took 12 days, 14 hrs and 20 mins of flying time at an average speed of 70 mph (113 km/h). The longest segment of the journey, from Friedrichshafen to Tokyo non-stop, was nearly 7,000 miles (11,2265 km) and took 101 hrs 49 mins. The Pacific crossing to Los Angeles took 79 hours.

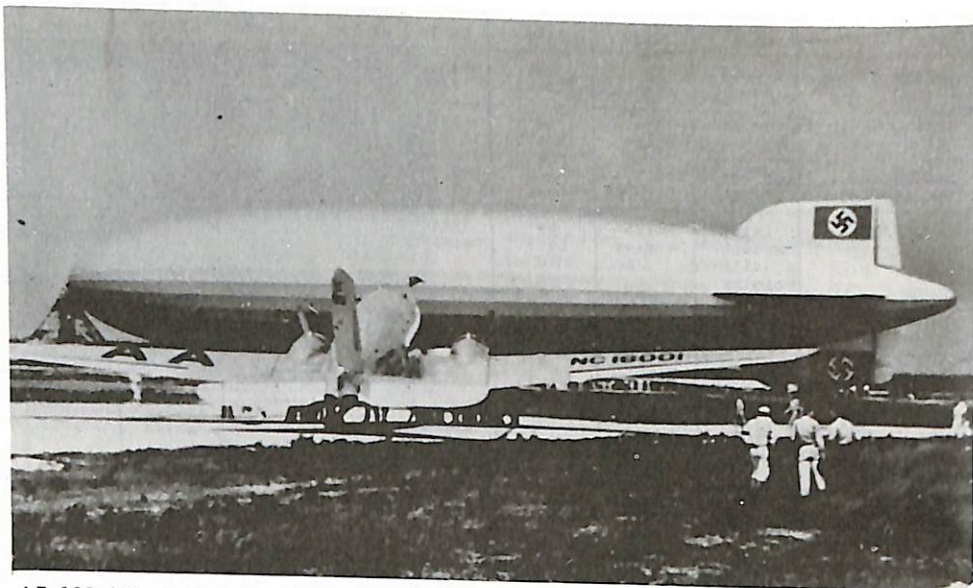
About this time Eckener, then president of the Zeppelin company, had dreams of a German-American Zeppelin airline. There was much interest from some American financiers, but Eckener's dream did not come true until the winter of 1936/37 (see later).

During 1930 and 1931 the Graf made a series of trial return flights to Rio de Janeiro, Brazil. The first left Friedrichshafen on 18 MAY 30 and departed Rio for the return flight via Lakehurst on 06 JUN. In JUL 31 she made an Arctic cruise to Franz Joseph Land with German and Russian scientists on board.

Regularly scheduled services to Recife (also called Pernambuco) in Brazil started on 20 MAR 32. Nine flights were made that spring and fall, with the last three continuing to Rio de Janeiro. On the other six trips passengers continued to Rio on board Kondor Syndikat aircraft. Nine return flights were made in 1933, 12 in 1934, 16 in 1935 and nine in 1936.

1935 was a memorable year for the Graf Zeppelin and the Zeppelin company, because on 15 SEP she made her 100th ocean crossing, on 22 SEP her 500th flight and in NOV her 50th South Atlantic return crossing.

When the Hindenburg burned, the Graf was outbound from Recife for Germany on one of her 20 proposed return services that year. Her captain, Hans von Schiller, did not tell his passengers of the disaster and pressed on for home. When the Graf arrived back in Germany, she was grounded and never carried another fare-paying passenger again. She made only one more flight, on 18 or 19 JUN 37 from Friedrichshafen to Frankfurt-am-Main to go on public display. When she was dismantled in 1940 she had made 590 flights, had travelled more than a million miles (1.6 million km), flown 17,178 hours, carried 13,100 passengers, crossed the South Atlantic 140 times and the North Atlantic nine times in the eight years and nine months since the day of her first flight.



LZ-129 'Hindenburg' and American Airlines DST-144 'Flagship New York', NC16001, c/n 1495, at Lakehurst, 1936. (American AL via George W. Cearley Jr.)

#### THE 'HINDENBURG'

The length of the Graf had been dictated by the size of the shed at Friedrichshafen in which she was built. Luftschiffbau Zeppelin decided that would not happen again and a new, larger shed was built before construction began on the LZ-129 'Hindenburg' in the fall of 1931.

Completed in DEC 35, she made her maiden flight on 04 MAR 36.

While the Graf Zeppelin had been intended as a training and research ship, the larger Hindenburg was from the outset built to carry 50 passengers over long (transoceanic) voyages. On shorter day trips she could even carry 150 passengers.

The Hindenburg left for her first South American service on 30 MAR 36 and on 06 MAY started regular service to New York (Lakehurst) for the Deutsche Zeppelin Reederei (DZR).

#### DEUTSCHE ZEPPELIN REEDEREI

DZR had been founded on 22 MAR 35 by the German Air Ministry and Deutsche Luft Hansa, mainly as a global propaganda instrument for the German Reich. Luftschiffbau Zeppelin had only a small minority interest in the company.

When the Hindenburg entered service, the German terminal of the transatlantic operations was moved to Frankfurt-am-Main. She made 10 return flights to New York during 1936, carrying 1,006 passengers, and nine return flights to Brazil after the North Atlantic service had been halted for the winter. The Hindenburg was so popular with travellers, her passenger capacity was soon increased to

72 from 50, in addition to the 55 crew.

A one-way voyage to Lakehurst from Frankfurt took about 65 hours, depending on the wind. The fastest crossing on record took 42 hrs 53 mins. That may not seem to be much of an accomplishment in today's Boeing 747 age, but it was a major achievement compared with a 7-to-10 day boat crossing and represented a tremendous time saving. Europeans could go to New York, conduct their business and be back home in less time than it took the boat one-way.

Prospects for success were so good, an international company, the American Zeppelin Transport Company was formed in the winter of 1936/37 to operate two large airships to be built by Goodyear at Akron, Ohio. They were to have been operated under the American flag over the North Atlantic and perhaps to South America, in conjunction with DZR. The Hindenburg disaster put a halt to the plans.

Eckener and DZR were planning to begin regular sailings to the Dutch East Indies (now Indonesia) as well, later to be extended across the Pacific to the U.S. west coast.

Eighteen return services to North America were planned for the Hindenburg in 1937. The first of these left Germany on 03 MAY to arrive at Lakehurst on 06 MAY, and the last one was scheduled for 02/05 NOV. Connections to and from New York (Newark) and Chicago were by American Airlines DC-3.

#### DISASTER AT LAKEHURST

The ship left Frankfurt on 03 MAY with 36 passengers and

61 crew (including 20 trainees) on board, her 63rd flight. Capt. Max Pruss, a WW1 airship veteran, was in command.

Bad weather over the Atlantic and the U.S. east coast caused a delay and the ship spent 12 hours cruising off the New Jersey coast waiting for better weather. It was late afternoon of 06 MAY (early evening in Germany) before she could proceed to Lakehurst.

(Tragically, Eckener had already scouted out a new U.S. terminal because of the frequent bad weather at Lakehurst. It was located at Alexandria, Virginia, not far south of Washington, D.C.)

While hovering over Lakehurst preparing for landing, and with U.S. Navy personnel on the ground already handling her mooring ropes, fire broke out in the Hindenburg's stern, followed by an explosion. The time was 7:25 p.m., 25 minutes after midnight early in the morning of 07 MAY in Germany. The press, gathered en-masse to cover the event, included Chicago radio reporter Herb Morrison and his sound man Jimmy Nelson, who had flown down to Lakehurst the previous day on an American Airlines DC-3. He was giving an on-the-spot commentary on the lading of the giant ship.

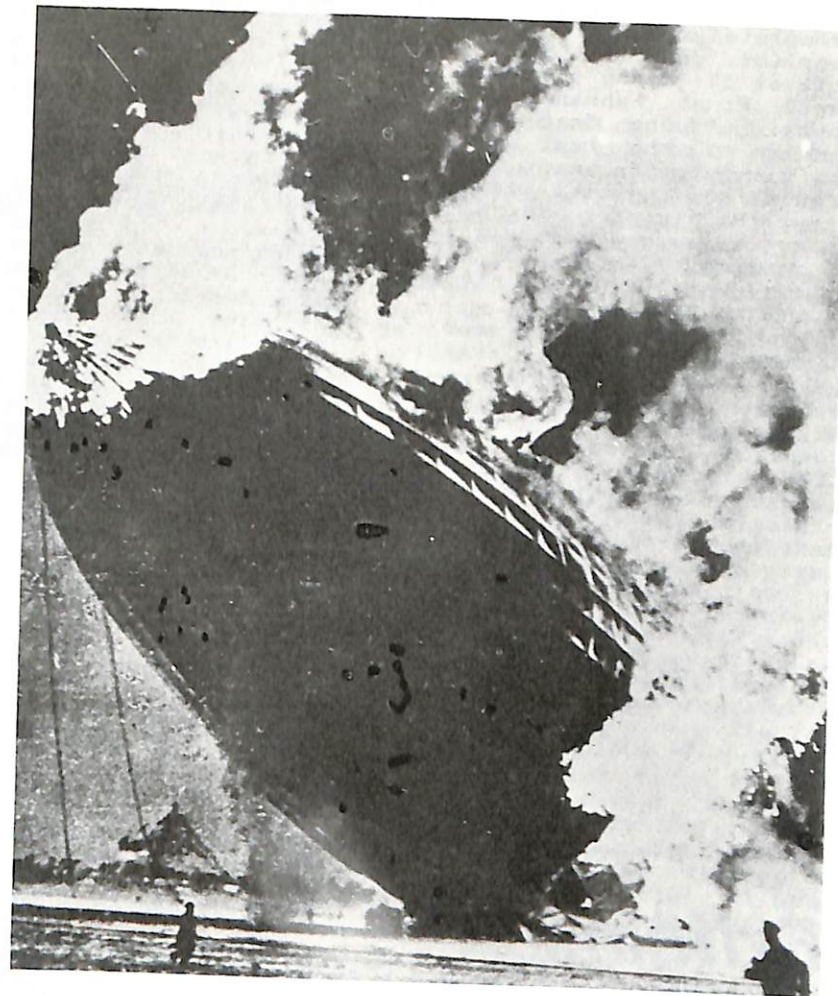
I am sure many of us have heard his broadcast, either live at the time or later, on tape. I hadn't even been born yet, but I still remember the chills racing along my back the first time I heard Morrison's account on tape, many years after the event. Morrison's voice broke as he was describing the disaster.

"Here it comes, ladies and gentlemen," Morrison said, "and what a great sight it is. A thrilling one! It is a marvellous sight. It is coming out of the sky pointed directly toward us and towards the mooring mast.

"The mighty diesel motors just roared. There is a swell of excitement in the air ... No wonder this floating palace can travel through the air at such a speed with these powerful motors behind it.

"The field that we though active when we first arrived has (turned) into a moving mass of co-operative action."

After describing the last minute preparations by the landing crew, Morrison continues, "The ship is riding majestically toward us like some giant feather, riding as though it is mighty proud of the place it is playing in the world's aviation.



The photo we all know so well: the mighty 'Hindenburg' explodes and burns on landing at Lakehurst, 06 MAY 37 at 7:25 p.m. local time.

"The ship is no doubt bustling with activities we can't see. Orders are shouted to the crew, the passengers are probably lining the windows looking down at the field ahead of them getting a glimpse of the mooring mast. It is practically standing still now. They've dropped ropes out of the nose of the ship and its been taking a hold of down on the ground by a number of men. It has started to rain again. The rain had slacked up a little bit. The back motors of the ship are just holding it, just enough to keep it from ...

"It has burst into flames. It is frightening, it is frightening, terrible. Oh, my, (...), it's running, bursting into flames ... this is terrible ... this one of the worst catastrophies in the world. It's falling, it has burst into flames and it's falling on the mooring mast.

"This is terrible, this is one of the worst catastrophies in the world - flames, oh, four or five hundred feet into the sky ... Oh, all the humanity, all the passengers. I can't talk ... the people..."

As he broke into tears, Morrison stopped his eyewitness account to step inside the building to overcome his intense emotions.

He returned moments later and explained the explosion in the ship took place just as it was being pulled down to the mooring mast. He said the tail surface broke into flames first, then there was a terrific explosion and that was followed by the burning of the nose and the nose crashing to the ground. Everybody was "running back at breakneck speed to get out from underneath it because it was over the people at the time it burst into flames."

As the stern of the Hindenburg sank, her bow rose high into the sky, sending the flames racing toward the control car. The, slowly, the entire ship sank to the ground. It was all over in 32 seconds from the moment the first flames were seen.

Twenty-two of her crew, 13 passengers and one of the

ground crew died, either immediately or later in hospital, for a total death toll of 36. Among the dead was Capt. Ernst Lehmann, former captain of the Graf Zeppelin and one of the best-loved of the six Zeppelin captains. He died of his injuries 24 hours after the disaster. Pruss was one of those who survived when he jumped from the ship's control car when it hit the ground.

The disaster put an end to Germany's greatest aviation triumph and one of the major aviation accomplishments anywhere. It spelled the end of commercial passenger airship travel, probably for good.

The cause of the fire and explosion has never been satisfactorily determined. Various reasons were advanced at the time, but sabotage was definitely ruled out. However, there is reason to believe sabotage was behind the fire.

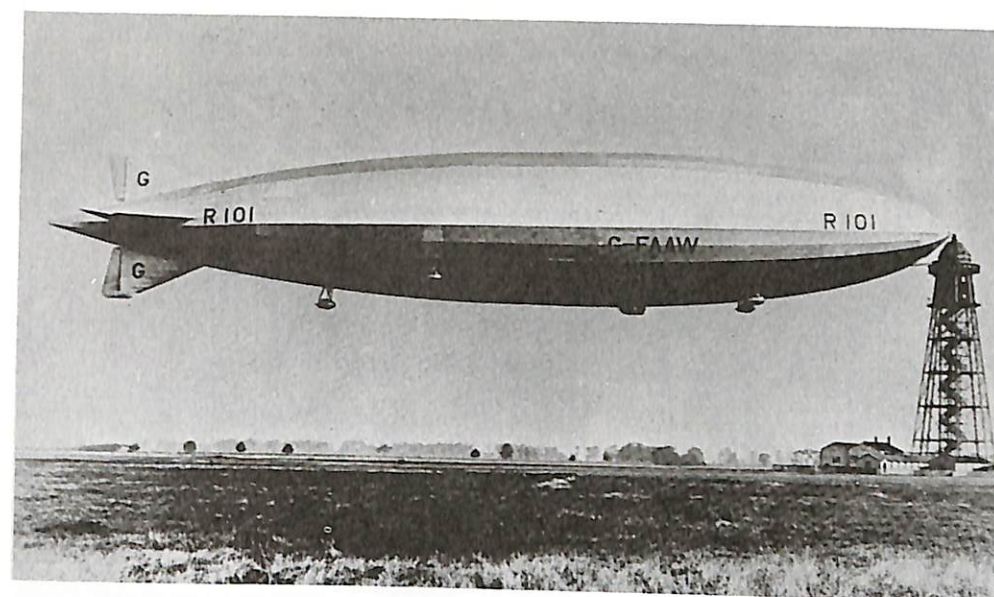
Adolf Hitler was in power in Germany and admitting some one actually had committed an act of sabotage against the German

Reich was inconceivable. He also did not want to alienate the U.S. government and public opinion against his Nazi regime any further by implying that somehow the Americans were responsible for the disaster. To avoid an international incident, the American government went along with coverup.

Before the disaster the Deutsche Zeppelin Reederei and its American subsidiary were planning to operate four Zeppelins in commercial service (two each). The LZ-129 Hindenburg was the first one. The second one, LZ-130, was larger than the Hindenburg and would have made her first Atlantic crossing, to South America, later that year, but the disaster at Lakehurst changed all that. The ship was redesigned to use helium rather than the inflammable hydrogen gas. In her new form she did not fly until 14 SEP 38. Named Graf Zeppelin II, she made some publicity flights in Germany and made at least nine flights along the borders of Germany's

neighbors Czechoslovakia, Poland, the Netherlands and Great Britain to probe the electronic defences of those countries. In MAY 39 she made a two-day spy flight along the British east and south-east coast to probe British radar defences, but failed to detect anything. A similar spy flight was made to Scotland in early August, also to no avail, probably because the ships' receptors were turned to the wrong wavelength. The Graff Zeppelin II never carried any commercial passengers. She was dismantled in 1940 and the next two ships, LZ-131 and 132, were never built.

The two giant airship sheds at Frankfurt were demolished because, it was said, they were in the way of German bombers taking off on their missions. The Zeppelin construction sheds at Friedrichshafen were bombed into extinction by Allied bombers during WW2 and by the end of the war, only memories and artifacts remained of an era in commercial aviation.



The ill-fated R 101, here riding at anchor at the mooring mast at her home base of Cardington.

over the Canadian and U.S. side of Niagara Falls, she returned to Britain two weeks later in 57 1/2 hours, aided by a favorable west wind.

The R101 was selected to make a flight to India. However, her flight performance was far inferior to that of the R100 and the government, facing failure of its 'shining example of the virtues of public over private enterprise', ordered the ship enlarged by an extra bay before the India flight. The result was not as expected. She turned from a very stable, although sluggish, airship into a highly unstable one, had become overweight and her gas cells leaked. For political reasons (his own), then-Secretary of State for Air, Lord Thomson of Cardington, ordered her on her way to India on the evening of 04 OCT 1930, two months behind schedule.

On board were Lord Thomson and other government officials, including the Director of Civil Aviation, the widely-respected Sir Sefton Brancker. Sir Sefton had ordered more trial flights before the big voyage, but was overruled by Lord Thomson.

The ship was in trouble right from the start in bad weather. She was unable to gain height and sailed across southern England at little more than rooftop level.

The English Channel was crossed at only 900 ft (300 m) but in stormy weather over northern France the ship dropped back to rooftop level. Just after 2 a.m. the next day, seven and a half hours after her departure, the R101 struck high ground near Beauvais, 40 miles (64 km) northwest of Paris. The ship was consumed by fire. Only six men survived and 48 others, including Lord Thomson, Sir Sefton and all the ship's officers, perished. It was the worst disaster in British civil aviation up to then, and it halted for good the British Imperial Airship Scheme.

The immediate cause of the crash was said to have been a sudden loss of gas in one of the forward gas cells when strong downdrafts of wind were pushing the nose down. This was no doubt aggravated by the seriously overloaded condition of the ship.

The successful R100 was broken up and sold for scrap.

## Britain..

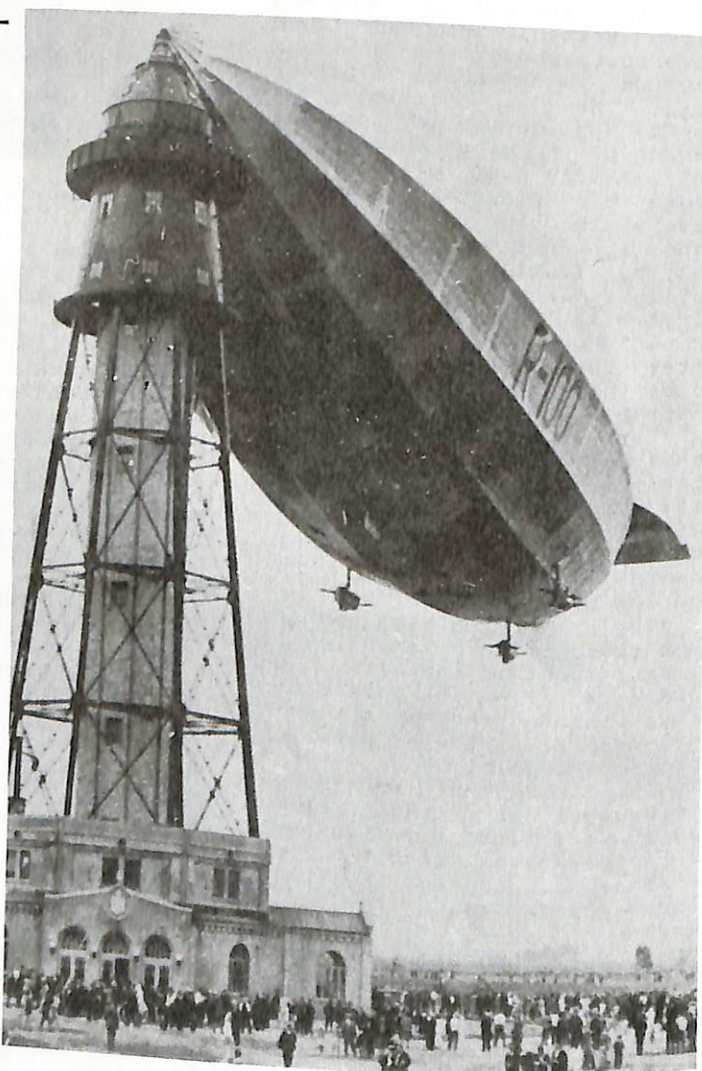
Outside Germany, Zeppelin had no competition worth the name. Britain, the U.S., France and Italy built several rigid airships between them, but none of these went into commercial airline service, not were they intended for it.

The British had plans to rival the Germans with their own world-wide airship operations. They were stopped on a hillside in northern France in 1930, the result of bad politics, bad planning, bad execution and bad luck, with the loss of 48 lives. Several top government and aviation industry officials were among the dead.

British efforts, however, deserve recognition here.

Several Zeppelin raiders came down on British soil during World War I. Most crashed in flames after having been shot down but the Navy L-33 had come down in one piece. Copying the design, the British completed the military R (for Rigid) 33 and R34 in 1919. Each measured 643 ft long (195.48 m) and had a gas cell capacity of just under two million cubic foot (56,600 m<sup>3</sup>).

A photograph exists of a



The British R 100 at the mooring mast at St. Hubert, near Montreal, Canada, in 1930.

model of an even larger, highly-streamlined British airship proposed by Vickers. It has the place names London and New York on the fuselage separated by the Royal Air Force roundel. I have no further details on this ship.

The R34 was chosen to make the world's first return air crossing of the Atlantic. Sailing on 02 MAY 1919 from East Fortune, Scotland, she carried 30 crew and passengers and one stowaway and arrived at Roosevelt Field, Mineola, Long Island, in the morning of 06 JUL after 108 hours and 12 minutes in the air. She was the first rigid airship to fly in the U.S.

The R34 returned to England three days later, taking 75 hours.

Four other British-built airships were complete or nearly so in early 1921. Only one, the R36, had a passenger car. But on 01 MAR, the Secretary of State for Air, Winston Churchill (British prime minister in WW2), announced the (Conservative) government was halting all airship activity to save money.

The R38, the biggest airship of its day, was under construction at the time for the British Admiralty. Declared surplus, she was completed instead for the U.S. Navy, to become ZR-II. She broke up over the North Sea and crashed in the mouth of the Humber River on 24 AUG 21 on her fourth sailing, a trial flight. 44 of the British and American crew were killed. It was determined her hull had not been strong enough to withstand the tight, high-speed turns the ship was subjected to.

The disaster did not deter Sir Denistoun Burney, member of

parliament and a former Acting Commander in the Royal Navy. In 1922 he conceived the Imperial airship program which was to link Britain with its empire in Canada, Australia, South Africa and India.

He proposed forming a company to operate the British airships then in existence and build new ones with a gas cell capacity of five million cubic feet (141,585 m<sup>3</sup>), measuring 760 ft (231.80 m) long and capable of lifting 44.5 tons (47,475 kg) of mail, passengers and cargo.

The company would also build mooring masts at Port Said (Egypt), Bombay, Rangoon, Singapore and Perth (Australia) and would start bi-weekly flights to India with a weekly extension to Australia.

Sir Denistoun wanted six ships over 15 years, but the newly elected socialist Labor government approved only two in late 1924. One, the R100, was to be built by ship and aircraft builder Vickers and the other, the R101, by the Royal Airship Works as a state-sponsored example of the virtues of public over private enterprise. They became known in the British press as 'Capitalist ship' and 'Socialist ship'. Barnes Wallis (in WW2 of Dam Busters bomb fame) was chief designer for the R100 and he hired as his chief calculator N.S. Norway, better known as the novelist Nevil Shute.

After a long gestation period, the R100 was completed in AUG 29 and the R101 in OCT.

R100 sailed for Canada on 29 JUL 30 with 44 people on board. The crossing to Montreal took 79 hours and after a series of successful demonstration flights, including a cruise

## ..and elsewhere

### FRANCE

France received two Zeppelins at the end of WW1 for service with the navy. One, the 'Dixmude', was a former German military WW1 ship and the other, the 'Mediterranée', was formerly the DELAG Nordstern. There were plans to use the second on scheduled services between Paris and Algeria. The plans were abandoned after the Dixmude disappeared over the Mediterranean in 1923 with more than 50 people on board. The cause of the disaster was never established.

From then on, no more was heard either of projected flights between French West Africa and Brazil.

### UNITED STATES

In the USA, the American Zeppelin Transport Company was born in the winter of 1936/37 to operate two large airships on intercontinental services, in conjunction with Luftschiffbau Zeppelin. These were to have been built by the Goodyear company at Akron, Ohio. The Hindenburg disaster put an end to the plans. Any U.S. airships built before and after this, were not intended for, nor used in commercial service and fall outside the scope of this account.

### ITALY

The DELAG Zeppelin Bodensee was turned over to the Italian Navy in 1919 and was renamed Esperia. On her delivery flight the ship travelled the 1,330

miles (2,140 km) from Friedrichshafen to Rome in 12 hours and 49 minutes. Renamed 'Esperia' she made a two-day Mediterranean cruise in 1925, but she was dismantled two years later.

The Italians themselves built two rigid airships, the N.1 Norge and the Italia. The first was used by explorer Roald Amundsen on his Arctic exploration flight and the Italia was the ship that took Gen. Umberto Nobile on an ill-fated trip to the North Pole. Both ships were designed by Nobile and were slightly larger than the pre-WW1 Viktoria Luise. Neither ship entered commercial service and they fall outside the scope of this account.

## life on board

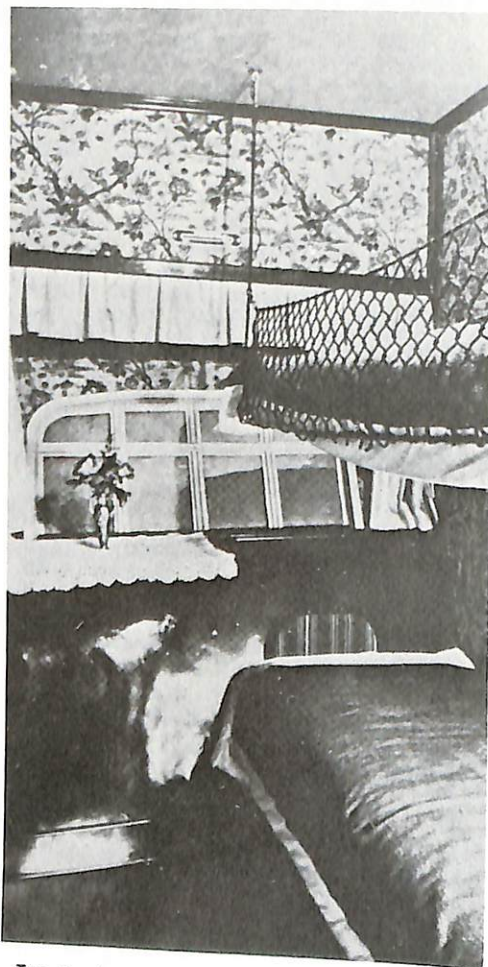
Imagine travelling on board an aircraft, seated at a small table beside a window, open for fresh air, while a uniformed steward serves you gourmet food and fine wines.

Don't look for it on the Boeing 747s and Concorde of 1987. But take your mind back 75 years and you'll find this was how people voyaged on the pre-World War 1 Zeppelins. A photograph of a Christmas voyage in 1912 even shows a small decorated Christmas tree on a table.

The passenger cars of the early Zeppelins resembled train cars, their interiors finished in mahogany wood with mother-of-pearl inlays and floors covered with carpets. The 20-24 passengers were seated in wicker chairs and were served full meals during the scenic tours over the German countryside. These tours often lasted several hours and diners had all the time in the world to take in the luxury of smooth travel, good company, pleasant surroundings and good food.

A wine list and menu of the 'Sachsen' has survived. It offers a choice of seven wines, two champagnes, several liquors and other drinks. The food included pate de foie gras, breast of goose, Beluga caviar and ham, salads, fresh French fruits and desserts.

The early ships had a separate crew car close to the ship's bow. But the crew could walk between the two cars by



Two-bunk cabin on the 'Graf Zeppelin'. (Luftschiffbau Zeppelin photo).

means of a gangway along the keel.

The passenger and crew compartments of the 1919 Bodensee and Nordstern were in large streamlined cars built integral with the ship's main frame, against the underside of the hulls close to the ships' bows. Both ships carried 20 passengers, but there is evidence up to 27 have been carried, with extra wicker seats in the central aisle when weather conditions provided maximum lift.

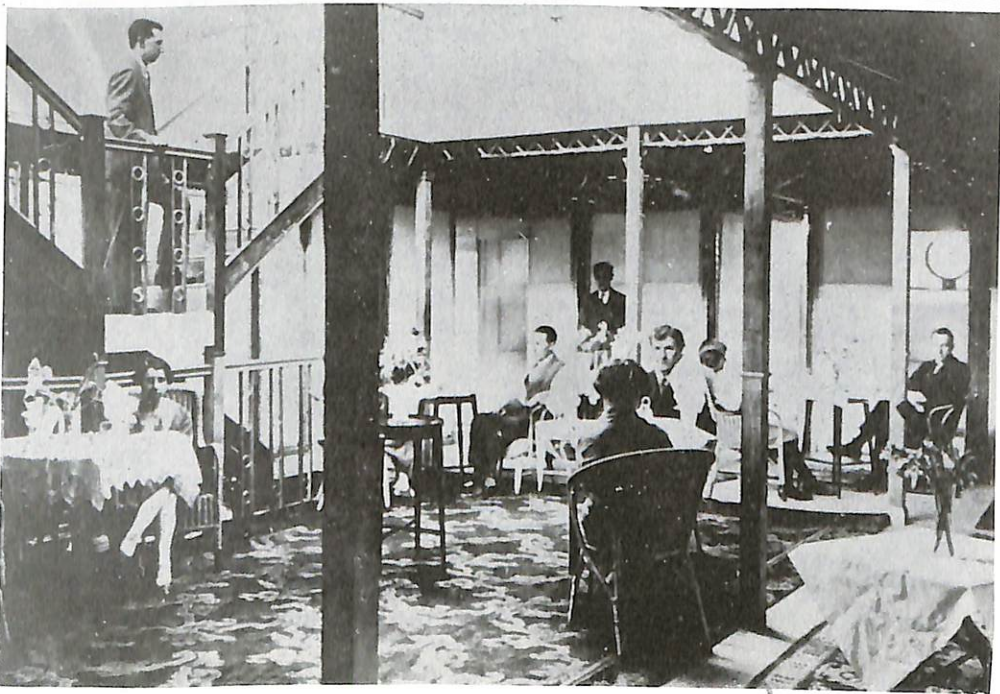
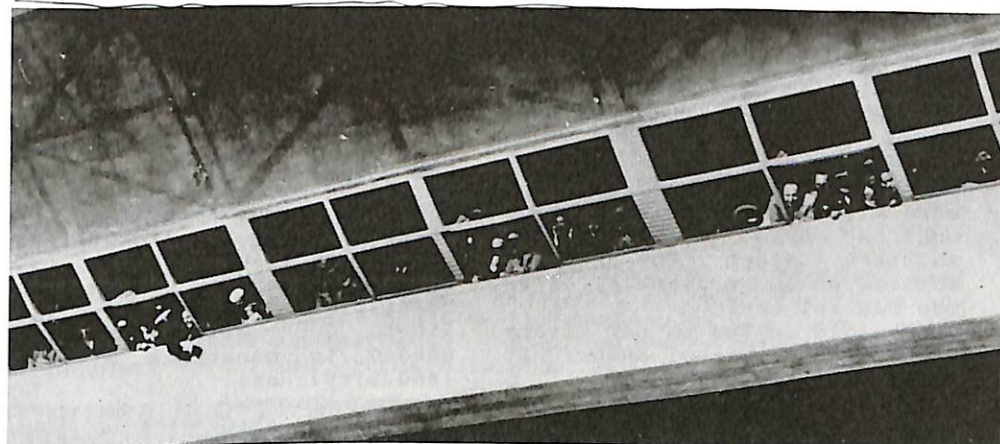
The Graf Zeppelin also had a single car, but it was large enough to contain a passenger and crew dining-room/lounge for 24. It was appointed with wine-red carpets and curtains. There were 10 separate passenger cabins in the car, five on each side of a central aisle. Each cabin had a couch, convertible into two bunks, and a table, closets and an outside window. A steward made the beds in the morning and turned them back into couches for day use.

Crew and passenger lavatories and washrooms were in the back of the car. Sleeping quarters for the crew, as well as freight and mail holds were in the main hull.

The 'creature comforts' enjoyed by passengers were substantial. Gourmet meals were prepared by two chefs in a galley which would put many of today's apartment building kitchens to shame. Diners were given menus as in earthbound



Walking promenade and observation deck on the 'Hindenburg'. Tables on the left are part of dining room. BELOW: observation windows of the 'Hindenburg'.



Two-storey dining room of the R 100. Nevil Shute is on the stairs.

restaurants and meals were served on real porcelain, custom-crafted and suitably engraved with the Zeppelin Luftschiffbau's 'LZ' logo (see Dick Luckin's dinnerware column, this issue). The dining room tables were covered with white table cloths for all meals.

"The luxury quickly won over most of the travellers," wrote Douglas Botting in his Time-Life book 'The Giant Airships', published in 1980. Quoting one traveller, Botting said, "We found ourselves in a pleasant room, getting acquainted over a midnight supper of lamb chops, peas, caviar and white wine. No steamship ever rode more evenly in a calm sea". Another pampered passenger wrote, even "the person with taut nerves may know a relaxation, a serenity and calm like no other in the field of travel."

More of the same was offered on the Graf Zeppelin's larger successor, the Hindenburg. This prompted Douglas R. Robinson to say, "You don't go flying in an airship, you go voyaging," in his Famous Aircraft Series book 'LZ 129 Hindenburg' of 1964.

In the Hindenburg only the control car with the bridge, radio room, chart room and captain's cabin, was suspended beneath the bow. All passenger and other crew accommodations were inside the huge hull, an arrangement first used on the earlier British R100 and R101. (The facilities described here are those for the Hindenburg, but they were basically the same on the two British ships.)

On the upper deck, measuring 49 x 92 ft (15 x 28 m) were the 'public rooms', with a dining room to port and a lounge and reading/writing room on starboard. Large slanted windows on both sides enabled passengers to see the world slide by a few hundred feet below. There was even a bay grand piano in the corner of the lounge, its weight being kept down through the use of aluminum. Passengers using the writing room could send their letters directly to the mail room in the hull through pneumatic tubes. The dining room doubled as a chapel for Sunday religious services.



The 25 two-bed staterooms, each with its own washbasin with warm and cold running water, were also on this deck, located in the centre, between the 'public rooms'.

The lower deck, below the staterooms, held a showerroom, bathroom, lavatories, smoking room, galley, crew's mess and officers' mess.

The staterooms were 5 x 6 1/4 ft (1.52 x 1.90 m) each and had no windows. The nine cabins added to the lower deck in the winter of 1936/37 (at the expense of crew messes) to increase the ship's capacity to 72 from 50, did have windows.

Three bars were in operation most of the day, manned by seven stewards. Passengers could

have a drink brought to their cabin by pushing a button on the doorjamb.

The public rooms closed at 11 p.m. but the main bar remained open until 3 a.m. Passengers and crew were strictly prohibited from smoking anywhere on or near the ship, except in the designated smoking room. All matches and cigarette lighters were to be surrendered to the crew on boarding. Even in the smoking room, passengers had to ask a steward for a light for their cigars, pipes and cigarettes.

Passenger and crew quarters were ventilated and heated by forced air bled from the engine cooling system.

With these comforts on hand,

is it any wonder that the Hindenburg's captain, Max Pruss, once said, "If you want to travel quickly, take an airplane. If you want to travel comfortably, take an airship."

It is not surprising that some passengers were only too happy to travel less comfortably just for the sake of enjoying a voyage on the Hindenburg. During the 1936 season, the ship's eastbound runs across the Atlantic operated at an average of 106.8% capacity. Some passengers accepted bunks in the officers' quarters along the ship's keel. Even at that, passengers were turned back for nearly every eastbound crossing.

## getting technical

Before delving into the technical aspects of airships, a short explanation of the three basic types is in order.

### NON-RIGID

Non-rigids have a hull made of a flexible, gas-tight envelope containing the lifting gas. The hull maintains its shape through the pressure of the gas. (A blown-up child's toy balloon is an example of such an envelope.)

The horizontal and vertical control surfaces are attached to the envelope. The control car is attached to the envelope or is suspended from it by cables. The engines are mounted on the control car.

### SEMI-RIGID

Semi-rigids have the same type of hull as the non-rigids, but the envelope is attached to a rigid keel which runs nearly the entire length of the envelope.

The control car is in the keel. The horizontal and vertical tail surfaces are attached to the envelope and the engines are mounted on the keel and/or the control car.

Both types are pressure airships, because they rely on the pressure of the gas inside to maintain their shape.

### RIGID

The Zeppelins and the R100/101 discussed here were rigids.

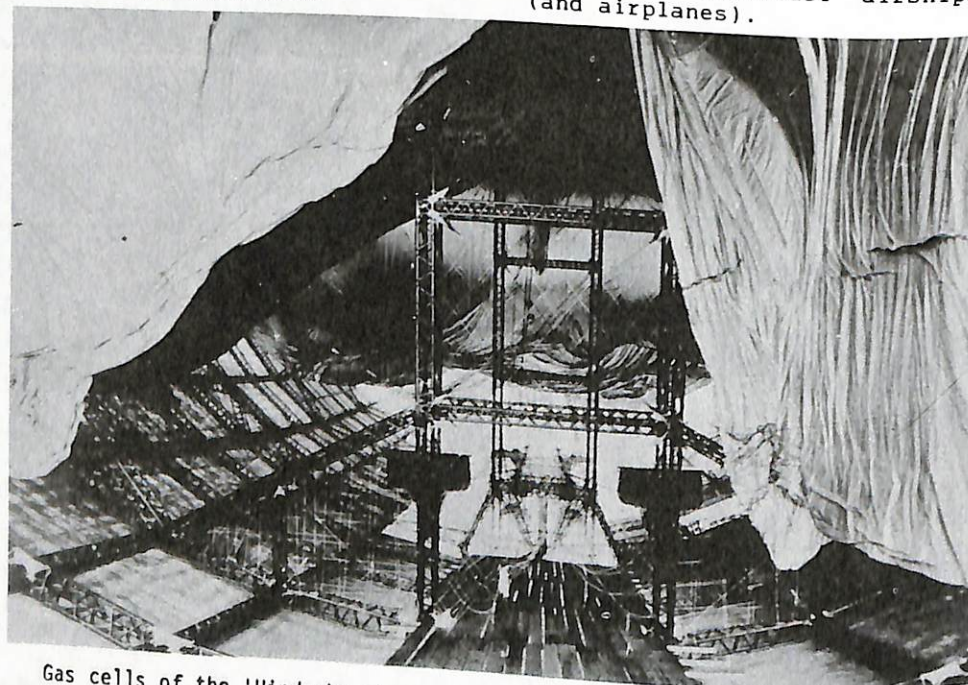
Their hulls were built of aluminum rings and girders covered with fabric, which was not intended to be gas-tight. Lifting gas was enclosed in

gas-tight bags or cells suspended inside the hull and separated by transverse aluminum girders. The control car and any other accommodations were built integral with the hull and were either inside the hull or projected from the bow. The horizontal and vertical control surfaces were part of the hull's frame and were also fabric covered. The engines could be installed anywhere along the hull, mounted on frame members, or on the control car.

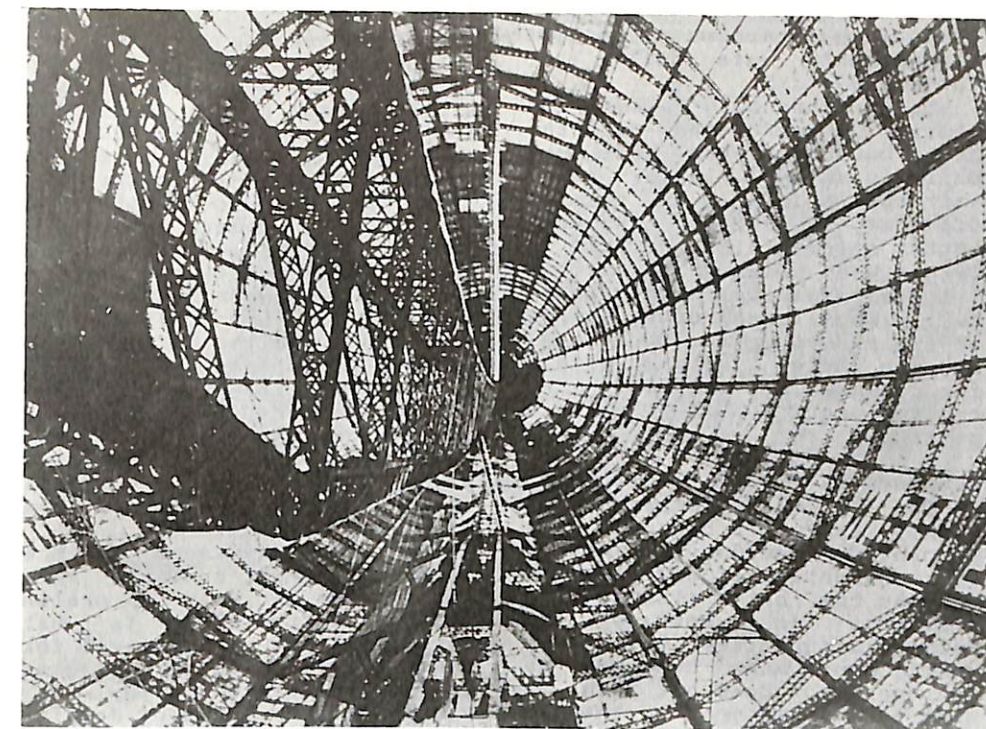
A rigid relies on her frame to keep her external shape, not on the gas pressure.

Airships are dirigibles because their engines allow them to fly into any direction, irrespective of the direction of the wind, while balloons only go where the wind blows them.

Building rigids became possible in 1886 after Paul Heroult of France and C.M. Hall in the U.S. independently and almost simultaneously had invented an electrolytic process by which aluminum could be produced in commercial quantities. This provided the light and strong material needed to construct airships (and airplanes).



Gas cells of the 'Hindenburg', partially inflated, looking forward.



Internal structure of the 'Hindenburg'. Crew walkway for in-flight inspections is on the left. (Zeppelin photo).

while her gas bags were being filled with hydrogen gas. After the passengers had boarded and the engines were running, a ground crew grabbed hold of the mooring lines and walked her out of the shed. Once clear, water ballast was released and the ship slowly rose into the air.

Outbound flights mostly were flown into the wind. This ensured that the ship, in case of an in-flight engine failure, would have a tail wind for the flight home.

Upon landing, gas was vented off to reduce lift and mooring cables were dropped when the ship was close to the ground. Pulling on the cables, the ground crew walked the ship to her mooring mast, to which she would be tied by cables from her bow.

here between the Zeppelins and the British and American airships, both military and civil. The Zeppelins would 'land to the ground' and their lower vertical tailfin was secured to a trolley running along a circular track laid out on the ground, so the ship could swivel in the wind. The other ships moored at a higher level, swinging freely with the wind like a weather vane.

These different procedures enabled passengers and crew of the Zeppelins to board and leave via small stepladders, while their counterparts on the other ships had a fair height to climb on a staircase within the mooring mast.

### STREAMLINED SHAPES

The post-WWI Zeppelins used the same construction techniques but there were substantial differences with their predecessors.

The constant-diameter, cylindrical hull had given way to the fully streamlined shape of the Bodensee and Nordstern (and the military Los Angeles).

Zeppelin had started to pay attention to streamlining during the war, after seeing the successful military Schutte-Lanz airships.

Designer Joseph Schutte and industrialist Heinrich Lanz had started building highly streamlined, plywood-covered rigids in 1911. Their patents were taken over by the government after the war had started and they became available to

### THE ZEPPELINS

Several non-rigids and semi-rigids had been built in the late 1800s before Count Ferdinand von Zeppelin became interested in them. But he was the first to build rigids on any worthwhile scale - nearly 120 by the time of the Hindenburg disaster.

The hulls of all pre-WWI Zeppelins had a cylindrical shape with pointed nose, blunt stern and a rather complicated arrangement of fins, rudders and elevators.

The LZ-1 of 1900 had small rudders at the bow and stern for directional control and a 550 lb (250 kg) sliding weight mounted on a track for vertical control.

The two Daimler engines produced only 30 hp and the LZ-1 was grossly underpowered, being controllable only in still air.

She was built and housed in a shed which floated on the Bodensee (Lake Constance), anchored only at the front. Two reasons for this curious arrangement exist. The most-widely accepted is that the shed always pointed into the direction of the wind, which made launching the ship easier and safer. And indeed, a number of DELAG and military Zeppelins would be destroyed because they were thrown against their sheds by strong cross winds while being walked out. The second explanation is that the count believed a crash landing on water would be

softer than on land.

The LZ-7 Deutschland, first of the DELAG ships, had larger twin rudders at the stern and four sets of four horizontal elevators stacked vertically, one set on either side of the bow and the stern. The ship's overall shape was unchanged from the LZ-1.

An integral V-section keel ran most of the length along the underside of the hull. About mid-ship it widened to provide a train car-like cabin for 12 passengers.

Two gondolas were suspended beneath the hull. The forward one housed the controls and a 125 hp Daimler engine driving two two-bladed propellers. These props were mounted about 1/3rd up the fuselage side and were driven via shafts and couplings. The second gondola, at the end of the keel, contained two Daimler engines mounted in tandem and each driving a four-bladed propeller. A walkway through the keel connected the forward crew gondola, the cabin and the aft gondola.

Except for more-powerful engines, some 'cleaning up' of the control surface structure and better streamlining of the nose, all ships through to the LZ-17 Sachsen were of similar appearance as the LZ-7.

### THE START AND LANDING

Awaiting her passengers, the Zeppelin would lie in her shed, held down by mooring lines and ballast (sand bags and water)

Zeppelin. Schutte-Lanz closed its doors in 1917.

The Bodensee and the slightly-longer Nordstern (they were nearly identical after Bodensee had been lengthened in 1919) housed, for the first time, crew and passengers in a single structure under the bow. The ships' four engines were mounted one each in a gondola on either side of the hull, about midship, and in a single rear gondola with two engines coupled to drive a single propeller.

Instead of the complicated, multi-unit control surfaces, the fin and rudder and the horizontal tailplane units were also streamlined and combined at the stern in a simple + arrangement.

The Graf Zeppelin had the same single control car/cabin structure, but she was less streamlined. Photos show the larger portion of the hull is nearly cylindrical. Even beyond this the diameter differs little. This was done to achieve the maximum possible hull volume within the dimensions imposed by the construction shed at Friedrichshafen. It simply was not high enough to allow a hull of larger diameter for full streamlining. Another result of building in a restricted space was that the control car/cabin is small for such a large ship and is faired into the upslope of the bow, rather than protruding below the keel. This too was to allow as large a hull volume as possible.

The Graf's hull was built up of 16 duralumin main rings, each in the form of a 28-sided polygon, spaced 49 ft 2.5 in (15 m) apart. There were two secondary rings between each pair of main rings. All rings were joined by longitudinal girders. The main rings were braced by a mass of steel wires. The secondary rings were not braced, to leave room for the lifting gas cells between the main rings.

Two interior gangways ran the length of the hull, one through the keel and the other just below the centerline. The second provided in-flight crew access to the 17 lifting gas cells above the gangway and the nine fuel cells below it. There was a ventilation shaft between each two cells.

The hull and the tail fins were covered with lightweight doped cotton. The fin at the bottom of the stern contained an auxiliary steering station.

Various cargo and water ballast compartments were built into the keel.

The Hindenburg was of similar construction as the Graf, but because she had been built in a new, larger shed, and she had a much greater diameter, resulting in much better streamlining and had a larger gas volume and higher lifting capacity. The larger hull also allowed for enclosure of the passenger accommodations and the crew quarters within its diameter, so that only the control car and the engines protruded from the hull.

#### HYDROGEN VS HELIUM

The Zeppelins depended on highly flammable hydrogen gas to provide buoyancy. Hydrogen is the lightest of all elements and was the only lifting gas available in Germany in commercial quantities. Helium has nearly the same buoyancy as hydrogen, but does not burn. It was available in worthwhile quantities in the 1930s only in the USA. But when Eckener applied to the American government for helium for the Hindenburg, he was refused. An American law, passed in 1927, prohibited the export of helium to conserve it for American airships. Eckener had no choice but to build the Hindenburg to use hydrogen.

Since that time, however, large reserves of helium gas had been discovered in the USA and after the investigation into the disaster at Lakehurst was over, Eckener began negotiations with the

## the future

Various proposals have been made since the end of World War 2 to revive the airship for specific tasks. Plans have included proposals to move natural gas from one part of the world to another in large ships and transportation of heavy and bulky loads over the vast stretches of empty land in the Arctic regions, Siberia, Africa and South America.

There was even a proposal in Britain some 15 years ago to build a mammoth cargo airship carrying a payload of 500 tons (1,120,000 lbs/508,500 kg) in 50 10-ton containers. The flying speed of this ship would have been around 100 mph (160 km/h) and her range virtually unlimited when refuelled in the air.

U.S. Congress for supplies of helium for the next generation of Zeppelins. Congress approved a provisional export permit for 10,593,000 cu.ft. (300,000 m<sup>3</sup>) as soon as Eckener could find a way to transport it to Germany.

He decided to modify the LZ-130, then under construction, for the helium, but before she had been completed, Germany forcibly took over control of Austria (the 'Anschluss') in March 1938 and the U.S. again imposed an embargo on helium, particularly to Germany. It had not forgotten the British experience in WW1, when Zeppelin raiders inflicted psychological and physical damage in many areas of the country.

An atom of hydrogen is the lightest element known to man. It consists of only a proton and an electron. This is what makes it twice as efficient for heat production as natural gas.

The gas is produced by displacement from acids by metals, by electrolysis of water and by reaction of carbon and steam.

The single-electron composition made hydrogen react readily with other elements and with common compounds, such as water and petroleum, to create heat ... and the flames which are part of it.

Helium is a stable -inert- gas and doesn't react with any other elements or compounds. This is what makes it so safe.

It is obtained by the fractionation of the gas from certain wells, found only in the USA, reason why the Germans could not get their hands on helium.

Cargo, fuel and crew were to be ferried back and forth to the transporter by smaller airships.

However, the only airships now flying are the small Goodyear blimps which are used for promotional purposes, reporting on large sports events and the like, and the Skyship dirigibles built in Britain, much for the same purpose.

It may very well come to pass in the future that large airships will be used as bulk cargo and natural resource haulers in underdeveloped areas. But never again will they carry fare-paying passengers on intercontinental voyages. People are too much in a hurry for that.

## the past

Inventors of past centuries have put forward many fanciful ideas on what they thought an airship should look like. Here are six of them, randomly selected from many ...

#### ← BRESCIA, Italy, 1670.

Jesuit priest Francesco Lana di Tersi proposed this 'airship'. A gondola (looking like half of an empty walnut shell) was suspended from four empty copper spheres. Lana proposed to expel the air from the spheres by heating them. They would then be sealed and cooled, resulting in a near-vacuum inside. Another method had the spheres filled with water which would then be drained through vertical tubes whose length was to correspond with the barometric vacuum created within the spheres. Lana reasoned the resulting near-vacuum in the spheres would be lighter than air and the 'airship' would rise as a result. There is no evidence Lana knew the spheres would collapse under the pressure of the outside air or that he had any idea of how thick their walls should be to prevent this collapse. Forward motion was provided by a sail catching the wind or by oars.

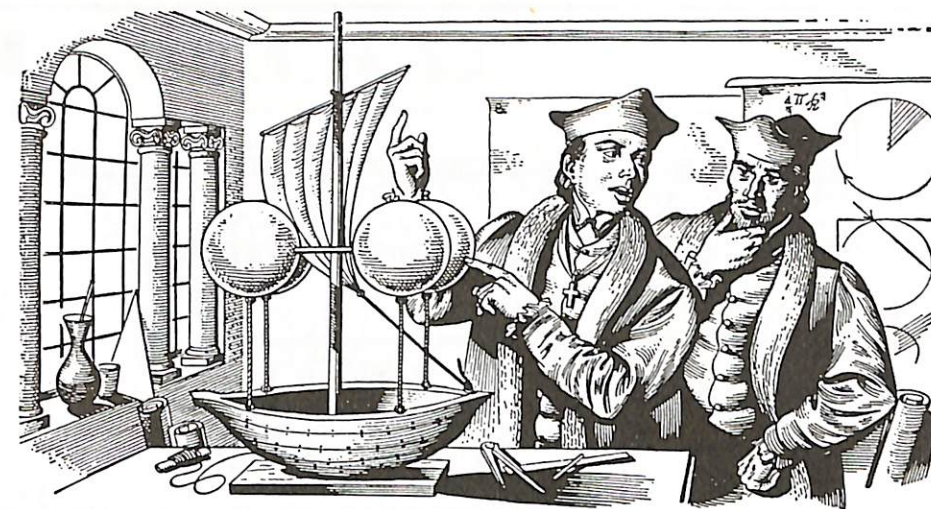
His idea was much admired by scientists of his time, but Lana backed off because he feared his invention would one day be misused for military purposes.

#### ← VIENNA, Austria, 1804

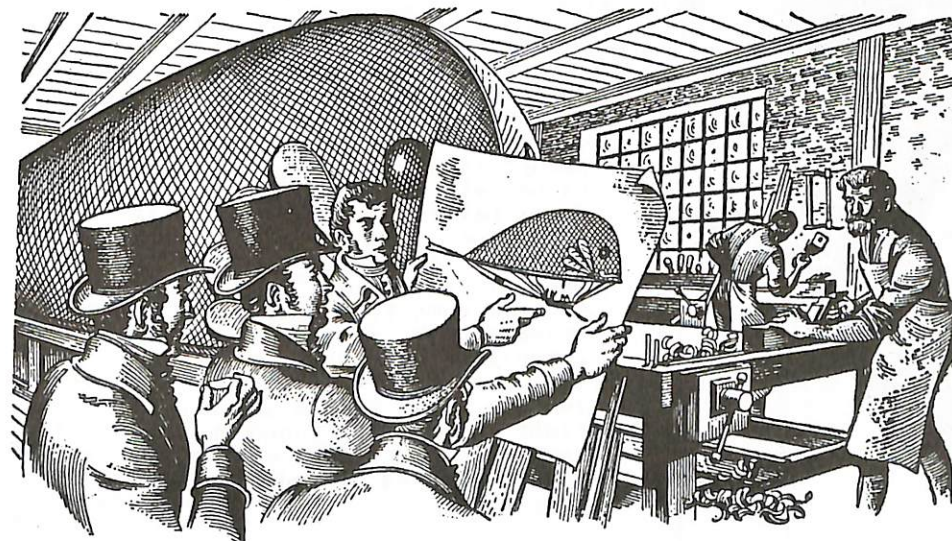
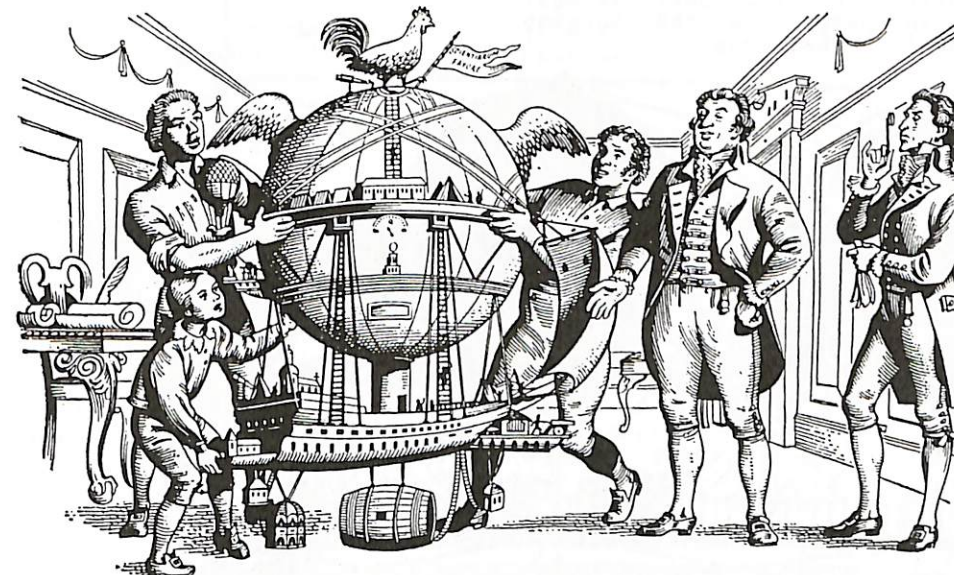
A Professor Robinson proposed this 'flying palace' for 60(1) passengers for a six-month nonstop flight to do scientific observations. The three-storey gondola of the colossus would include a kitchen, storage room, laboratories, music room, private cabins and a ladies' salon. Perched on top of the large balloon was a rooster - symbol of vigilance - with an eye so big, it could house an observatory.

#### ← LONDON, England, 1816

'Flying whale' designed by Swiss gunsmiths S.T. Pauly and Durs Egg, to have been built in London, England. Powered by a steam engine driving oars. Alternatively, manpower could be used to row the ship. The horizontal tail fin, in conjunction with a movable weight, would enable the ship to rise and descend.

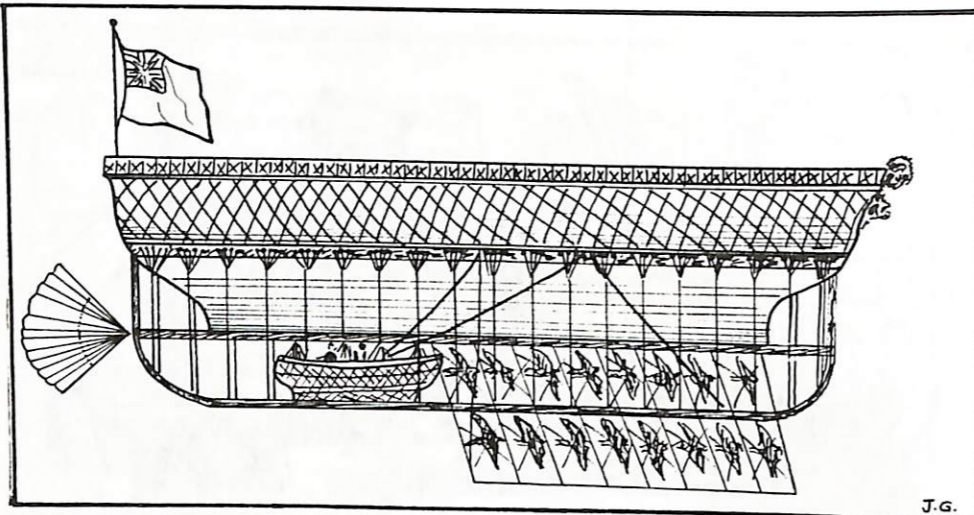


Illustrations this page courtesy BP Aviation Service



LONDON, ENGLAND, 1835

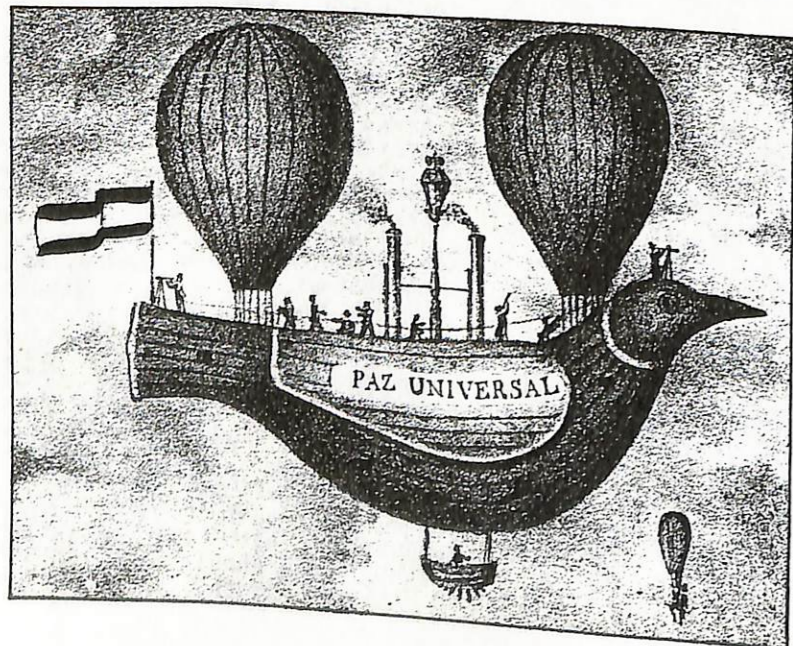
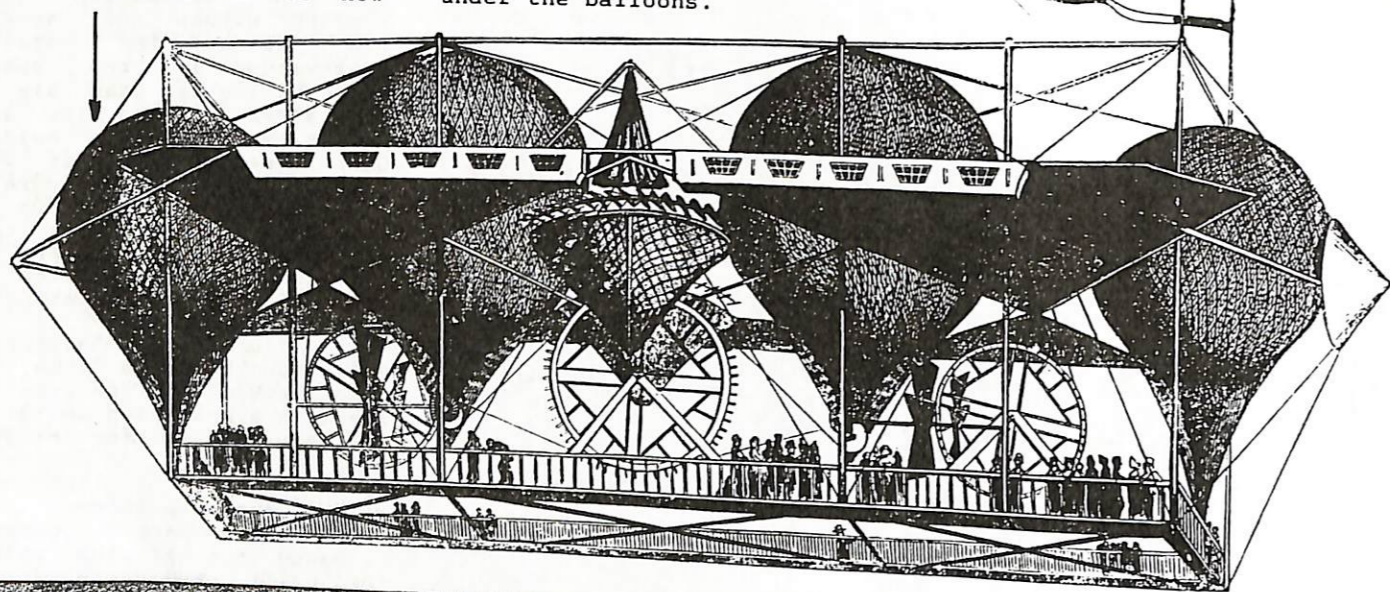
Even more fantastic was this British project for an airship (literally a ship) filled with 'lifting gas' and powered by harnessed eagles, falcons or other large birds suspended under the keel. How the inventor would get all the birds to flap their wings at the same time is lost in history. Also note that the passengers were seated in a sloop-like gondola also suspended under the keel. How they and the birds were to survive during a landing is not known either.



PARIS, FRANCE, 1850

This design was proposed by a Frenchman with the last name of Petain (also spelled Petin). It consisted of several balloons linked together in a metal or wooden frame and deriving forward motion from propellers driven by special wheels. No clues as to how

these wheels were driven. The 'airship', which was never built, could transport several dozen people on the gangway under the balloons.



← SPAIN, ABOUT 1880

Outright impossible was this Spanish design in the shape of a giant wooden dove. The text on the side proclaims "world peace" in Spanish. The ship was to be held aloft by two rather small balloons. Note the two ship-type funnels in the centre, with smoke rising from them. This suggests power was to have come from some sort of steam engine. But there are no propellers visible anywhere. The device between the two funnels looks like a gas street light post and lookouts are standing on the head and at the tail, peering through telescopes.

# BOOKCASE

By JOOP GERRITSM

The five books reviewed here, are all out of print as far as I know. But they are my favorites on the subject of airships and if you are an airship buff, I urge you to buy them should you come across them at a second-hand book sale, flea market etc.

## THE GIANT AIRSHIPS

First on my list is the 1980 Time-Life book, 'The Giant Airships', by Douglas Botting.

It is a must-have just for the many historic photographs, paintings and superb technical drawings, the last all in color.

Botting starts his narrative in 1900, with the first Zeppelin dirigible, but in photos and short vignettes he also he also looks before that year. Also discussed and illustrated are the unsuccessful attempt by American inventor John Morrell to fly a non-rigid at Berkeley, California, in 1908; the Santos-Dumont Airship No.6, which flew around the Eiffel Tower in Paris in 1901; the Clement-Bayard II which flew from Paris to London in six hours in 1910 and the airship 'America' which attempted to cross the Atlantic in 1910.

The bulk of this fabulous book is taken up by the

Zeppelins. Pre- and post-WWI peacetime activities are told, and there is a chapter about the nighttime raids over the south of England during the war.

The British get space for their pre-WWI and wartime ships, and for the flights and fates of the R34, R100 and R101, all profusely illustrated with many great photographs.

American military airships of the Twenties and Thirties are detailed, as are the Polar flights of Italian General Umberto Nobile.

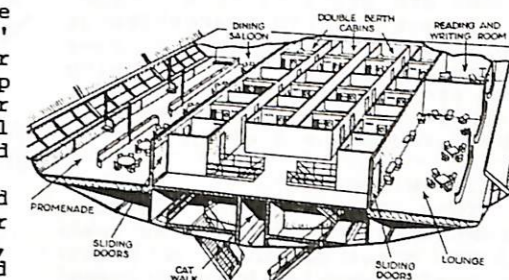
But the book excels in the material on the 'Graf Zeppelin' and 'Hindenburg'. The chapter "Touring the world on 'the ship with a soul'," speaks for itself, as does the final chapter, "Crescendo and calamity".

There are detailed photographs and full-color cut-away drawings of the hull, gas cells, control cars and passenger accommodations of the ships. A spectacular shot shows three crewmen atop the Graf Zeppelin's hull, lowering one of their mates down the side in a rope harness to repair damaged fabric ... while the ship was high over de South Atlantic in 1933.

'The Giant Airships' is also of interest to memorabilia collectors. There are many illustrations of collectibles of many kinds, from large wall

posters to an enameled gold cigarette box and a ladies purse in the form of the Graf Zeppelin. There is also a photograph of a nutcracker in the shape of ... Graf Ferdinand von Zeppelin himself. Even if you will never have a chance to own any of these items, having the pictures in this book is a real treat.

Beautifully printed on high quality paper, this book is definitely a must in the library of any aviation enthusiast!



'Hindenburg' passenger deck. (From 'The Airship', reviewed here).

## THE AIRSHIP - A History

A close second for my most-favorite airship book is 'The Airship - A history' of 1974, by British author Basil Collier. It delves into the technical and historical aspects of airships, beginning 1670 proposal by Francesco Lana di Terzi (see elsewhere in this issue) and proceeding right up to and including the Goodyear blimps, including many proposals of and the few actual airships built in the 19th Century.

This book covers the same Zeppelin material as the Time-Life book, but Collier's text goes into much more historic detail, especially on pre-WWI British airships and WWI operations by the Germans, French and British. These war operations alone occupy about 20% of the text. Unlike the Time-Life book, 'The Airship' also discusses German airships built by Schutte-Lanz, Gross-Basenach and others.

The post-WWI years see the great German and British airships, and the two Italian ships, detailed, as well as the American Los Angeles, Shenandoah, Akron, Macon and other military ships.

Where Botting focusses almost entirely on rigid, Collier also details non-rigid blimps, from the WWI coastal

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I also thank Schedule Editor George Cearly for making the photograph of the 'Hindenburg' and an AA DC-3 available to me, and Editors Dick Koran (Wings & Things), Dick Luckin (Dinnerware) and Don Thomas (Sticker Chatter), as well as George Cearley, for including substantial Zeppelin material in their own columns.

patrol ships, submarine hunters and convoy escorts to the present Goodyear blimps.

The final chapter offers some insight into what the future might hold for airships. Because this book is 13 years old, some predictions now look strange, but who knows ...

This and the Time-Life book, both great, are intended for different audiences and approach the subject from different angles. The Time-Life book offers a detailed but popular view, while Collier's book is intended for the more-serious scholar of airship history. The hundreds of (B&W only) photographs, the tables and maps, and a very comprehensive, cross referenced index are proof of this.

I have one big regret about this book: the closest I come to owning a copy is borrowing it from the public library. Despite my best efforts, I have never found one I could buy.

#### LZ129 "HINDEBURG"

This 1964 album by Douglas H. Robinson deals with the last of the great airships. A short historic overview glances over the origins of the Luftschiffbau Zeppelin, its pre-WWI passenger airships and the Graf Zeppelin, and then it is the Hindenburg all the way. Fabulous photographs of the ship and many close-ups of exterior and interior details. Some very fine half-tone drawings and cut-aways as well.

The text discusses in great detail technical aspects and the accommodations on board. My

#### R100 IN CANADA

Another single-subject book. This 1982 Barry Countryman title is a superb production on the visit of the British R100 to Canada in the summer of 1930.

The book contains a detailed text on the reasons for building the ship, her design and construction process from the first metal cut to the covering of the hull, and her sailings. The photographs are terrific and illustrate every construction detail you ever wanted to know about the ship, the places where it was built and the mooring mast constructed especially for her at St. Hubert, Montreal, Quebec. Some (B&W) photographs of collectibles too.

Other British airships are discussed briefly (one nice shot of the R34 and several of the R101).

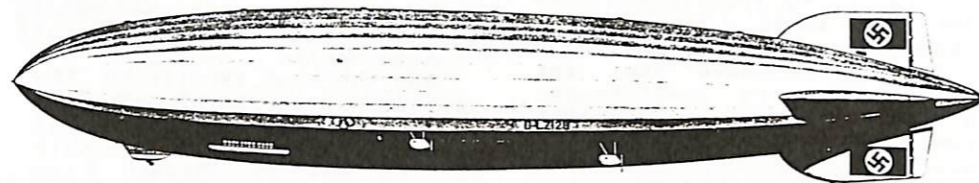
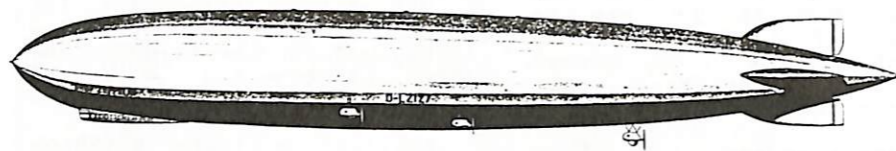
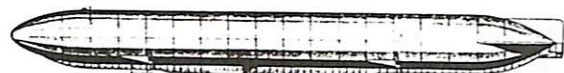


Illustration from LZ129

"Hindenburg", reviewed here.

COMMERCIAL ZEPPELIN DEVELOPMENT  
(Drawn to Same Scale)

"Viktoria Luise," completed 1912, carried 20 passengers on 2-hour joy rides from hangars near large German cities.  
"Bodensee," carrying 20 passengers, made first scheduled intercity flights between Friedrichshafen and Berlin in 1919.  
"Graf Zeppelin," completed 1928, circled globe and made many flights across North and South Atlantic, with day and night accommodations for 20 passengers.  
"Hindenburg," completed 1936, with capacity of 70 passengers, was first aircraft designed and built specifically for crossing the North Atlantic commercially.

COMMERCIAL ZEPPELINS, 1912-1936

favorite chapter is 'Life in the Belly of Leviathan', which needs no further explanation. It makes you feel as if you were on board yourself.

Short chapters discuss the tragedy at Lakehurst and the Daimler-Benz diesel engines which powered the Hindenburg.

The final 17 pages are taken up by the complete flight manual for the LZ120 'Bodensee' issued to the crew. It addresses every aspect of flight. Robinson says no flight manual for the Hindenburg is known to exist and he

speculates none was ever issued because the ship was flown "by personnel with literally years of close association in handling the 'Graf Zeppelin' and earlier commercial ships." For that reason, he said, he included the LZ120 manual. The reason is good enough for this reviewer.

In his introduction to the manual, Robinson says Dr. Hugo Eckener, who wrote it, was known as "The Pope" to his associates, "because his pronouncements on airship travel were infallible!"

#### EUROPEAN TRANSPORT AIRCRAFT Since 1910

This 1966 book by airliner historian John Stroud describes type-by-type and in great detail all European-designed transport aircraft known to have entered airline service. The Zeppelins, from the LZ-7 'Deutschland' to the LZ129 'Hindenburg' get 18 pages packed full of details on the development, technical aspects and operations of the airline Zeppelins, including first flights, service entry dates, number of flights flown and number of passengers carried. Many nice photographs too. Published by Putnam, which also did R.E.G. Davies' books 'Airlines of the United States since 1914' and 'Airlines of Latin America since 1919' and is definitely of the same high standard.

One caution: don't buy this book only if you want to know

more about the Zeppelins. Buy it, period!

I like to end these reviews with two quotes from the R100 book:

"I have not interested myself in airships because I like their appearance, nor am I fascinated by their size, but because they are the only form of vehicle capable of traversing great ocean spans carrying commercial loads. They are the keystone of the arch of Imperial Communications." - Sir Denistoun Burney, moving force behind the Airship Guarantee Company and the Imperial airship scheme, 12 FEB 1930.

The second quote, at the start of the final chapter, 'The End of British Airships,' is from British Prime Minister Ramsay MacDonald, spoken on 14 MAY 31: "Airships, up to date, have neither proved a failure nor achieved an assured success."

# STICKER CHATTER

by DON THOMAS

A short history of modern airships - The British had the R34, which crossed the Atlantic in both directions in 1919, the first air craft in the world to do so. The R-100 made a roundtrip to Canada in 1930. The R-101 was destroyed in France on the way to India when it struck the ground and caught fire in the same year.

The Italians had the Norge and the Italia. The Norge, under command of Gen. Umberto Nobile, made a successful trip over the North Pole from Norway to Alaska, but their Italia, with the same General in command, struck the ice on a Polar trip. The control car was torn off and the crew spent some time on the ice before being rescued.

In the United States, lighter-than-air was mostly a U.S. Navy show. The Shenandoah and the Akron were lost in violent storms. The Macon was lost at sea although most of her crew were saved. The ZR-3 'Los Angeles', built in Germany in 1924 for to the U.S. as war reparations, gave many years of good service before being scrapped in 1939. France also received a German dirigible, renamed the Dixmude, which made several successful flights before she disappeared on a Mediterranean flight in 1923.

None of the above, however, can be said to have contributed much to furthering the transportation of passengers by lighter-than-air means.

It were the Germans who were the most successful with dirigibles, especially in air transport of passengers. DELAG was the name of Count Von Zeppelin's company. From 1911 to 1914 the Schwaben, Sachsen, Hansa and especially the Viktoria Louise carried hundreds of passengers on charter and sightseeing flights, mostly in the Frankfurt area. None of these were regularly scheduled flights.

After World War 1 the Germans put the Bodensee in scheduled service, but later were forced to turn it over to the Italians, who named it the Esperia.

The most-successful of the Zeppelins was of course the 'Graf Zeppelin'. It made many trips between Germany and all

MIT LUFTPOST  
PAR AVION

DEUTSCHE LUFTPOST  
EUROPA  
Graf Zeppelin  
16. 8. 1929

ERSTER FLUG  
RUND UM DIE WELT  
MIT LUFTSCHIFF L. Z. 127  
"GRAF ZEPPELIN"  
bis Tokio.

Luftschiff Graf Zeppelin  
Luftschiff L. Z. 127  
Luftschiff L. Z. 127  
Luftschiff L. Z. 127

Luftschiff Graf Zeppelin  
Luftschiff L. Z. 127  
Luftschiff L. Z. 127  
Luftschiff L. Z. 127

Heinr. Temme  
Import - Export  
Ueberlingen  
am Bodensee

THE BANK OF TAIWAN, Ltd.  
Osaka, Japan

Friedrichshafen (Bodensee) - Tokio

parts of the world. After a flight across the Atlantic to New York, and many flights over Germany and the rest of Europe, it made its most-famous flight, the one around the world. A flight cover from this trip is shown, addressed to Osaka, Japan (#1). This 1929 flight stopped over in Tokyo. From 1933 to 1936 the Graf Zeppelin was on a regular mail and passenger run from Germany to Rio de Janeiro. A baggage label used on this South Atlantic service is shown (#2) along with the round label used on the Graf (#3) and one of the letterlabels used to separate passenger baggage for customs inspection (#4). The other round label (#5) was used later by the Zeppelin company for both the Graf Zeppelin and the big new Hindenburg. The Hindenburg, which flew "Over the ocean", as the label says in German (#6) to Lakehurst, N.J., was destroyed in 1937 when it caught fire as it was landing. After that, hydrogen was considered too dangerous to use in dirigibles, so the Graf Zeppelin was grounded and airship passenger services were halted.

During the Zeppelin era many hotels capitalized on the Zeppelin name and fame - a few samples are shown (#7-11). Timetables from New York (#12-14), Brazil (#15), Argentina (#16) and Germany (#17) are shown, as is a large brochure (#18) on the Zeppelin company, whose agents in New York were the Hamburg-Amerika steamship line, and agents in Brazil the Sindicato Condor.

IM ZEPPELIN ÜBER DEN SÜDATLANTIK

DEUTSCHE ZEPPELIN-REDEREI

NAME \_\_\_\_\_

ZIEL \_\_\_\_\_

ABFAHRT \_\_\_\_\_ REISE NR. \_\_\_\_\_

HAMBURG-AMERIKA LINIE - SYNDICATO CONDOR LTDA



#3



#4

IM ZEPPELIN ÜBER DEN OZEAN

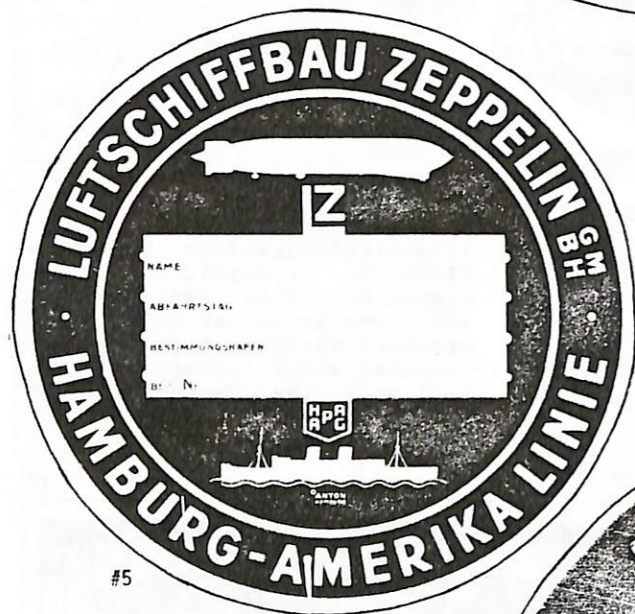
DEUTSCHE ZEPPELIN-REEDEREI

NAME \_\_\_\_\_

ZIEL \_\_\_\_\_

AB: ANRI \_\_\_\_\_

#6

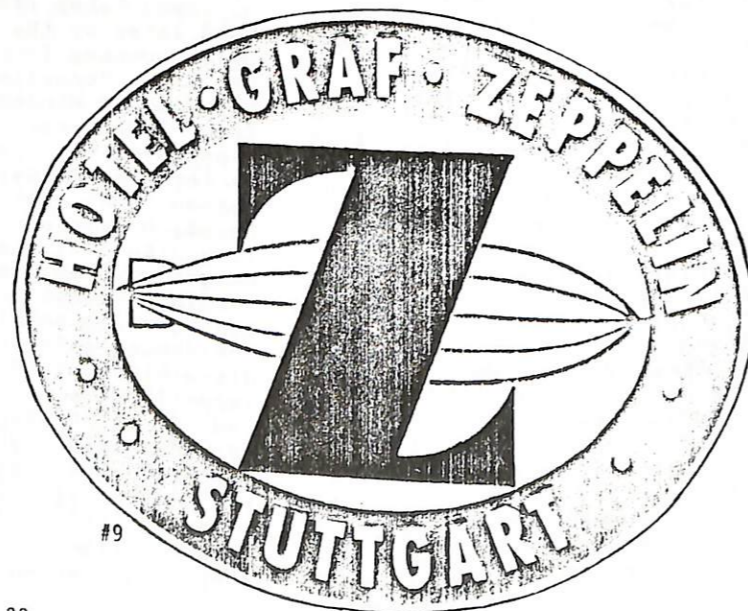


#5

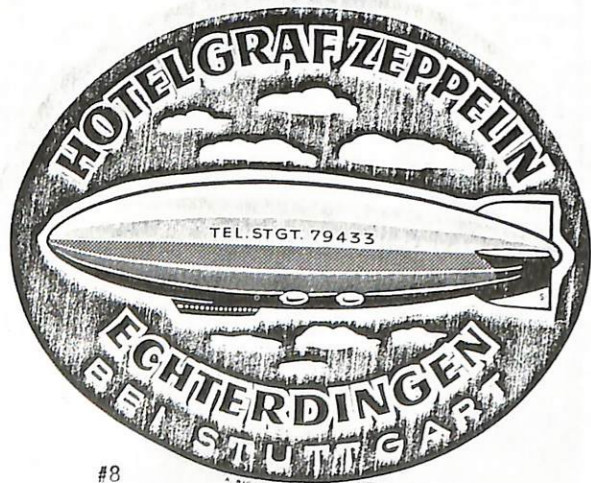
PLEASE NOTE: NEW ZIP Code for Mr. Thomas, effective 01 JUL, is 34698.



#7



#9



#8

Kurgarten-Hotel  
Friedrichshafen Bodensee  
Im Konzern des Luftschiffbau Zeppelin

#10

2 days to europe

GERMAN ZEPPELIN TRANSPORT CO  
AMERICAN ZEPPELIN TRANSPORT, Inc  
HAMBURG-AMERICAN LINE  
NORTH GERMAN LLOYD  
GENERAL PASSENGER AGENTS

#13

NEW YORK  
AIRLINES TICKET OFFICE  
VAN. 3-0490  
HOTEL ROOSEVELT NEW YORK

Use the German Air Mail Service to South America

5 days in transit

For further information regarding the rates and the latest closing time apply to the agencies of the Hamburg-American Line, or to the local postmaster.

Printed in Germany

#12

GERMAN ZEPPELIN TRANSPORT CO.  
AMERICAN ZEPPELIN TRANSPORT INC.

**SAILINGS & RATES**

HAMBURG-AMERICAN LINE  
NORTH GERMAN LLOYD  
*General Passenger Agents*

MARCH 15, 1937

#14

En 2 días a través del Océano

Deutsche Zeppelin-Reederei

#16

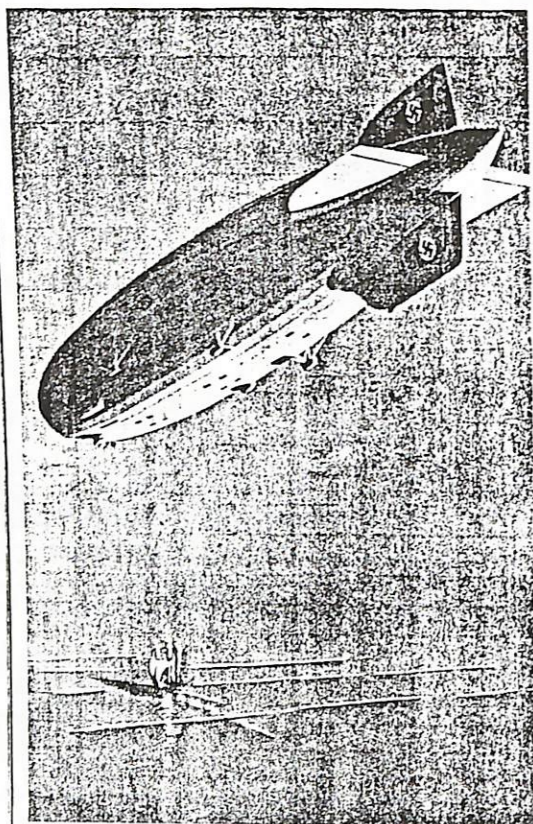
Serviço Aereo Transoceanico Via Condor-Zeppelin

N.º 3 HORARIO 1936

Deutsche Zeppelin-Reederei  
Representante geral na America do Sul  
SYNDICATO CONDOR LTDA.

#15

DEUTSCHE ZEPPELIN-REEDEREI

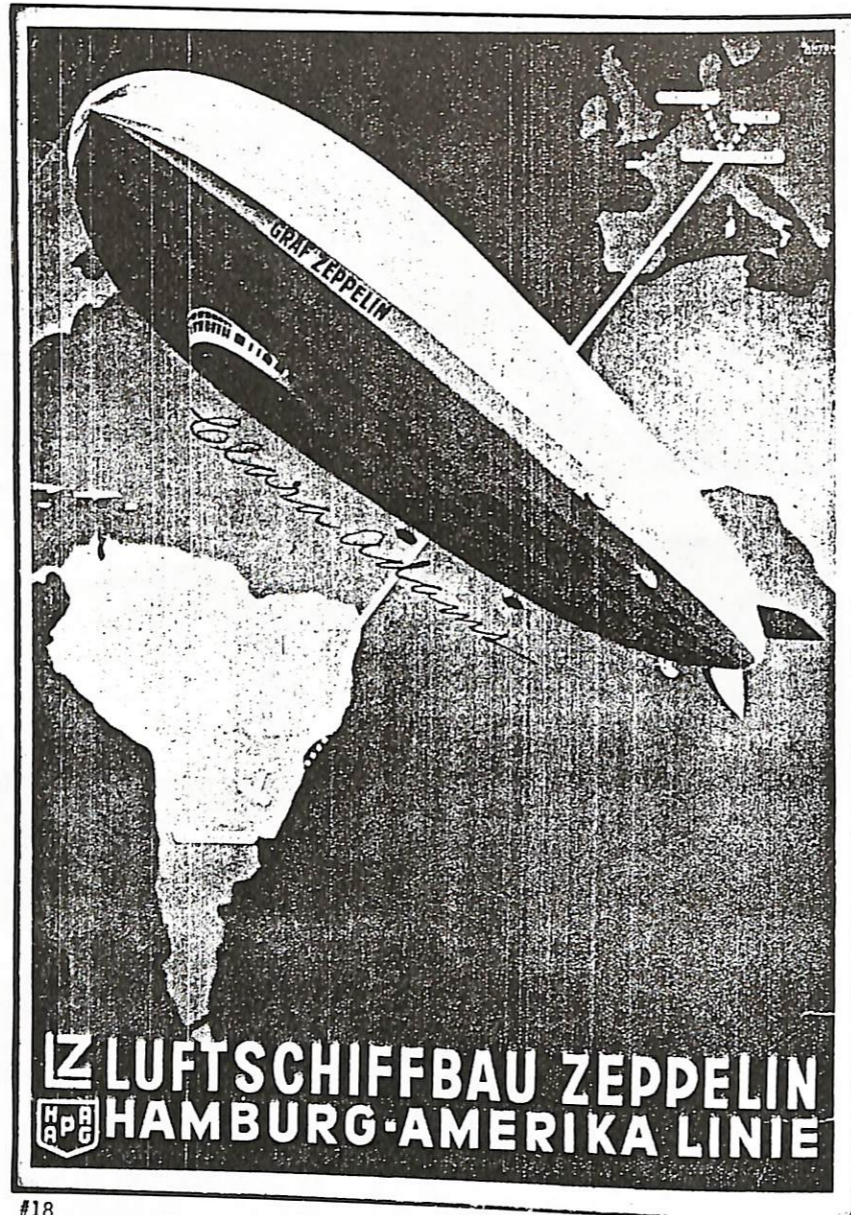


FAHRPLAN  
und Fahrpreise

für den ÜBERSEE-DIENST der  
DEUTSCHEN ZEPPELIN-REEDEREI

Ausgabe Februar 19.  
Änderungen vorbehalten.

#17



#18

Member George Cearley's new book, "American Airlines, America's Leading Airline", is now in print. With more than 700 photographs and a much expanded text from the previous edition, this is a must for anyone interested in American Airlines.

Two other books are due to appear this summer or fall. Member Ron Davies, curator of air transport at the National Air & Space Museum, Washington, D.C., will have a new book on Pan American Airways, which will show all of PanAm's aircraft, past and present, in color, with full descriptions and history of their use with the airline.

The other new book is my own, titled Nostalgia Panamericana. It will feature 60 pages of mostly flying boats, mostly Pan American Airways, associates and contemporaries. All pages will be in color, showing the beautiful art work used in the 1920s and 1930s by PAA and others in their brochures, timetables and baggage labels. No jets! Copies might be ready by Convention time in July. Anyone interested in flying boats or commercial aviation will want this popularly-priced book on his coffee table. More details in the next Captain's Log.

24



#11

BACK TO THE PRESENT

Back with today's stickers, BILs and labels, Lee Bachar of Chicago sent in new labels from Gronlandsfly of Greenland (#19). The printing is blue, with red center. There are two sizes, 57 mm and 97 mm in diameter. Lee also sent in Busy Bee of Norway (#20), Cargolux of Luxembourg (#21) Luxembourg and Orion of Great Britain (#22). The latter shows a Boeing 737-300SQ. The Cargolux label is unique because it comes in the form of a postcard of which the oval label forms the center part (#21a).

From Pat McCollam we received some interesting labels - new BILs from Royal West Airlines (#23), Golden Pacific Airlines (#24), Mesa Airlines (#25) and States West Airlines (#26). There must be many such small airlines all over the U.S.A. and Canada which use BILs. The best way we get to know about them is when members like Lee and Pat send them in to us for recording. Pat also sent in some new Southwest Airlines stickers (#27), celebrating St. Patrick's Day - green shamrocks, "Kiss me, I'm Irish", etc. There are three kinds. Pat also said L.A. helicopter Airlines may be out of business soon. One of their destination stickers is shown (#28). He also sent in LAX, BUR, LGB, JBP and JID.

Philippine Airlines has a new logo or color scheme - a rising sun on the tail of the aircraft.



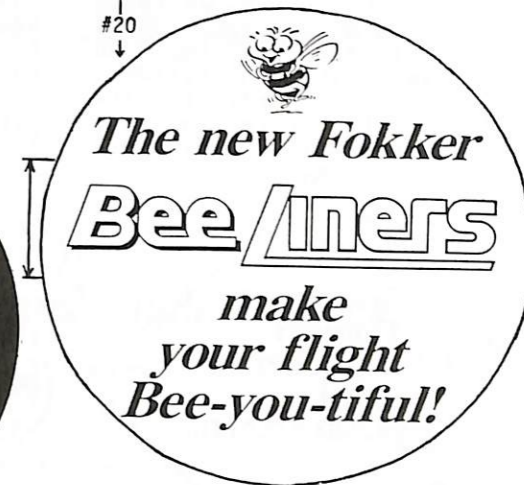
#19



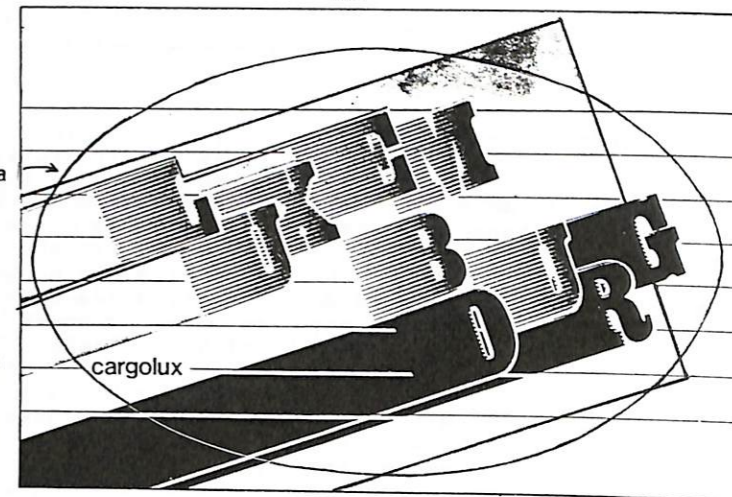
#20



#22



#21



#21a

cargolux



#27



#28

#25

**mesa airlines**

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

Phone \_\_\_\_\_



#23

#24

**GP Golden Pacific Airlines**

BAGGAGE I.D.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_

PHONE \_\_\_\_\_ ZIP \_\_\_\_\_

25

#26

**STATESWEST AIRLINES**

Name \_\_\_\_\_


Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

Phone (Area Code) \_\_\_\_\_ Number \_\_\_\_\_

NAME \_\_\_\_\_  
 ADDRESS \_\_\_\_\_  
 CITY/STATE \_\_\_\_\_  
 TELEPHONE #29 \_\_\_\_\_



# Sky West

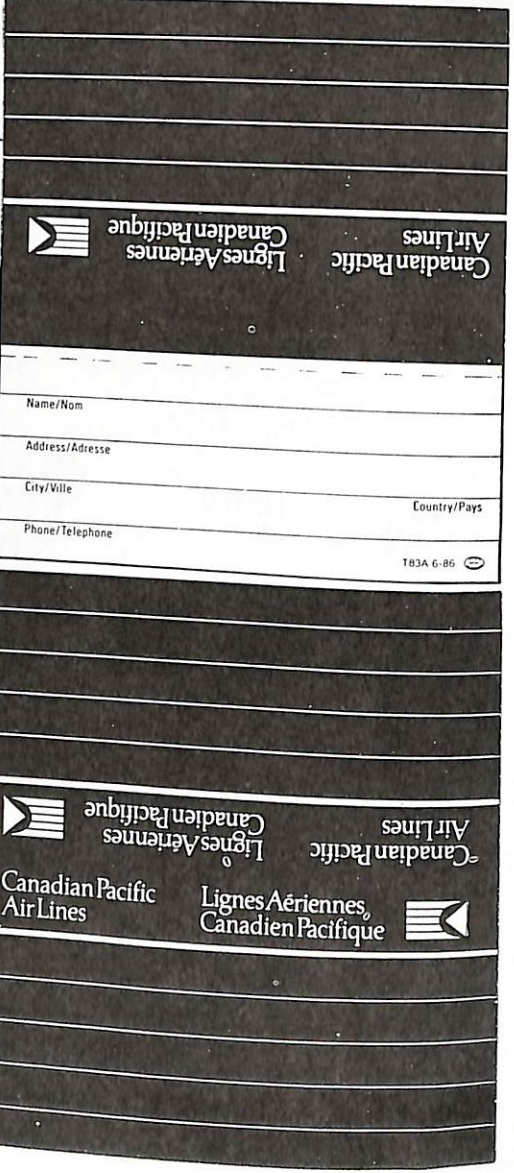
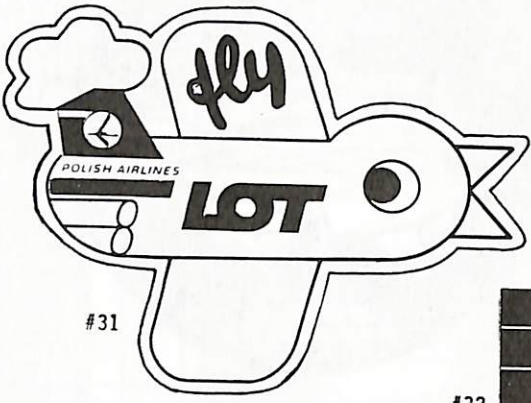
Skywest Airlines (#29) is the newest Delta Connection airline. Delta, which has taken over Western Airlines, also has ASA, Business Express and Comair as Delta Connections. Skywest will co-ordinate its schedules with Delta for the convenience of passengers

flying from Los Angeles and Salt Lake city. Air Atlanta has filed for bankruptcy, has cancelled all flights and has laid off all personnel. Although they hope to resume some flights, the situation doesn't look promising. The "Special Edition"

label (#30) will probably be hard to get from now on.

(Eds' note: I have added a Polish Airlines LOT label (#31) which they sent me last year when I asked them for details on their Lockheed L-14 operations. Printed on white with black bird outline and tail feathers, red 'fly', white and red national flag on the tail and blue logo and tail emblem.

Another entry by me: (#33) new Canadian Pacific Air Lines BIL, picked up at Toronto on 13 APR of this year. Since CPAL has now been renamed Canadian Airlines International/CAI, these Royal blue, red and white BILs will soon be rare - JG.)



**STICKER COLORS & MEASUREMENTS**

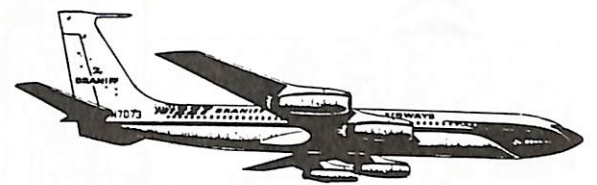
- #19. Diam. 2 3/16 in. (55 mm); white background; dark blue print; red center.
- #20. 3 7/8 x 1 9/16 in. (97x40 mm); white background; text yellow with black outline; bumble bee yellow and black stripes on body, white face and wings.
- diam. 4 in. (100 mm); top & bottom parts yellow background; center part white; bumble bee as above; text in top & bottom black; yellow 'Bee', white 'Liners', both in black outline.
- #21. 5 7/8 x 4 in. (149x112 mm); white background; black text; red trail behind 'LUXE', black behind 'MBU', dark blue behind 'ORG', white between red & dark blue trails, all on light blue rectangle.
- #21a. 4 5/8 x 3 in. (118x75 mm).
- #22. Diam. 4 in. (100 mm); maroon background & vertical tail; orange logos; maroon, orange & yellow cheatlines on white aircraft; black outlines of airline name & aircraft; white bottom text.

- #23. 5 11/16 x 1 1/4 in. (144x32 mm); violet on white; bottom third of logo is pink.
- #24. 2 3/4 x 1 1/4 in. (70 x 57 mm); blue on yellow.
- #25. 3 1/2 x 2 1/2 in. (89 x 63 mm); green on white.
- #26. 2 3/4 x 1 3/4 in. (70 x 45 mm); white background; 'STATES' light blue; 'WEST' gray; rest of text black.
- #27. 2 x 1 3/4 in. (50 x 44 mm); white on green.
- #28. 2 x 2 in. (50 x 50 mm); black on beige.
- #29. 10 3/8 x 1 1/4 in. (264 x 31 mm); red on yellow.
- #30. 2 1/4 x 2 1/4 in (57 x 57 mm); colors?
- #31. greatest width 6 1/2 in (165 mm); greatest depth 5 in (127 mm); white background; black outline of bird & tail feathers; red 'fly' and bottom bar of white-red Polish flag on tail; blue 'LOT', tail & titles.
- #32. 3 1/2 x 4 7/8 (87 x 98 mm); royal blue & white background; text royal blue on white & white on royal blue; logo white bars & orange triangle; two wide orange bars across on either side of titles.

# AROUND THE WORLD

## of Airline Schedules

Copyright, 1987  
 George Walker Cearley, Jr.



THE SCHEDULE ARTICLE THIS ISSUE INCLUDES A VARIETY OF MATERIAL INCLUDING AIRSHIP SERVICE IN THE 1930'S, A LOOK AT THE SUPER DC-8 ON ITS 20TH ANNIVERSARY OF SERVICE, AND THE MERGER OF DELTA AIR LINES AND WESTERN AIR LINES.

Wöchentlicher Deutscher Luftpostdienst  
**Europa-Südamerika**  
 3 1/2 Tage Berlin - Buenos-Aires (14.000 km)  
 Brasilien / Uruguay / Argentinien / Chile  
 Bolivien / Peru / Ecuador / Paraguay  
 Bei nachstehenden  
**Zeppelin-Fahrten**  
 auch Fluggast- und Frachtbeförderung:  
 6. 4., 20. 4., 4. 5., 18. 5., 1. 6., 15. 6., 29. 6.,  
 weitere Luftschiffreisen werden noch bekanntgegeben  
**Verlangen Sie unseren Sonderprospekt**  
 Auskünfte erteilen sämtliche  
 Postanstalten sowie alle Dienststellen der Deutschen Lufthansa

## Air Trips to North and South America

with the Airships of the Deutsche Zeppelin-Reederei

**South America Service:**

Departure every second Tuesday in the evening from Frankfurt or Friedrichshafen.

**North America Service:**

Periodical journeys similar to the South America Service.

AT LEFT: ADVERTISEMENT FROM APRIL 1, 1935, LUFTHANSA TIMETABLE FOR ZEPPELIN SERVICE BETWEEN EUROPE AND SOUTH AMERICA - THREE AND A HALF DAYS FOR THE 14,000 KILOMETER FLIGHT FROM BERLIN TO BUENOS AIRES. ON RIGHT: ADVERTISEMENT FROM APRIL 4, 1937, LUFTHANSA SCHEDULE FOR AIRSHIP SERVICE BY THE DEUTSCHE ZEPPELIN-REEDEREI BETWEEN GERMANY - NORTH AMERICA AND GERMANY - SOUTH AMERICA. DEPARTURES FROM GERMANY WERE MADE FROM FRANKFURT AND FRIEDRICHSHAFEN.

**WORLD-WIDE SERVICE**  
 LOS ANGELES - CHICAGO - NEW YORK  
 LAKEHURST - FRANKFURT  
 SOUTH AFRICA - INDIA - AUSTRALIA

From Los Angeles, Chicago or any point on the system of American Airlines, Inc., on frequent regular schedules to New York (Consult Timetable).  
 From New York to Lakehurst by the exclusive service of American Airlines, Inc., connecting with departures and arrivals of the airship Hindenburg.  
 From Lakehurst to Frankfurt via Airship Hindenburg.  
 From Frankfurt to European points via Deutsche Lufthansa.  
 From Europe to:  
**South Africa:** Cape Town and intermediate points via Imperial Airways, Calcutta, Singapore and intermediate points via Imperial Airways, K.L.M. and Air France.  
**Indo-China:** Hanoi and intermediate points via Air France.  
**Dutch East Indies:** Batavia and intermediate points via K.L.M. - K.N.I.L.M.

**AMERICAN • PAN AMERICAN • DEUTSCHE ZEPPELIN REEDEREI**

TO MEXICO, CENTRAL AND SOUTH AMERICA, EUROPE—American Airlines to Dallas or Ft. Worth, connecting airline to Brownsville, Texas, and Pan American through Mexico, Central and South America. Airship Hindenburg or Graf Zeppelin from Rio to Frankfurt A.M., Germany; thence, by Deutsche-Lufthansa, and connecting European airlines, to all Europe, Asia, Africa, India and Australia.

AT LEFT AND RIGHT: ADS FROM JULY 15 AND NOVEMBER 15, 1936, AMERICAN AIRLINES TIMETABLES, RESPECTIVELY. AMERICAN PROVIDED CONNECTING SERVICE WITH THE AIRSHIP HINDENBURG, D-L2129, DURING 1936 VIA A DC-3 FLIGHT CONNECTION AT LAKEHURST, NEW JERSEY. A CONNECTION VIA AMERICAN AIRLINES AND PAN AMERICAN AIRWAYS WITH THE DEUTSCHE ZEPPELIN-REEDEREI WAS MADE THAT YEAR WITH THE GRAF ZEPPELIN OR HINDENBURG AT RIO DE JANEIRO FOR SERVICE ACROSS THE ATLANTIC TO EUROPE.

**WORLD-WIDE AIR SERVICE**

Again this year American Airlines, with its exclusive connecting service with the Airship Hindenburg, will provide all-air service from all points in the United States to all points in Europe. The first eastbound flight of the Hindenburg leaves Lakehurst May 6th. Thereafter, at scheduled intervals through November 2nd, 18 round trips will be made. See details of this and other world-wide air services on Page 8.  
**VACATION AIR TOURS**... Every summer American Airlines renders another very important service to vacation travelers. Vacation round-trip air tours which help you to see much more and go much farther in less time... bring distant national parks, playgrounds, resorts, scenic spots, vacation cities, within a few hours of your home. Make this summer's vacation one that will live long in your memory! Your travel agent or your American Airlines' representative will gladly furnish details.

**WORLD-WIDE AIR SERVICE**  
**American Airlines, Inc. • Airship Hindenburg**  
 (Effective May 6, 1937)

**Europe** - American Airlines, Inc., to Lakehurst, N. J., providing exclusive connection with Airship Hindenburg for Frankfurt a/Main, Germany, where the Deutsche Lufthansa and connecting lines afford air service to all Europe.  
**Africa** - From Frankfurt, via Deutsche Lufthansa, connecting with Imperial Airways and associated lines for Egypt, the Sudan, East Africa and the Transvaal.  
**The Orient** - Imperial Airways to India, Burma, Siam, Malay Peninsula, China, Dutch East Indies and Australia. Air France to Syria, Iraq, Persia, India, Burma, Siam and Indo-China. K. L. M. and K. N. I. L. M. (Royal Dutch Air Lines) to Egypt, Arabia, India, Burma, Siam, Straits Settlements and the Dutch East Indies.

AMERICAN AIRLINES WAS TO PROVIDE CONNECTING SERVICE WITH THE AIRSHIP HINDENBURG AGAIN IN 1937 BEGINNING MAY 6 THAT YEAR. THE DATE SERVICE WAS TO BEGIN WAS THE INAUGURAL EASTBOUND ARRIVAL AT LAKEHURST OF THE HINDENBURG THAT YEAR. THIS WAS ALSO THE DAY THE HINDENBURG EXPLODED ON LANDING AT LAKEHURST. THIS DISASTER ENDED THE AIRSHIP SERVICE ACROSS THE NORTH ATLANTIC AND, OF COURSE, AMERICAN'S CONNECTING FLIGHTS.

Delta DC-8s  
come in  
a new size...

Delta's Super DC-8s,  
world's largest Jetliners  
...first in  
transcontinental service!

AT RIGHT: PAGE FROM DELTA'S APRIL 30, 1967, TIMETABLE SHOWING AN EXAMPLE OF THE CARRIER'S INITIAL DC-8-61 SERVICE - FLT 121, NEW YORK-ATLANTA-NEW ORLEANS-DALLAS-LOS ANGELES. DELTA WAS FIRST TO OPERATE THE SUPER DC-8-61 IN SCHEDULED TRANSCONTINENTAL U.S. SERVICE.

**DELTA AIR LINES SOUTH and WESTBOUND SERVICE**  
New York-Philadelphia-Washington-Atlanta-The Caribbean-Louisiana-Texas-California  
TABLE 1 (Continued on pages 22, 23, 24, 25 and 26)

JET DC-8	JET DC-8	JET DC-8	JET DC-8	JET DC-8	JET DC-8	JET DC-8	JET DC-8	JET DC-8	JET DC-8	JET DC-8	JET DC-8	JET DC-8	JET DC-8	JET DC-8	JET DC-8	JET DC-8	JET DC-8					
549	121	121	156	687	578	189	885	531	823	45	454	717	439	917	787	525	379	573				
NY	NY	NY	NY	NY	NY	NY	NY	NY	NY	NY	NY	NY	NY	NY	NY	NY	NY	NY	NY			
12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35		
1:00	1:00	1:00	1:00	1:00	1:00	1:00	1:00	1:00	1:00	1:00	1:00	1:00	1:00	1:00	1:00	1:00	1:00	1:00	1:00	1:00	1:00	
12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35	12:35

*[Note: Detailed flight schedule table with columns for flight numbers, aircraft types, departure times, and destinations. Destinations include New York, Washington, Atlanta, Dallas, Los Angeles, San Diego, San Francisco, and Honolulu.]*

Note (1) Flight 189 operates as NY-FT Worth-Dallas as F/Y Dallas-Los Angeles. Effective April 30, 1967.  
Note (2) Flight 45 operates as (M) Charleston-Montgomery; (A) Montgomery-Port Worth. (M) Fares apply to any destination for Charleston-Columbia or Atlanta passengers.  
Note (3) Flight 540 Charleston-Savannah portion on May 1, 8, 12, 19, 26 and 29 will operate with DC-8 equipment out Charleston 1:20 AM into Savannah 1:56 AM.  
Note (4) Flight 158 Savannah-Atlanta only on May 1, 8, 12, 19, 26 and 29 will operate with DC-8 equipment out Savannah 2:40 AM, Atlanta 4:10 AM-4:40 AM into Atlanta 5:34 AM.  
Page 22

**COMPLETE SCHEDULES BETWEEN THE MAINLAND AND HAWAII**  
(LOCAL CONNECTING SCHEDULES IN COMPLETE SCHEDULE TABLES)  
Effective July 9, 1967

**WESTBOUND**

Flight Number	199	181	183	183	185	61	21	195	5	111	187	201	189	197
Aircraft Type	DC-8 JET	Super DC-8	Super DC-8	DC-8 JET	DC-8 JET	DC-8 JET	DC-8 JET	DC-8 JET	DC-8 JET	DC-8 JET	Super DC-8	DC-8 JET	DC-8 JET	Super DC-8
Class of Service	F/Y/K	F/Y/K	F/Y/K	F/Y/K	F/Y/K	F/Y/K	F/Y/K	F/Y/K	F/Y/K	F/Y/K	F/Y/K	F/Y/K	F/Y/K	F/Y/K
Days Operated														
NEW YORK (International)	(EDT)Lv													
WASHINGTON/BALTIMORE (Friendship)	(EDT)Lv													
CHICAGO (O'Hare International)	(CDT)Lv													
SAN FRANCISCO (International)	(PDT)Lv													
SAN DIEGO (International)	(PDT)Lv													
LOS ANGELES (International)	(PDT)Lv													
HONOLULU, HAWAII	(HST)Ar													

**EASTBOUND**

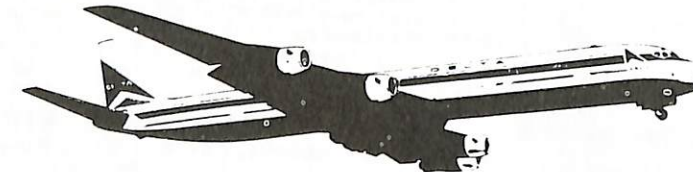
Flight Number	180	190	184	200	58	36	16	192	182	194	186	100	188	198	196
Aircraft Type	Super DC-8	DC-8 JET	DC-8 JET	Super DC-8	DC-8 JET	DC-8 JET	DC-8 JET	DC-8 JET	Super DC-8	DC-8 JET	DC-8 JET	DC-8 JET	DC-8 JET	Super DC-8	DC-8 JET
Class of Service	F/Y/K	F/Y/K	F/Y/K	F/Y/K	F/Y/K	F/Y/K	F/Y/K	F/Y/K	F/Y/K	F/Y/K	F/Y/K	F/Y/K	F/Y/K	F/Y/K	F/Y/K
Days Operated															
HONOLULU, HAWAII	(HST)Lv														
LOS ANGELES (International)	(PDT)Ar														
SAN DIEGO (International)	(PDT)Ar														
SAN FRANCISCO (International)	(PDT)Ar														
CHICAGO (O'Hare International)	(CDT)Ar														
WASHINGTON/BALTIMORE (Friendship)	(EDT)Ar														
NEW YORK (International)	(EDT)Ar														

UNITED AIR LINES WEST AND EAST-BOUND SCHEDULES BETWEEN THE U.S. MAINLAND AND THE HAWAIIAN ISLANDS AS OF JULY 9, 1967, SHOWING SUPER DC-8 (DC-8-61) SERVICE BETWEEN THE WEST COAST AND HONOLULU. IT WAS IN THESE MARKETS THAT UAL INITIALLY UTILIZED ITS STRETCH DC-8'S, RATHER THAN IN TRANSCONTINENTAL SERVICE.

THIS SPRING MARKS THE 20TH ANNIVERSARY OF SERVICE WITH THE DC-8-61, MANY OF WHICH WERE LATER UPGRADED TO DC-8-71 STANDARDS.

ON APRIL 10, 1967, DELTA AIR LINES TOOK DELIVERY OF ITS FIRST DC-8-61, N822E, SHIP 861. A LITTLE OVER ONE WEEK LATER THIS AIRCRAFT WAS PLACED IN SERVICE. AS OF APRIL 30, 1967, THE FOLLOWING DC-8-61 FLIGHTS WERE OPERATED (ALL SERVICES ILLUSTRATED): (1) FLT 121, NEW YORK (KENNEDY INT'L AT IDLEWILD)-ATLANTA-NEW ORLEANS-DALLAS LOVE FIELD-LOS ANGELES; (2) FLT 10, LOS ANGELES-DALLAS-ATLANTA-JACKSONVILLE; (3) FLT 11, JACKSONVILLE-ATLANTA; AND (4) FLT 16, ATLANTA-NEW YORK (KENNEDY INT'L AT IDLEWILD). ALL THESE FLIGHTS WERE OPERATED WITH THE ONE DC-8-61, N822E, SHIP 861.

ON APRIL 10, 1987, TWENTY YEARS AFTER ITS DELIVERY TO DELTA, N822E (SHIP 861), NOW A DC-8-71, OPERATED THE FOLLOWING TRIPS: (1) FLT 827, DAYTON-ATLANTA-FT. MYERS; (2) FLT 298, FT. MYERS-ATLANTA-DAYTON; (3) FLT 535, DAYTON-ATLANTA-NEW ORLEANS; AND (4) FLT 855, NEW ORLEANS-DALLAS/FT. WORTH-LAS VEGAS.



This is a new generation of giant Jets... first of their type in regularly scheduled transcontinental service. But being first is nothing new with Delta. We were first to fly the DC-8, the Convair 880 and the DC-9. Our normal complement of passengers standing beside a new \$8 1/2 million Super DC-8 gives you a rough idea of the size of this world's largest Jetliner. But Delta has purposely limited first-class and one of spacious comfort and luxury in a series of cabins handsomely decorated with colorful new materials and rich textures. And six stewardesses add a new dimension to Delta's famed hospitality. These new Super DC-8s will operate easily from present Jet airports and terminals, and will tend to reduce air traffic by accommodating up to twice as many passengers in one Jet instead of two. We believe you'll be thrilled to fly in the world's largest Jetliner. Now in service coast-to-coast via major Southern cities. Chicago-Miami service to follow.



**WESTERN**

*Naturally....  
the O-N-L-Y  
way to fly!*

LOCATION OF WALLY BIRD STICKER ON SHIP 905.





**Fly Your Mail!**

**CONSTANT! DIRECT! DAILY!**

**Los Angeles to New York in 30 Hours!**

BEGINNING IN APRIL, 1926

**Transcontinental Air Mail Service for Southern California!**

**JUST THINK!**—42 hours saved between Los Angeles and Chicago. Proportionate time saving to and from all eastern points, whether on air mail routes or not.

LOS ANGELES and Southern California have not been given direct air mail service because the western terminus of the transcontinental air mail route has been located at San Francisco.

LOS ANGELES will become the South Pacific terminus of this system through inauguration by the WESTERN AIR EXPRESS, INC. a daily air mail service connecting with the government operated trunk line at Salt Lake City.

THIS NEW LINE will serve all Southern California with "AIR MAIL" to and from every point in eastern United States.

YOU, MR. BUSINESS MAN, can push your business ahead hours a day, and days a week, by availing yourself of this direct transcontinental air mail service.

UNDOUBTEDLY you place a definite value upon your personal time and that of your business; therefore, you can easily compute the value of this new service to you.

YOU SHOULD use the official "AIR MAIL" envelope with red, white and blue stripes similar to the design on the outside of this folder and the official "AIR MAIL" stamp—but, if these are not available, mark your letter plainly "AIR MAIL" and affix the proper postage.

FOR GENERAL INFORMATION, TELEPHONE OR WRITE

**WESTERN AIR EXPRESS, Inc.**

Directors: WILLIAM M. GARLAND, BYRON L. GRAYES, GEORGE M. HOLLET, HARRIS M. HANSHUE, COL. ELBERT J. HALL, G. E. NOLL, MAJOR CORLISS C. MORRILEY

Officers: President and General Manager—HARRIS M. HANSHUE, Vice-President and Gen'l Mgr.—MAJOR CORLISS C. MORRILEY, Treasurer—BYRON L. GRAVER, Secretary—R. A. MORTON

James G. Woolley, Traffic Manager

Suite 801 W. M. Garland Bldg., 9th and Spring Streets, Los Angeles, Calif. VAndike 6707

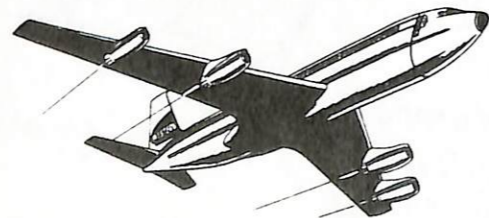
Western Air Express, Inc. flying Douglas mail planes equipped with Liberty engines—latest aircraft development of the famous "Around-the-World" cruises—built in Southern California and conceded to be the world's best airplanes. CARGO CAPACITY, flying field at Telegraph Road and Santa Fe tracks.

A FOLDER FROM EARLY 1926 PROMOTING WESTERN AIR EXPRESS AIR MAIL SERVICE WHICH BEGAN APRIL 17TH THAT YEAR ON A ROUTE FROM LOS ANGELES TO LAS VEGAS AND SALT LAKE CITY. PILOT MAURY GRAHAM DEPARTED VAIL FIELD, LOS ANGELES, HEADING NORTH WITH 256 POUNDS OF MAIL CARRIED IN A DOUGLAS M-2 MAILPLANE. AT ABOUT THE SAME TIME, PILOT JIMMIE JAMES STARTED HIS SOUTHBOUND JOURNEY FROM SALT LAKE CITY. EACH FLIGHT WAS COMPLETED IN EIGHT HOURS, AND THESE MARKED THE BEGINNING OF WESTERN'S COLORFUL HISTORY. AT THE TIME OF ITS MERGER WITH DELTA, WESTERN WAS THE OLDEST SURVIVING AIRLINE IN THE U.S. UNDER THE SAME BASIC NAME, I.E., WESTERN AIR EXPRESS AND WESTERN AIR LINES.

**Delta And Western.  
It's More Than A  
Merger. It's An  
All-Star Team.**

*Delta Air Lines*

**WESTERN  
AIRLINES**



# AIRLINE DINNERWARE

by RICHARD W. LUCKIN

I am very pleased to add my name to those of the other fine team members of the CAPTAIN'S LOG staff. Writing about transportation china is not new to me. Four years ago my wife and I published our first book on the subject, called 'DINING ON RAILS', a 320-page encyclopedia dealing with railroad dining car china.

In addition to our writing about and collecting of railroad china, we also have a sizable collection of airline china and glassware.

It is my objective to show, in each issue of the LOG, new patterns, some old ones, and in some cases to feature a theme dealing with a certain type of ware. My first 'theme' in this

issue features cups and saucers. Hope you enjoy it.

Generally my budget doesn't allow me to sit in front of the curtain in first class, so my own dinnerware is often plastic. However, let's take a look at what a first class ticket buys. It is more than just a wider seat and more legroom.



#1

1. Northwest Orient uses a very attractive china for International First Class service. Made by Royal Dalton of England the china is decorated with a center band of burgundy,

flanked on either side by sand-colored bands. 'Regal Imperial' text and logo are gold.

2. McClain Airlines chose this stately pattern. The band is



#2

cobalt blue with two gold pinstripes. Top marked logo is also gold. The china is made by REGO of Japan and is back-stamped "McClain Airlines" as well.



#3

3. KAL (Korean Air Lines) used just a plain china on this older pattern with a cobalt-blue logo. The manufacturer is Milyang China of Korea.

4. A repetitive logo design is featured on Finnair's china. The design is light blue with darker blue letters F mixed in. This Thomas china is designed by Topio Wirkkola. Pieces are backstamped "Finnair".



#4

with this issue the CAPTAIN'S LOG has a new airline dining service editor. Adding Richard W. Luckin to the Log team means losing Keith Armes.

Keith has been our dining service editor since the Fall 1981 issue of the LOG and has published 15 columns in the 22 issues since then, doing a great job on everyone. For that we sincerely thank him because we know airline dinnerware is a popular topic for many WAHS members.

In the past two years, Keith has found it difficult to find the time necessary to do the subject justice and produce the high-quality material the readers have come to expect from him. In fact, he has been able to present us with only three columns in the previous nine issues... far fewer than he and our readers would like to see.

I am certain that all our readers join Mr. Luckin and I in thanking Keith for a job well done and for the countless hours he has spent preparing his material, all at his own expense. Thank you Keith, and good luck with your future endeavors. Please be assured that future contributions will always be welcomed by all of us.



#5

5. A tulip design is appropriate for KLM's First Class china. Flower design and letters KLM are an orange/yellow. The saucer is marked "KLM" on the back while the cup is not. Made by Hutschen-dreuther of Germany.

6. We'll save the most-beautiful design for last. Malaysian Airline System certainly spared no expense for their First Class china. Made by Noritake of Japan, this bone white china features delicate multi-shaded flowers. Pin-stripes and airline logo are in gold. The saucer also sports a logo. The pieces are not backstamped.

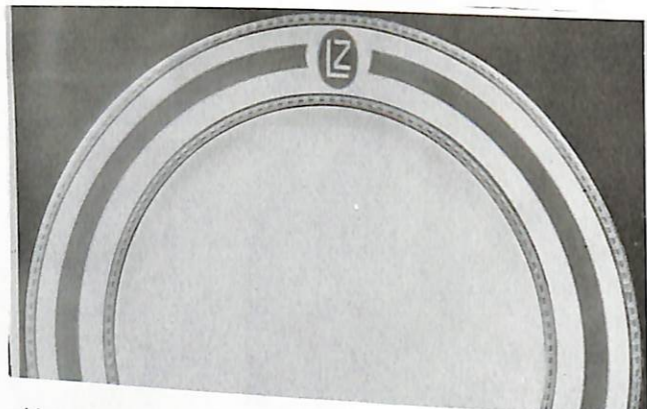
I am also including some pieces of Zeppelin china, in line with the main feature in this issue.

7. Made in 1928, the elegant pattern design on this Zeppelin plate certainly conveys the luxury of travel on the airships of that time. Letters LZ stand for Luftschiffbau Zeppelin. According to backstamp, this plate was used on the "Graf Zeppelin". Picture 7a shows this backstamp. It reads: 'H&C / SELB BAVARIA / HEINRICH & Co / HEINRICH-ELFENBEIN-PORZELLAN / "GRAF ZEPPELIN" / 1928

8. Another pattern for Zeppelin china, this is decorated in blue and gold. I have been told this is a Hindenburg pattern. Picture 8a shows the backstamp.

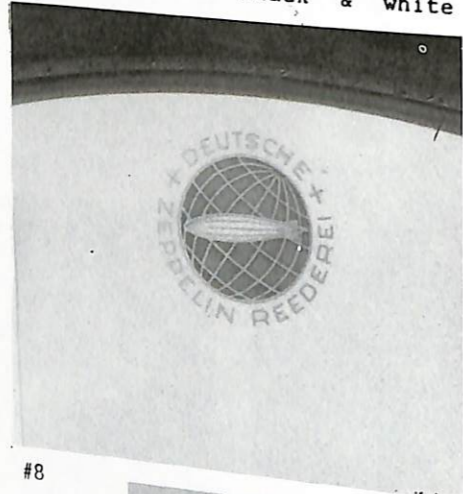
Other Zeppelin patterns were made. Hopefully I'll have photos of these to share soon. That's all for now. Next time: Kuwait Airways, an early American Airlines piece, an Iran Air pattern and more.

(Ed's note: I have added photo 9 of a "Graf Zeppelin" mocha cup to Mr. Luckin's material. Pattern is identical to that on



#7

the plate in photo # 7. No, I do not collect airline china. This is just a black & white picture I picked up many years ago and kept around for a reason I no longer remember-JG)



#8



#9



#8a

32

# WINGS & THINGS

by RICHARD KORAN



LEFT: Outstanding Zeppelin memorabilia from Cabezas Collection: hat of the Hindenburg's machinist, and Deutsche Zeppelin Reederei (DZR) automobile standard - see main text. Small pin at bottom left is DZR lapel badge for wear by staff. Souvenir keyholder (to right of badge) pictures Graf Zeppelin in flight. Keyholders were sold on board.

In the fall of 1933 a 20-year-old lighter-than-air nut from Wyandotte, Michigan, named Emerson Mehlhose, went to the level tract of ground near Akron, Ohio, dominated by the impressive arches of the Goodyear-Zeppelin Dock, to view the arrival of the Graf Zeppelin - and to be a member of the ground crew that windy October day.

"The wind was too high for the arrival," Mehlhose said, "so Dr. Eckener (Dr. Hugo Eckener, captain of the Graf -JG) flew around the local area 'til the wind settled down enough so the huge silver airship could be brought in without any difficulty."

Mehlhose said he was quite excited about being in the ground crew helping handle and moor the Graf Zeppelin. His being there was the result of his consummate interest in gliders, the flying of which he did a lot in the Akron area in those days. It was while in Akron that Emerson met one of the team of German engineers, Wolfgang Klemperer, who had been brought from Germany to work at Goodyear-Zeppelin.

The Germans have always had a keen interest in gliders, as well as the Zeppelins, and Mehlhose and Klemperer had soared together quite often, sharing their glider experiences. It was Klemperer who got Emerson on the ground crew for the Graf Zeppelin landing and it was also Klemperer who would introduce him to Dr. Eckener, the German

hero and international celebrity.

Akron in those days was sometimes referred to as the "Friedrichshafen of America", after the small German town where the Zeppelins were built.

Emerson Mehlhose is a fellow Quiet Birdman (QB) in the Detroit Hangar and I have known him for more than five years. It was just recently that I found out about his early Zeppelin experiences in Akron. When I went to the Mehlhose home in Wyandotte, I was shown the Bendix Trophy for Distance, presented to Emerson in 1936 by the Soaring Society of America. His flight of 77 miles (124 km) in that year was the longest on record during the Seventh National Soaring Contest. A member of the Soaring Hall of Fame in Elmyra, New York, sailplanes and lighter-than-air were in his blood - and still are, as I could see in his eyes during our afternoon together. It was no mere coincidence which put Emerson Mehlhose in the control cab of the the Graf Zeppelin that day with Dr. Eckener!

"He was there, with his cap and leather coat," Mehlhose said, "and he asked me if I 'would like to see my ship!'" When the tour began, "we had to take our shoes off so as not to cause a spark, since the Graf Zeppelin used hydrogen," he went on. After the visit, Mehlhose and Klemperer joined the Graf's crew members at a local Akron hangout for beer

and conversation. Emerson said he will "never forget the experience!"

My afternoon in Wyandotte included stories about airships in the Detroit area as well as Akron. I told him about my postcard showing the mooring mast for dirigibles at Ford Airport, Dearborn, Michigan (Vol. XI, No. 3, p.10) and Mehlhose told me that Ford had the mast built for \$1 million! That was lots of money in those days.

Some of Emerson's personal photograph collection are reproduced here with his permission - including the pictures taken at Grosse Ile naval base showing the ZMC-2 airship, a metal-clad, built under contract to the Aircraft Development Corporation of Detroit, Michigan. An all-metal hangar, 120 feet high, 120 feet wide and 180 ft long (36.6 x 36.6 x 55.08 m) was also erected on Grosse Ile by the ADC, at a cost of \$100,000. The first flight of ZMC-2 took place at the naval facility downriver (as they say here) on 19 AUG 29.

As a historical comment, the Grosse Ile hangar was dismantled in 1960, after 33 years of service, and was transported to Trenton, Michigan, where it is now the central portion of the Trentwood Lanes bowling alley.

The ZMC-2 had flown more than 2,500 hours and was salvaged in 1941 with engines, instruments and appurtenances assigned to the Lighter-than-Air School at Lakehurst, New Jersey.

With great timing, fellow collector and museum collector and - curator Hector Cabezas of Frankfurt, West Germany, sent me a large black and white photograph of the hat worn by the former Hindenburg

machinist, a Herr Zassler, who was living in the area until he passed away just last year at the age of 90. The photo also shows the Deutsche Zeppelin Reederei (DZR) automobile standard along with a DZR lapel badge and Zeppelin "souvenir" keyholder. Last year I was able to photograph both of these items as they were on display in the lobby of the Steigenberger Hotel just minutes away from the FRA airport.

The all-black hat worn by Herr Zassler bears a bullion wreath (that used to be gold) with a light-blue oval enamel badge with the white letters "LZ" - for Luftschiffbau Zeppelin. My color slide of this hat would not reproduce well and Hector's photo arrived in the nick of time for this issue of the CAPTAIN'S LOG.

Additional hats can be seen being worn by Zeppelin captains on page 151 of "The Giant Airships" in the Time-Life Epic of Flight series of books. The shots of the "brotherhood of dedicated captains" show Ernst Lehmann, Hans von Schiller, Hans Fleming, Anton Wittemann and Max Pruss.

"These five men, along with their charismatic leader, Hugo Eckener, commanded the Graf Zeppelin or the Hindenburg, or both. More than seasoned and reliable captains, they were single-minded apostles of the airship cause," says the book's author, Douglas Botting. "Together, they brought Germany's commercial airship service to full stride in the mid-1920s, extending safe, regular passenger service to three continents."

The Deutsche Zeppelin Reederei (DZR) automobile standard is a striking collectible - all red with black and white "bars", extending to the four corners from the DZR insignia, a globe with an airship in the center and surmounted by a distinctive eagle. The swastika is placed just below the globe and represents that part of the Zeppelin era.

The small oval enamel hat badge piece with the initials LZ can best be seen in full color on page 115 of the Giant Airships book, where it is shown on a Bavarian porcelain sugar bowl used aboard the Zeppelins.

The initials LZ appear on a number of pieces used in those days, and I refer you not only to various illustrations in the Giant Airships book (for the right shades of enamel), but

also to the Airline Dinnerware column in this issue of the CAPTAIN'S LOG. Of course you could also go and visit the Steigenberger Hotel and see the real thing in Hector's displays.

Other collectibles illustrated in the Time-Life book include an enameled gold cigarette case, a Zeppelin-shaped purse with the Count's (Count Ferdinand von Zeppelin) portrait, a decorated harmonica case, a wooden Count von Zeppelin nutcracker and an ivory-trimmed brush with Count von Zeppelin photo pin plus Zeppelin pin.

A third Zeppelin item hangs from the ceiling in the Steigenberger Hotel lobby, next to the display case. It is a model of the Hindenburg which used to hang in the lobby of the airport near the Lufthansa counters. It was damaged a year or so ago when a terrorist bomb went off in that area. The Hindenburg model has been restored - all pieces were recovered except one, the right rear engine of the airship. It is a stunning model.

The Zeppelins also brought back some personal memories of the Frankfurt area. For 10 years I flew in and out of the FRA airport with Operation Greek Party, an Air National Guard refuelling operation for USAF Europe from 1966 to 1976. As guardsmen we alternated squadrons of KC-97s (Boeing 377s to airline folks) for these operations, rotating nine guard units. Anyway, just off the east end of the Frankfurt runways is the town of Zeppelinheim, the small town which housed the workers of Weltluftschiffenhafen Rhein-Main.

The older civilian employees at R-M used to tell of the days gone by, talking about the two giant airship hangars which were located where the present military ramp is. We parked our military Stratocruisers right where the German airships once docked and were hangared. We also used to walk over to Zeppelinheim for brats and beer at the "Bratwurst Lady's" wagon, located right near Eckener platz, and to the small Zeppelin museum in the post office.

Zeppelin photographs in the anniversary book of the Frankfurt Flughafen, "1936-1986 - 50 Jahre Flughafen Frankfurt" really show how it was in those days. Base operations at R-M had great old pictures, but

nothing like these. Those hangars were huge! But what happened to them? The following quote from "The Giant Airships" tells the tale.

"But the large rigid airships were absent from the skies during the whole of World War II. Indeed, in early 1940, Luftwaffe chief Hermann Goering ordered the destruction of the only two existing Zeppelins on the ground that their metal was needed for the construction of military aircraft. Pleas that the old Graf Zeppelin be preserved were ignored. The ship was pulled to bits and its parts sent to the Netherlands to make a German radar tower.

"The two great hangars at Frankfurt were blown up with the explanation that they hindered the takeoffs of Luftwaffe bombers."

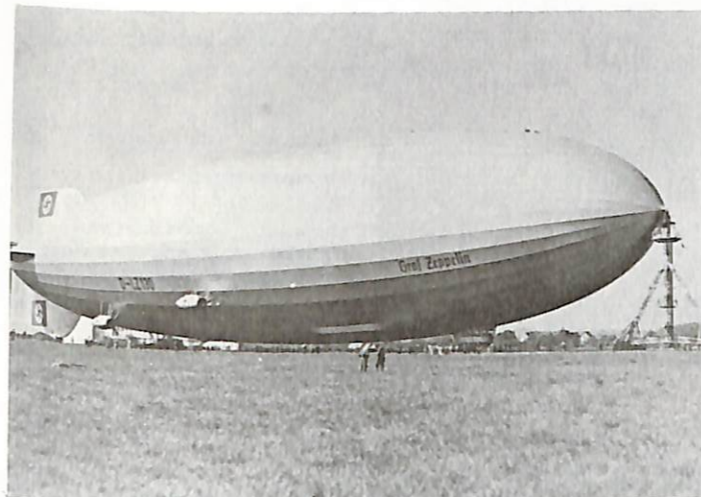
To close on a humorous note, I would like to quote from the letter I received from a military collector friend, J. Duncan Campbell. He wrote me that he and his wife had taken a flight on American Airlines from Harrisburg to El Paso.

"The other 'big thing' has been my part-time ground crew work with Don Dillon," Duncan said. "Don is a retired USAF Command Pilot who is enjoying his retirement flying his hot-air balloon, The Wind Carver (HOT AIR BALLOON RIDE, 1987 Gift Certificates Available, DILLON HOT AIR BALLOON SERVICE). I'm now very familiar with the sequence for launching a balloon, but I haven't yet ridden the chase van (with two-way radio) to see the land-and-deflate technique. The chase van uses country road maps that show every road except farm lanes.

"The critical part of launch occurs when the balloon is erect and straining for lift-off. That's when the ground crew surround the wicker basket and purposely hold it down until the pilot says 'cast off!'

"Now that is a surprise for the first time - that balloon literally JUMPS into the air, getting about 10 feet in the first second.

"Don has offered, several times, to take me on one of his flights. I've assured him each time that I'm not going to go with him. The mere thought of me standing in an oversized laundry basket, 2,000 feet above the ground, sends chills out to my fingernails. If I dwell on the thought, my pulse rate goes to 150. Not me!!!"



LZ 130 was the second airship with the name Graf Zeppelin and was intended as a sister ship to the Hindenburg in transcontinental services by the Deutsche Zeppelin Reederei. Although completed, it never entered commercial service because of the Hindenburg disaster. Instead, it flew only a few electronic and radar intelligence gathering operations along the British coast in the first year of World War 2. This is a Zeppelin-Metallwerke photo, courtesy of John Mellberg and was used in a series of airships photos for a calendar in 1981. It shows the ship at Friedrichshafen Lowenthal in 1938. Photo was provided to me by Emerson Mehlhose, along with a number of other Graf Zeppelin calendar pictures.



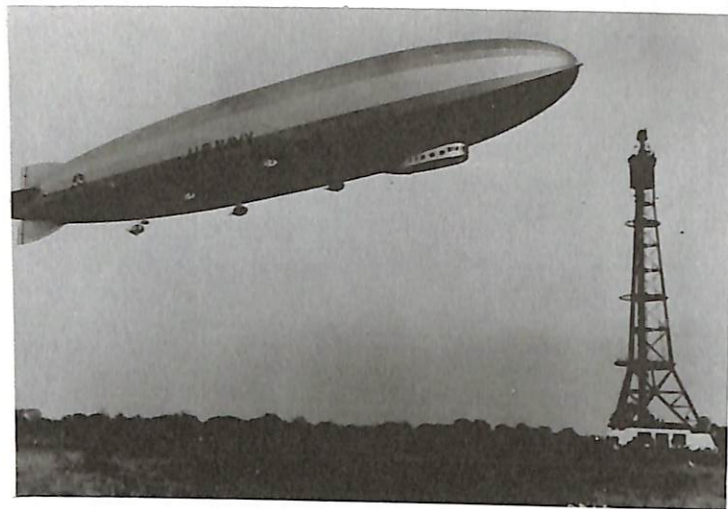
Cloth armband worn by Graf Zeppelin ground crew members at the Akron, Ohio Goodyear-Zeppelin facilities in 1933, when the LZ-127 arrived for a visit. It was worn by Emerson Mehlhose when he was on the ground crew helping to moor the giant airship. The Graf circled the airport area until the winds settled down, then came in for the 'landing'. "It was a thrill of a lifetime," Mehlhose said when I interviewed him. The armband is just white cloth with the letters applied in black ink. It was secured around the arm with a safety pin.



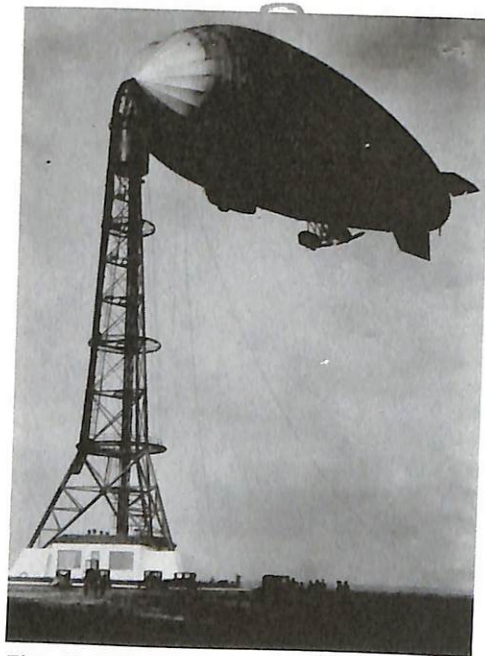
Airship Hindenburg - American Airlines 'Exclusive Connecting Service' sticker. Quoting George Cearley's 1981 American Airlines illustrated history book, "American lines provided connecting service with the Hindenburg Zeppelin in 1936 and was to have this service again in 1937." The sticker is done in red, white (now of-white) and blue.

Oesterreichfahrt 1931 commemorative of the Graf Zeppelin voyage over Vienna in that year. This collectible was acquired some years ago in the Frankfurt am Main area. The small silver 'medal' is of a plastic-like material, mounted on a red-white-red ribbon. It shows the LZ 127 in flight over the Vienna skyline. The colors of the ribbon are those of the national flag of Austria.

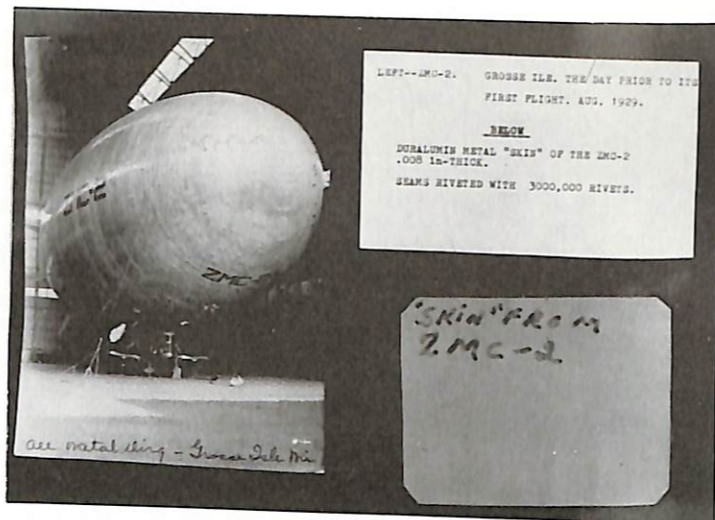




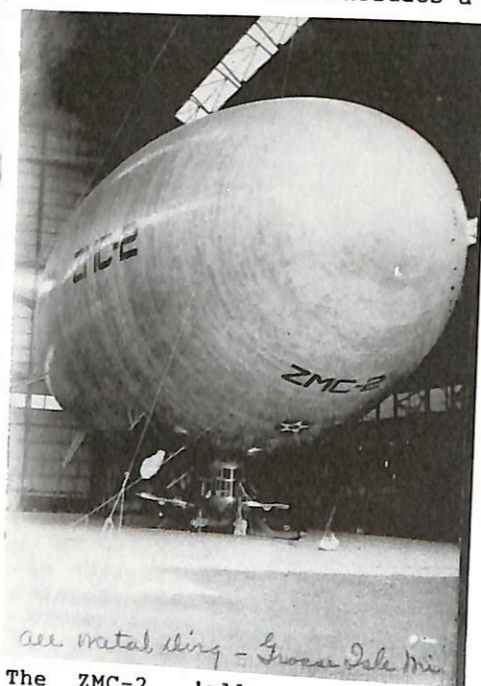
USS Los Angeles (ZR 3) arriving at Ford Airport, Dearborn, Michigan, on 15 OCT 26. The field is now Ford's test track across from Greenfield Village. The airship mast in the picture was one of six masts in the U.S. at the time. The Los Angeles was built by the Zeppelin company in Friedrichshafen, Germany, as LZ-126, and was flown across the Atlantic by Hugo Eckener himself for delivery to NAS Lakehurst. This photo is from Emerson Mehlhose's personal collection and is an official photograph.



The U.S. Army's RS-1 airship docked at the Ford mooring mast at Dearborn, Michigan, in 1926. About half the size of the USS Los Angeles, RS-1 was a semi-rigid airship. "It is a pressure ship, but the fabric bag is strengthened by a metal keel, extending the entire length of the ship, with reinforcement at the nose, to prevent being forced in by air pressure during high-speed flying," according to 'The Story of the Airship' by Hugh Allen, 1931. Photo from the Mehlhose Collection.



A scrapbook page showing the ZMC-2 airship built at Grosse Ile Naval Base, Detroit, Michigan, in 1929. A downriver first, the metal-clad airship was built under a contract awarded to the Aircraft Development Corporation of Detroit. ZMC-2 was constructed in an all-metal hangar at a cost of \$300,000. The Grosse Ile hangar cost \$100,000 to build. The ship's first flight took place on 19 AUG 29, 10 days after inflation with helium was completed. The scrapbook page is from Emerson Mehlhose's collection of airship material and includes a small piece of Duralimin 'skin' of the airship.



The ZMC-2 'all-metal dirig' built on Grosse Ile, near Detroit, in its hangar on the naval base. The ship was delivered to Lakehurst, New Jersey, for trial flights by the U.S. Navy. Her last flight took place on 19 AUG 39. After having flown more than 2,500 hours, the metal-clad airship was salvaged in 1941 and the car, complete with engines, instruments and appurtenances, were assigned to the Lighter-than-Air School at Lakehurst.



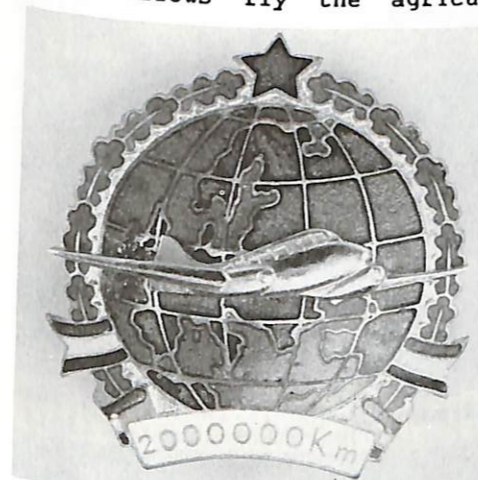
1929 Stout Air Services ticket for a flight from Detroit's city airport to Cleveland and back. Given to me by former Detroit Bob Hiller, now of Beverly Hills, Florida, this ticket was a present for his 11th birthday. According to Hiller, the roundtrip cost \$5 and "was a great flight". The ticket is light blue and is printed in red and black ink - the date, 5/26/29, is in pencil. Signed by a company employee on behalf of Bill Stout, the ticket says, in the bottom right corner, "This receipt is to be retained by you as a reminder of your 25-mile aerial tour in the Ford-Stout All-Metal plane. Keep boosting aviation."



Wing of Birmingham Executive Airways, an expanding British commuter with international services, flying BAE Jetstreams out of Birmingham Airport, Birmingham, England. A real catch for this Birmingham, Michigan, collector, the wing is finished in gold with the center in gold and yellow enamel and 'BEA' in blue enamel. Marked on the back with an 'M' over a 'W' for Manhattan-Windsor, the wing has a pin back for wear.



Aeroflot, the Soviet airline, has four classes of pilot wings. This one, Number 4, is worn by single-engine pilots. These fellows fly the agricultural and crop spraying operations in the USSR. This is run by Aeroflot, the national airline! The wing is typical Aeroflot: gold finished wing, light blue center with airplane and a white shield below with gold '4'. The wing has a hallmark and is pin back.



2,000,000 km badge from the Eastern Bloc is a beautiful airline badge. It has blue enamel for the Atlantic Ocean and red for Europe, from Norway in the north to the Mediterranean in the south. Green leaves surround the badge and the airplane in the center is in silver. Star at the top is red and the flags at the bottom are in blue, yellow and black enamel. The 'Km bar' at the bottom is done in white. I saw a badge just like this one on the uniform of a TAROM (Romania) captain recently in New York. The badge has a vertical pin on the back for uniform wear.



American International Airlines wing. AIA suspended flight operations in SEP 84 as a result of financial difficulties which plague the airline industry these days. This beautiful wing was used by both the cockpit and cabin crew personnel - silver finish for the pilots and gold for the cabin attendants. The center logo uses red and blue enamel, the two diagonal 'bars' at left being red and the rest blue, forming the stylized 'AIA'. There are no hallmarks and the wing has clutch backs for uniform wear.



Los Angeles Airways pilot wing sent to me by WAHS member Pat McCollam of Burbank, CA. The 'United' pattern wing is overall silver with the center device 'LA' having been added at a later date. The wing is hallmarked Leavens Mfg., Attelboro. However, they did not produce it. According to their source, the wing was produced for United, and someone must have acquired it, removed the United center and added the LA one. The 'LA' is silver with blue enamel added for background.



NSFC - National Skyway Freight Corporation pilot wing was found in a group of other wings offered to me. NSFC was founded in 1945 by Robert Prescott, former 'Hump' pilot in China with the Flying Tigers. NSFC flew early Budd Conestoga airplanes (a novel design for sure), hauling all sorts of freight. A military ATC contract late in 1946 took NSFC into the Pacific and in FEB 47 the company changed its name to The Flying Tiger Line. The wing shows considerable wear, but the bullion was gold on a cloth backing. The center is blue enamel with gold 'NSFC' and lines. This wing probably came out of the Oscar Stonberg Collection.

# THE SLIDE COLLECTOR

by RICHARD J. FEDORCO II



1. IL-86 'widebody' CCP-86015, of Aeroflot. (Photos 1 - 9 by Peter Zsille)



2. Syrianair IL-76M cargo plane operated for the government.

In this issue of the LOG I share with you a treat I received in the mail from Peter Zsille of Budapest, Hungary.

Peter sent me a very nice collection of slides of Eastern and Western European operators. Unfortunately he did not mention where he took these pictures (and perhaps it might be best not to), and I apologize for a nose or two being cut close, but that is how I received them back from Kodak. I am trying to clear up this problem. My dealer says it has to do with how Kodak sets the slides in the duplicating machine. In any event, I hope you enjoy these and I will try to add a few more in a later issue.

Also a few "transition" shots of former Republic aircraft during the merger process with Northwest, shot by Tom Rambis of Sparta, Wisconsin and by Al Moniz of Brampton, Ontario.

Just a final note: I am still looking for DC-8 slides and photos for an future issue.

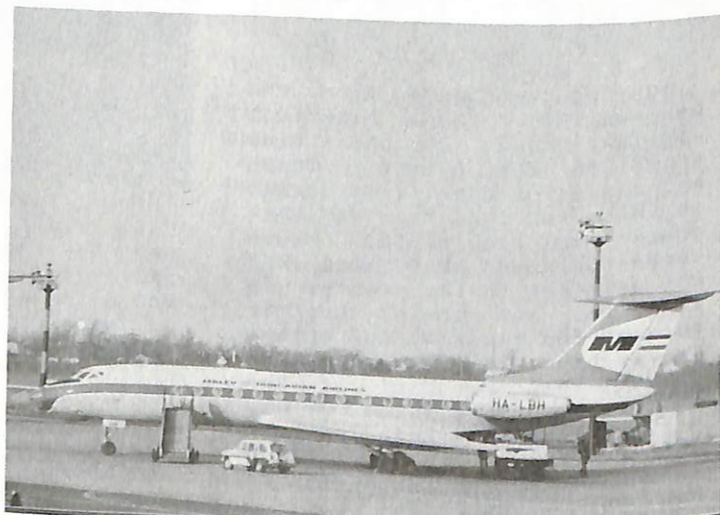
Till next time. Keep those shutters clicking.



3. IL-62M, DDR-SEI, c/n 3036931 of Interflug (East Germany).



4. TU-134A LZ-TUL, c/n 3352303 in Balkan's new livery.



5. TU-134 HA-LBH, c/n 0925 of MALEV (Hungary). Note glass nose.



6. TU-154B-2 HA-LCR, c/n 543/93820012, shows six-wheel main gear on main u/c leg.



7. TU-134A, CCCP-65912 of Aeroflot. Note glass nose for visual navigation.



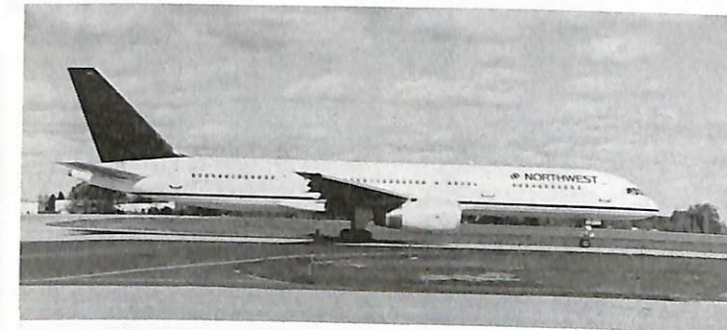
8. DC-9-32 PH-MAX, c/n 47515 "City of Rome" of KLM pulls up to the gate at Amsterdam.



9. A-310-203 PH-AGK, c/n 394, of KLM at Amsterdam.



10. DC-9-51 N772, c/n 47774 in Republic's final colors, at Toronto. (Al Moniz photo)



11. 757-2S7 N603RC, c/n 23322, in transitional colors at MSP, OCT 86. Note Rolls-Royce engines. (Tom Rambis photo)



12. DC-9-15F N9357, c/n 47156 in transitional colors, used on EWR-MEM route, at EWR. (Richard Fedorco photo)



13. CV-580 N2738R, c/n 57, departing LSE for MSP. Transitional colors as in 11 & 12. (Tom Rabis photo)

# AIRLINE PLAYING CARDS

by THOMAS DRAGGES

It is about time to start thinking about Airliners International, to be held in Indianapolis in July. I know the boys are working hard to make it a successful convention and I hope I will be in attendance and get the chance to see everyone. The question is whether or not I can get my vacation that week. As of now, I can not.

Now on to the show of new playing card issues.

I just picked up a new deck from Canadian Pacific Air Lines. This deck could possibly be the last deck under the Canadian Pacific Air Lines name. Whether or not it is depends on what Pacific Western Airlines does with CPAL: run it as a separate company or merge it with PWA.

(CPAL was renamed Canadian Airlines International after Mr. Dragges wrote this column - JG.)

The deck has a blue background with the title, Canadian Pacific Air Lines,

printed diagonally across the card in white print with the logo of white bars and orange-red triangle. The title is in both English and French, Canada's two official languages.

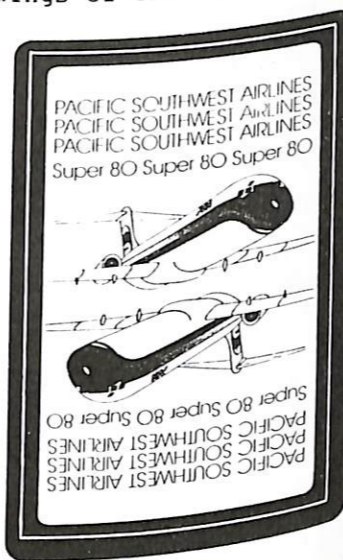
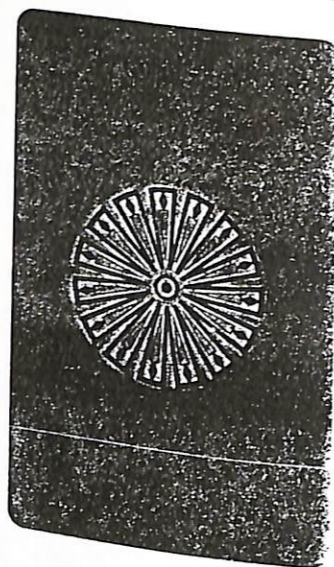
Hot off the press is a new deck from Piedmont Airlines. Thank you, Piedmont. At least one airline knows how to put out a new deck periodically. The cards have a silver border with the light blue Piedmont logo in the top left and bottom right corners. The main picture shows the fuselage of the Boeing 737-300 in Piedmont's white and blue colors and red titles. The sky is also blue, of course.

These are the only new decks I have received to tell you about, so I will continue to feature decks of some airlines which have faded away or will be gone by the end of the year.

First there is Air California. The two decks with the sunburst logo were bridge

sets available through their in-flight magazine. In other words, they were purchased through the mail. One deck has an orange background with black logo and the other one is the reverse: black background with orange logo. After Air California shortened their name to Air Cal, they issued a new deck which was given out on their flights. The cards have a white background and show what I call the 'California fault' line which is made up of the following Air Cal colors (from top to bottom): yellow, orange, lavender and purple. Air Cal is in purple print except for the horizontal bar in the A of Air, which has the same colors as the 'fault line'.

The next deck is the only one I know of to have been issued by Pacific Southwest Airlines (PSA). It was introduced when they inaugurated service with the MD-80. The cards have a white background with red, white, red and black border. All printing within the borders is in black, along with the drawings of the aircraft.



## BAY AREA AIRLINE HISTORICAL SOCIETY

We will once again have our mini-convention at the Holiday Inn, San Francisco Airport, on 26 SEP 87 from 0900 hrs to 1500 hrs. A donation of \$3 is requested at the door. Hope to see you in the fall. For more details, write us at:

C/o Tom Dragges,  
526 Venture Ave.  
SAN MATEO, CA 94403

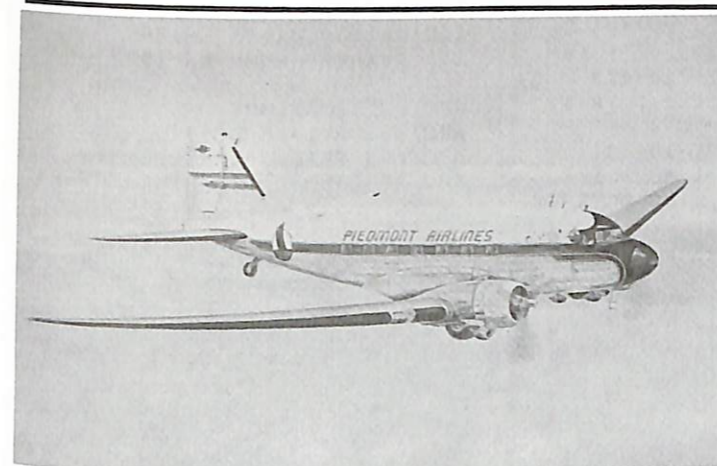
or call us at:  
(415) 574-8111

AIRLINE COLLECTABLES  
Buy Sell Trade



# POST CARD CORNER

by WILLIAM DEMAREST



#1. Painting of DC-3 restored by Piedmont.

#2. Piedmont 737-201 Adv. N788N, c/n 22445, and Pontiac race car with driver Ricky Rudd (McNabb Studio).

#3. N602AW is Air Wisconsin BAE 146-200.

#4. Boeing 234LR of Helikopter Service.



Once again I find myself buried under an avalanche of new postcard issues. The airlines and the private publishers continue to print postcards at a furious rate. Let me share them with you.

One interesting new postcard may come as a surprise to you. Piedmont Airlines issued a continental size DC-3 postcard in conjunction with the rollout of their recently restored DC-3. The postcard shows a drawing of the aircraft in flight (#1). Another older Piedmont issue - in regular size - shows a Boeing 737-200 with Piedmont-sponsored race car (#2). Air Wisconsin's BAE 146 N602AW is depicted flying over the countryside on a regular-size card (#3).

In Norway, Helikopter Service A.S. has four new beautiful continental size postcards available: Sikorsky S-61, Boeing 234 LR with S-61 in background (#4), Aeropstiale AS 332L Super Puma and a combination card showing these three 'copters and a Bell 212 as well. Liveries are red on white.

Kar Air of Finland has an A300 issue in their latest livery which shows the aircraft in flight over a coastline.

Dragonair of Hong Kong has another new 737-200 postcard. (See Vol. 12, No. 4, p. 17 for another card.) This card shows the aircraft in a 3/4 front view on the ground, facing left.

Another colorful postcard shows Air Berlin's white, gray and red 737-300 on the ground, facing right (#5).

Virgin Atlantic printed at least two new 747 postcards in conjunction with their new service to Miami. One is a ground shot, tail view, and the other a nice inflight shot.

Also a re-publication here of a card first shown in Vol. 12, No. 4, p. 19. There, the printer accidentally reversed the card of the Air Mauritanie



F-28-4000 by P&B Holland (#6). Our apologies!

Many thanks to those of you who have taken the time to write me with your comments and postcard news. I do appreciate your assistance.

With this issue I feature some airline-issued postcards

from airlines which have recently disappeared from our routemaps (#13-20). Enjoy this trip down memory concourse. I will feature some 'golden oldies' from various international carriers the next time around.

The following are new issues by private, commercial publishers:

**AEROGEM POSTCARDS**

- 0901-Air Atlanta 727-291
- 0902-AirCal BAe 146
- 0903-Air Puerto Rico DC-9-14
- 0904-American 707-123B
- 0905-American Eagle CV-580
- 0906-Avensa 727-51
- 0907-Braniff Int'l 720-027
- 0908-Canadian Pacific DC-8-43
- 0909-Eastern L-1049C
- 0910-Ecuatoriana DC-10-30
- 0911-Midway DC-9-31 new clrs.
- 0912-National-Sun King DC-8-61

- 0913-TranStar MD-82
- 0914-United DC-6B
- 0915-Western DC-10-10

**AEROPRINT**

- 110-Falcon Cargo L-188
- 111-Transwede MD-83 (#7)

**APC PUBLICATIONS**

- APC/A62-Aviaco DC-9
- APC/A63-TEAL L-188 Electra
- APC/A64-Japan Air Lines CV-880



#5. Air Berlin 737-3Y0, N67AB, c/n 23496, at Berlin-Tegel (Renato Krause photo).



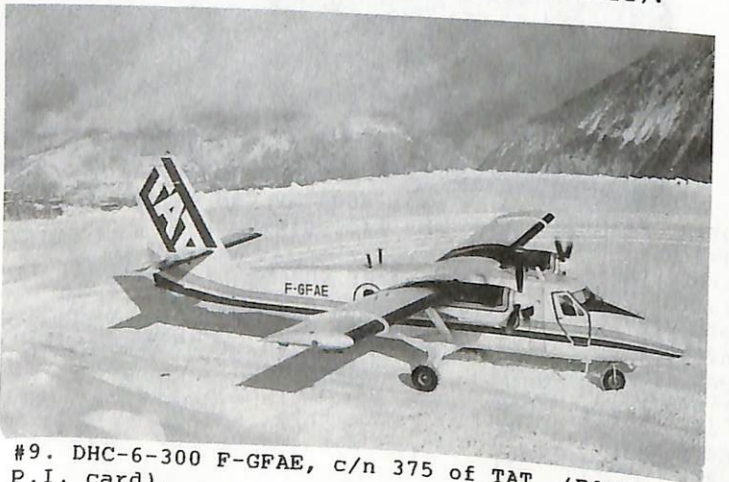
#6. F-28-4000, 5T-CLG of Air Mauritanie (B&B)



#7. SE-DHB, Transwede MD-83 (Aeroprint card).



#8. 707-436, BOAC (Aviation Hobby Shop card).



#9. DHC-6-300 F-GFAE, c/n 375 of TAT (Editions P.I. card).



#10. Australian 737-376, VH-TAF, c/n 23477 (Michel Moskal card).



#11. Burma AW F-28-4000 XY-AGA, c/n 11232 (P&B).



#12. JET 24 Boeing 747, N9663 (U.S. Publ.).

- AVIATION HOBBY SHOP**
- AHS80-South African 747-244B
  - AHS81-Japan Air Lines 747-146
  - AHS82-BOAC 707-436 (#8)
  - AHS83-Air India 747-237B
  - AHS84-Singapore Airl. 747-312
  - AHS85-Balkan TU-154A
  - AHS86-Gulf Air VC-10
  - AHS87-British United VC-10
  - AHS88-Olympic Comet 4B
  - AHS89-British United Britannia 317

- AHS90-El Al Britannia 313
- AHS91-Falconair Viscount 784
- AHS92-Martinair DC-7C
- AHS93-Aerocondor DC-6
- AHS94-Court Line BAC 111-500
- AHS95-Aer Lingus Viscount 808

- EDITIONS PI**
- 454-Oman Aviation F-27
  - 455-Le Point Mulhouse DC-8-71
  - 456-CAAC 747-200
  - 457-Air Guadeloupe F-27
  - 458-Air France/TAT FH-227B
  - 459-Minerve Caravelle 6N
  - 460-Iberia A300
  - 461-Air Limousin Nord 262
  - 462-CSA IL-18
  - 463-TAT DHC-6 Twin Otter (#9)
  - 464-Holland Aerolines ATR 42
  - 465-Air Inter Caravelle 3
  - 466-Quebecair DC-8-63
  - 467-Nationair DC-8-62
  - 468-Royal Air Maroc 747-200

- FLITE-LINE FOTOCARDS**
- 030-Braniff Int'l CV-340



#13. 737-293, N461GB, c/n 19306 of Wien Consolidated.

- 031-United 737-222
- 032-Trans World Express DHC-6
- 033-Ozark 727-2D4
- 034-TWA Stratoliner
- 035-Air Baja DC-3
- 036-Pan American Stratoliner
- 037-United Express BAe 146
- 038 United Express F.27
- 039-Braniff L-188 pastel/Panagra yellow
- 040-Braniff 707-227 pastel/turquoise
- 041-Continental 737-130 CO/PE colors
- 042-DHL Worldwide Expr, 727-22C

- INTERNATIONAL AIRLINE WORLD PUBLISHING**
- Historical postcards - 500  
copies of each published:
- Penn Central DC-3
  - East African DC-3
  - Mohawk BAC 1-11 (Black & gold)
  - Northwest DC-3
  - Flying Tiger C-46
  - Braniff DC-8 (Panagra colors)
  - Wien DC-3
  - National C-46
  - Robinson Beech 18
  - Mackey CV-440
  - Pan American CV-240
  - Braniff BAC 1-11 (2-tone green)
  - Airlift DC-8 (Capitol colors)
  - Alaska L-1649

Also publishing a Frontier Collector series and a Fantasy Aircraft series.

- MANCHE POSTCARDS**
- M55-Aerolineas Argentinas HS748-105
  - M56-ALA Argentina YS-11
  - M57-LANICA BAC 1-11
  - M58-Lineas Aereas Paraguayas DC-8-63

- MARY JAYNE'S RAILROAD SPECIALTIES**
- MJ594-AA Eagle EMB 120 Brasilia
  - MJ595-AA Eagle Beech 99
  - MJ596-New York Air Connection Beech 1900C
  - MJ597-as MJ596, Shorts 330
  - MJ598-PSA BAe 146
  - MJ599-Chalk's Grumman Albatross
  - MJ600-Eastern 727-200 Air Shuttle Plus
  - MJ601-Northwest CV-580
  - MJ602-Piedmont Commuter Beech 1900C
  - MJ603-Southeastern Commuter DH-104 Dove
  - MJ604-Wrangler Aviation CL-44

- MICHEL MOSKAL POSTCARDS**
- 122-Sobelair 707-373C
  - 123-Trans European 707
  - 124-Canadien Pacificque DC-10-30
  - 125-Eagle Air 737-205C
  - 126-Garuda 747-2U3B new colors
  - 127-Air France A310
  - 128-Transbrasil 737-340
  - 129-Australian 737-376 (#10)
  - 130-African Safari DC-8-63

Text continued on page 45 →



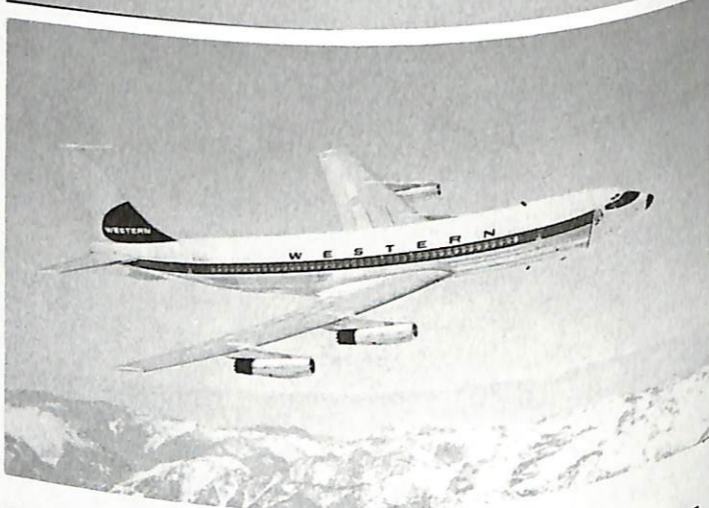
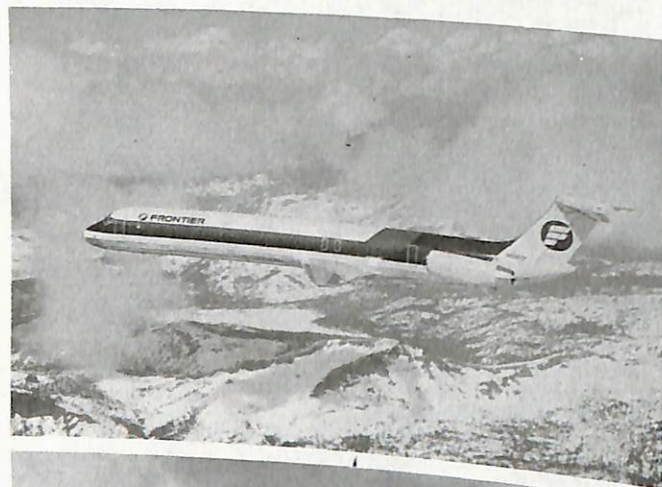
#14. Same plane as #13, but now with Wien Air Alaska titles airbrushed in.



RIGHT: #15. Air Florida DC-10-30CF

BELOW: #16. Frontier MD-82, N9803F, c/n 49118 (Jeff Black Photographs card).

BELOW RIGHT: #17. Republic 727-2S7, N715RC, c/n 22019, was formerly with Hughes AirWest.



ABOVE LEFT: #18. Capitol International DC-8F.

ABOVE RIGHT: #19. 707-139, N74613, c/n 17903 of Western.

LEFT: #20. Air Atlanta 727-22. The back of this card reads (in part): "Great News! Beginning January 19, 1986, Air Atlanta expands its service to include Tampa, Orlando, and Philadelphia. That means more great flights on my favorite airline." The message is signed by David Lowe, Director of Sales.

# AIRLINE HAPPY HOUR

by AL S. TASCA

The other day I received two interesting sticks from a fellow WAHS member Carmel Axiag in Malta and I want to share them with you all. I also thank Mr. Axiag for taking the time to send them to me. It is much appreciated.

Here they are, along with his comments.

Fig. 1. This one-sided stick with a flat top, round shank and bubble end, has been used by AirMalta since 1984 on all its flights operated by its five Boeing 720s. It was also used on aircraft leased by the airline, such as the 707, 727, CV-880, DC-9 and BAC 1-11. The sticks come in blue, red and possibly white and all have the logo in gold. The stick measures six inches (15.2 cm) long and has no manufacturer's name on it. The top displays the Maltese Cross, the national emblem of Malta. It is formed by four arrowheads meeting at their points.

Fig. 2 shows the same stick, but with a different logo on the top. It shows the vertical tail of the Boeing 737 and was put in use when AirMalta purchased its three new Boeing

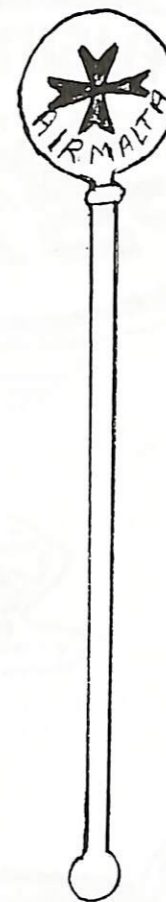


Fig. 1

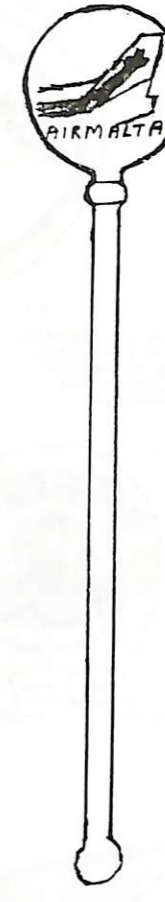
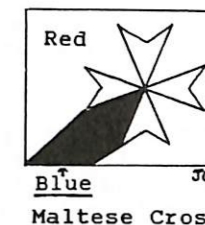


Fig. 2

737-345s. It was also used on flights operated by the airline's three remaining 720s. The Maltese Cross is at the top of the upswept cheatline on the tail. The known color of this stick is brown.

I hope you'll enjoy these and I am asking you to drop me a line when you come across or hear of a new, rare or unusual swizzle stick. I'll feature them in the CAPTAIN'S LOG so we can all enjoy them.

Happy collecting



Arrowheads are white

## POST CARD CORNER

Continued from page 43

- 131-Bangladesh Biman DC-10-30
- 132-LAP Paraguay DC-8-63
- 133-Iraqi Airways 737-270C
- 134-Saudia 737-268
- 135-Canadien Pacifique 737-2T5

- 71-Balkan AN-12
- 72-TAROM Bac 1-11
- 73-Aviateca 727-25C
- 74-Air Swazi Cargo 707-344C
- 75-Independent Air 727-35
- 76-Presidential BAe 146
- 77-CAAC BAe 146
- 78-Air Atlantic Dash-8

- P&B SERIES- HOLLAND
- 024-Rio Sul F-27-200
- 025-Korean Air F-28-400
- 026-Air Sinai F-27-500
- 027-Burma A.W. F-28-4000 (#11)

- WORLD AVIATION PRODUCTIONS
- WAP09-Petroleum Air S. Dash-7
- WAP10-Air France Caravelle
- WAP11-Air Gabon DC-6B
- WAP12-ATA/Air Algerie L-1011
- WAP13-Faucett DC-4
- WAP14-KLM 737-306
- WAP15-Pakistan Int'l A300
- WAP16-Surinam AW DC-8-63
- WAP17-Air Guinee 707-351C
- WAP18-Trans African DC-8-55F
- WAP19-Scanair DC-10-30
- WAP20-CTA Espana DC-8-61

- US PUBLICATIONS
- 63-Norcanair F-28-1000
- 64-Canadien Pacifique 737-317
- 65-First Air 727-90C
- 66-Air Manitoba C-46
- 67-Air Manitoba BAe748
- 68-Norcanair CV-640
- 69-Jet 24 747-123 (#12)
- 70-Istanbul Hava Yollari Caravelle 10R

### APOLOGIES!

My apologies for some small slip-ups in Vol. 13 No. 1.

Page 7: The caption with the Ozark DC-3 photo was garbled. It should read:

DC-3 N763A, c/n 4894, of the Prairie Aviation Museum, Bloomington, Illinois, painted up in Ozark colors for the occasion (Ozark's 35th anniversary open house at St. Lambert International Airport, 28 SEP 85).

Page 9: I left out the '24' in the expiry date of the Ozark timetable: 24 OCT.

Page 38: second column, 12 lines from the bottom - 18.3 revenue passenger miles should read: 18.3 million revenue passenger miles.

Page 50: the address is missing for Raymond D. Crane, who is seeking color information on Colonial Air Transport in the late 1920s. His address is: 101 Almont St., WINTHROP, Ma. 02152, USA, or at the Boston Museum of Science, Hayden Planetarium, for those who live nearby.



# JUNIOR CREW INSIGNIA

by STAN BAUMWALD

The responses to my first article in the CAPTAIN'S LOG (Vol. 12, No. 3) have been very satisfying and have given me some encouragement to continue this project.

In this issue I will describe and illustrate some wings from my collection which are not in the original Junior Crew Insignia Book or about which there is some confusion as to what is available.

Some time ago I came across a Northwest Airlines kiddie wing which I believe is the first issue for the airline and is the only one of its kind I have seen. It is illustrated in Fig. 1 and is in metal, bronze colored with a pin back.



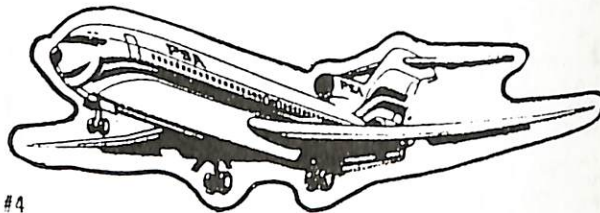
#1



#2



#3



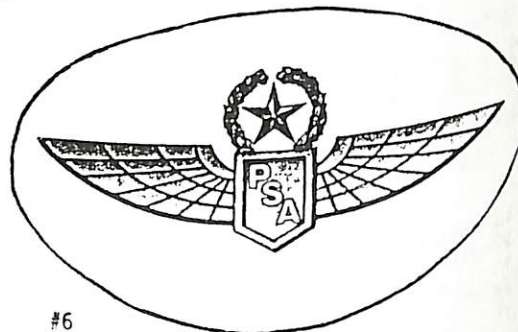
#4



#5



#7



#6

There are five types of PSA (about to merge, so I expect no more from them) kiddie wings and they are shown here in Fig. 2 (cloth), #3 (heavy paper), #4 (heavy paper), #5 (thin paper) and #6 (plastic).

Pilgrim Airlines, formerly of New London, CT, put out a kiddie wing some time ago. It came in bronze, silver and gold and all three varieties are of heavy metal with pin backs. The airline started business in 1962 and was reputed to be the oldest commuter in the United States. Pilgrim was integrated into Business Express in 1986. I don't know whether the three versions of the wing were put out at the same time or not. The wing is shown in Fig. 7.

Icelandair and its predecessor put out six different wings of the same style. All are gold with blue lettering and are made of plastic. The interesting part is that some are in the native language, others in English. Three have 'Icelandair' in the center and they are for the 'Junior Captain', 'Junior Pilot' and 'Junior Stewardess'. In the native language we have two 'Flugleidir' wings with 'Flugfreyia' and 'Flugstori' in the center. Then there is the

predecessor Loftleidir with 'Junior Stewardess'. I am sure there must be more out there of this same style. The wings, made by the Stoffel company, are shown in Fig. 8.

There is also one more earlier kiddie wing, but this is a different style completely. Garuda Airlines came out with two kiddie wings a few years ago and they are shown in Figs. 9 and 10. These are a flat design and are made of plastic with a safety pin back.

The captain's wing has a gray background with a pilot wing of gold and the flag of Indonesia in the center. It is almost an exact replica of the real wing. The stewardess wing is about the same design (there is no star at the top!) but is only a half wing, as worn by crew members. Now that Garuda has a new paint job, it will be interesting to see whether or not they issue a new kiddie wing.



#8a



#8b



#8c

TOP LEFT: Icelandair - Junior Captain  
TOP RIGHT: Icelandair - Junior Pilot  
RIGHT: Icelandair - Junior Stewardess



#8d



#8e

ABOVE LEFT: Flugleidir - Flugfreyia  
ABOVE RIGHT: Flugleidir - Flugstori  
LEFT: Loftleidir - Junior Stewardess



#8f

EDITORS NOTE: original Junior Crew Insignia Book was published several years ago by Bob Feld. No longer available. Book was "xerox" print. Book is valuable reference work.

Last but not least are two kiddie wings from SAS, Figs. 11 and 12. One shows the DC-9 and the other the DC-10. They have a white background with the most-recent paint scheme of the airline. Made of plastic, they have a safety pin back and were made by a company named Regenta. I always wondered why SAS never put one out for their Boeing 747, but now that the carrier is in the process of selling these aircraft, I think they were just planning ahead.

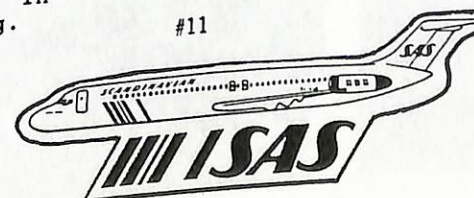
Now I need some help. For reasons of being complete, I am asking collectors who have wings not shown in the original kiddie wing book to please send me photos or photocopies of them, preferably showing them in their actual size. I plan to include them in the master book that I am working on and hope to have ready by Indianapolis Convention time. Thank you in advance and happy collecting.



#9



#10



#11



#12

# AIRLINE MODELING

by GERRY COLE

Sometimes there are slow periods in this hobby, times when none of the manufacturers are making anything new. At such times, the airline modeler turns to the box or shelf where the older kits are stored ... and tries in vain to remember why on earth he bought all that junk! Luckily, the past three months have been very good to airline modelers, and there are some new treasures to discuss.

## NEW KITS AND ACCESSORIES

Sasquatch Models has two new items, both in 1/144th scale. The first is a Twin Otter kit from low-pressure injection molded styrene. The kit consists of 12 molded parts, a piece of strut shock, and instructions. Although no decals are included, a decal sheet with the green/white Pilgrim livery is due shortly.

The second Sasquatch kit is a set of four CFM-56-2 engines and pylons to convert Revell DC-8s to the -70 series. Both the engine set and the Twin Otter are available from ATP/AA, or direct from Sasquatch at 6881 S.E. Alberta Street, Portland, OR 97206.

For those who are not familiar with low-pressure injection molding, a word of caution is perhaps in order. While low-pressure molding reduces mold costs to the point where a model of subjects of interest to us, can be made available at an affordable price, it is very difficult to produce Hasegawa-quality parts.



1. Leoman 737-300 in Western colors.

You should expect more flash and larger 'sprues' than with high-pressure molding. However, the kits are generally easier to assemble than vacuforms, less expensive, and easier to work with than most resin models.

## PROPLINER CONVERSION KITS

Those of you who attended the Airliners International convention at Hartford in '86 may have noticed a DC-7 conversion in 1/72nd scale from the Heller DC-6 kit. The builder, Hans Pennell, has marketed that conversion and a number of other 1/72nd scale items of interest to airline modelers. For the Connie, there

are engine nacelles for the conversion instructions for the L-049 and L-649, both long and short Connie noses, the improved prop hubs for the Heller L-1049 kit. These are excellent quality resin castings, with engraved lines and fine details.

For the Douglas Star, Canadair C.4 North Star, DC-7B/DC-4 and DC-7C. These contain proper spinners required and conversion instructions which relate to the Heller DC-6 kit. Also available is a DC-7C conversion kit with a slightly different nacelle diameter to fit the

(Leoman photo)

Formaplane DC-7 vacuform wing. A series of antennas is also on offer, one set of two belly antennas for the TWA L-1049G Connie, and another generic set of two belly antennas for an L-1049, DC-6 or DC-7.

If your taste runs more toward jets, Hans has a set of four early non-fan JT-4 engines to make a Boeing 707-300 series aircraft from the 1/72nd scale Heller 707. These have excellent compressor fan and exhaust detail and instructions are provided to show the required modifications to the kit pylon, wing root/flap, wing tip and nose gear door. By the time you read this column, a set of four CFM-56 engines in 1/72nd scale should also be available.

For more information and specific prices on the above, contact Hans Pennell at Classic Airliner Parts, 33 Fair Street, Norwalk, CT 06851, and be sure to include a large SAE. This is great stuff, worth getting, even if you don't usually build

in 1/72nd scale. Incidentally, Hans may do a 1/200th scale resin and metal kit of the DC-8-52 ... if there is sufficient interest. You've got his address, let him know of your interest and tell him you read it in the CAPTAIN'S LOG.

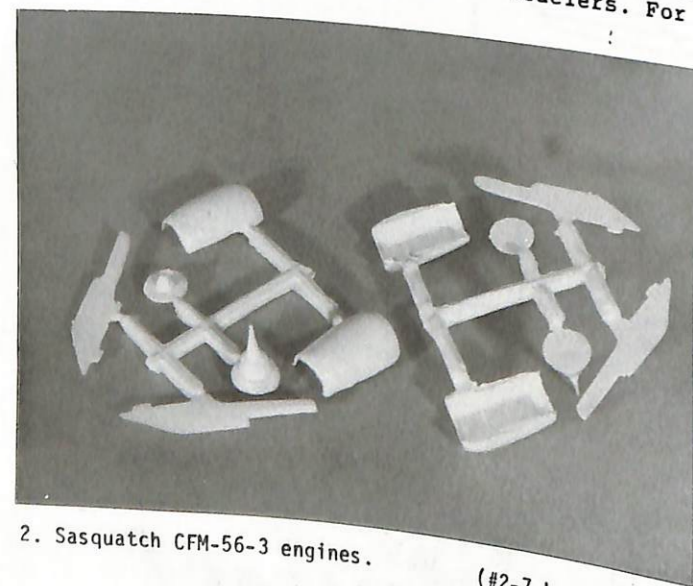
## MORE NEW KITS

Clint Groves of Airliners America/ATP loaned me the prototype of their Shorts 360 model long enough to photograph it. This 1/144th scale resin model is cast by Tom Young of MAI, Inc. It has 15 parts, including a one-piece fuselage with the nose weight already installed. Parts are included to make the model with wheels retracted or extended. Decals are provided for American Eagle and United Express with stripes included only for the former livery. Decals also include windows and de-icer boots, as well as emergency exit markings. Production kits should be available for about \$18.00 U.S.

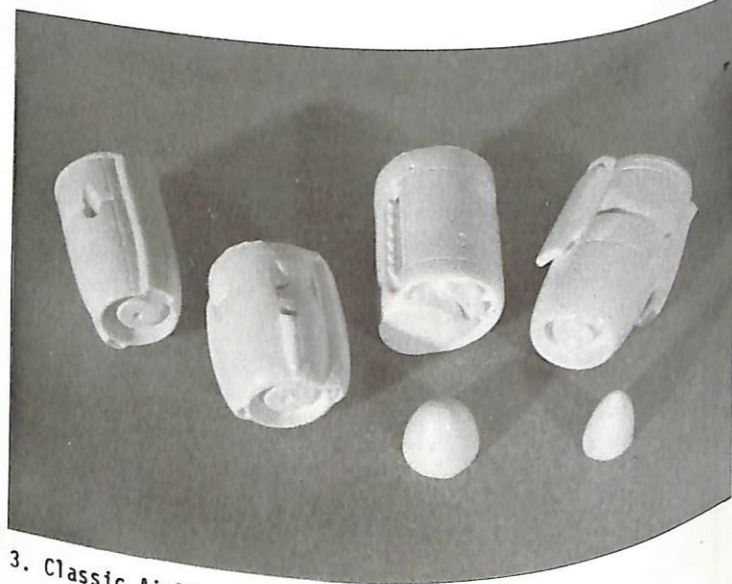
Hasegawa has released a 1/200th scale kit of the Boeing 767-200 in JAL livery. In addition to the new decal sheet, this model also has P&W, rather than GE engines. Hasegawa therefore continues to provide the variety of worthwhile alterations in their basic kits which they started with the 747 EUD series.

Fotocut, Box 120, Erieville Rd., Erieville, NY 13061 have extended their line of airliner antennas to include a set in hard-to-make 1/72nd scale, and a set of small-scale blade antennas and waste water drains. We can expect more airliner parts from this company in the future.

From across the Atlantic, Aeroclub Models in the U.K. have started producing a series of cast-metal parts in 1/144th scale. Intended for the Welsh Models Vacuforms, props are available for the Britannia, BAe 748 (Andover) and DC-3, as well as DC-3 type front cowls with engine detail. For



2. Sasquatch CFM-56-3 engines.

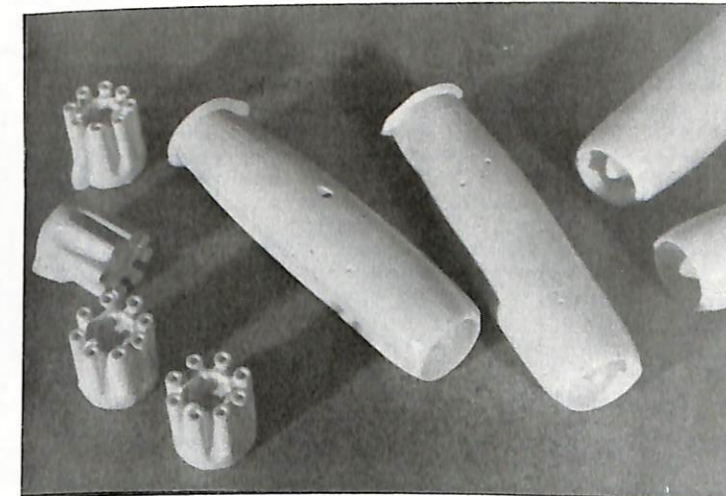


(#2-7 by Gerry Cole) 3. Classic Airliner Parts piston engines.



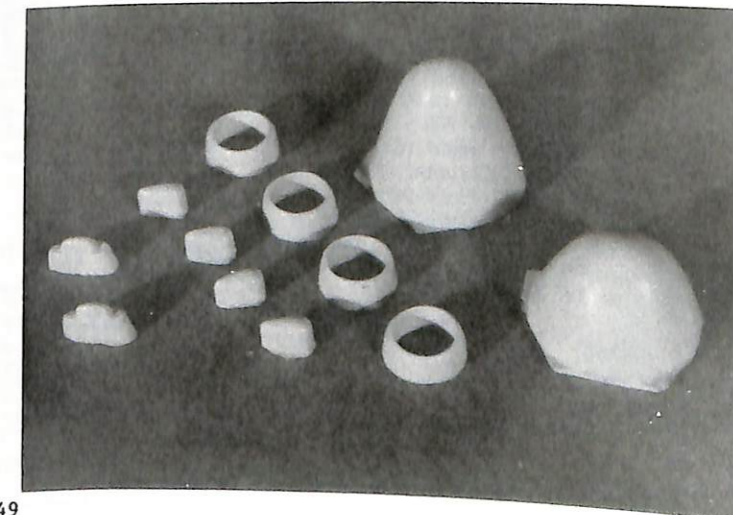
4. AA/ATP Shorts 360.

6. Sasquatch Twin Otter kit.



5. Classic Airliner Parts Boeing 707 JT-4 engines.

7. Classic Airliner parts.



superdetailers, a 14-cylinder twin-row engine has also been produced. Which engine? In 1/144th scale it is hard to tell.

I have had a chance to look at the Welsh Models 1/144th scale vacuform Vickers Viscount 800 series and compare it to the older ATP Series 700 kit. Unlike the ATP model, the Welsh kit has the fuselage split vertically. The front part of the Welsh kit engines are separate from the wing, rather than a part of it, as in the ATP kit. The Welsh kit includes cast metal landing gear and wheels. All this should make the assembly of the Welsh kit somewhat easier and less critical of over-sanding of parts after they have been removed from the sheet. The ATP kit, however, provides nice decals for the cockpit and cabin windows, although you'd need two decal sheets to get enough windows to do an -800. The Welsh kit provides only military decals, a real negative point. If you decide to do the Welsh Models kit, I would suggest you order two sets of ATP Capitol Viscount decals. Now, if only Aeroclub would do the props!

Leoman Models have told me their Boeing 757 in 1/144th scale will be released very shortly. Done in resin, as is their excellent 1/144th scale Boeing 737-300, the kit will include AA/ATP's Eastern 757 decals. I hope to have a review for the next issue. By the way, the 737-300 kit just mentioned is now available with AA/ATP decals for the pre-merger Western bare-metal aircraft.

#### NEW DECAL RELEASES

The long-awaited decal releases from Airlines America/ATP are now available. The Western 737-300 sheet included with the Leoman kit is available separately to do a -300 or -200, or a bare-metal Boeing 727-200. The decal comes in 1/144th and 1/200th scale. Even the 'City of Boston' name is included for a 727-200 registered N2823W. The Western DC-10-10 sheet includes not only the complete red, white, blue livery, but also door outlines and gray exterior reinforcements on the center engine and fin. This sheet is also available in both scales.

There are three new or re-released Eastern Airlines sheets, an L-1011 or DC-10-30, a Boeing 757/727 with the narrow stripes under the

windows, and a wide-stripe DC-8/Boeing 720/727. Both come in 1/200th and 1/144th scale for each type. Each Eastern set includes the AA/ATP USA flag decal and required emergency exit markings. All decal sheets are very complete and well done.

As I understand it, decal printers are like the story of the old pilots and the bold pilots: there are no old bold pilots. There are printers of opaque decals and printers of decals with very good registration, but no printers of opaque decals with very good registration. To get around this problem, AA/ATP has printed the title backgrounds on the new decal sheets separate from the dark blue parts. The result should definitely help the modeler get even white outlines. Overall registration on my sheets was good, but not perfect. Misregistration on cheat lines can be fixed with application of thin Scalemaster stripes without too much difficulty, but titles are another matter. I think AA/ATP has the right idea and I hope they do future decal projects the same way.

The final decal item from AA/ATP to be discussed here is a sheet intended for the 1/144th scale Shorts 360. However, this decal can be used on many other United Express and American Eagle aircraft operated for them by formerly independent commuter carriers. This should be a great sheet to try decal swaps with, although most stripes and all registrations will have to be provided by the modeler.

#### DETAIL REFERENCES

When Detail and Scale announced their Boeing 707 & AWACS book, I was sure that the ultimate detail source on the 707 would be available to all of us at a reasonable price. The book is here, listing at under \$8.00 U.S. retail. There are 72 pages of B&W photos, text and artwork, and eight pages in full color. The author is Alwyn T. Lloyd, a service engineer from Boeing, who should have access to all the 'right stuff'.

The photo quality is excellent, with clear and sharp pictures and lots of detail views. There is even a section reviewing most of the 707 models at the end of the book. Could the modeler ask for more for his \$8?

Perhaps he could. WAHS

member Bill Ames from Palos Verdes Estates, CA has written an excellent five-page review of this book and I have forwarded a copy to the publisher. Bill points out a number of organizational errors which tend to confuse an already confusing set of 707 airframe and engine combinations. There are many irrelevant photos, photos placed in the wrong section, and inconsistencies in tables of model types and dimensions. Key points on the wing root and flap shapes, empennage span, ventral sub-fin size and such are mentioned only briefly in text and photo captions and are not explained in clear terms. Instead of photos of the different engine types and their designation, we get photos of uncowed engines and bare mounts.

For example, in the modelers decal review section the Revell kit H246 registration N142AA should be listed as a bogus one, while the Minicraft/Heller 707 kit registration N786TW is valid for a TWA 707-331B, not incorrect, as listed in the Detail & Scale book. By the way, Roger Sawyer's 707 model is pictured on p.70, together with your model editor's WAHS business card.

In spite of the negative comments from Bill, I highly recommend this book if for nothing but the great photos. It is the most likely material your \$7.95 is likely to purchase for quite some time. With a little luck, and our encouragement and support, our future Detail & Scale releases will be a little better organized. It is still a 'Best Buy', even with all its faults.

#### MODELER'S HINT

Do you need paint to match the Boeing 707 light gray which shows up so often on bare-metal fuselages and most airliner wings, but you don't have a can of AA/ATP enamel handy? A perfect match is Japanese WW2 Navy undersurface light gray (N10), Munsell color system No. N 7.5/. This can be mixed and used Tamiya acrylic J.N. Gray XF-12 out of the bottle.

#### FROM THE DEPARTURE LOUNGE

In the next issue I will share some modeling techniques which have been contributed by our readers. Keep your comments coming, along with model photos and kit reviews.

# SAFETY CARDS

© 1986 Carl Reese

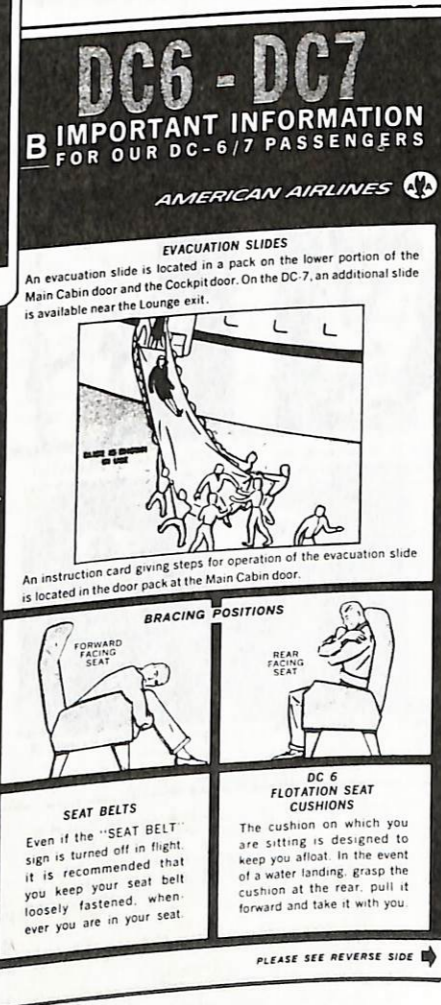
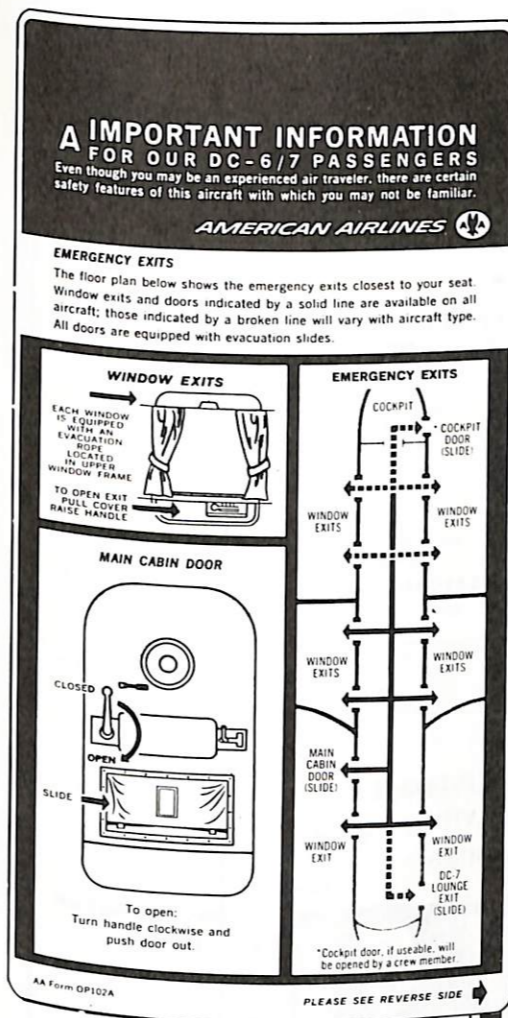


FIGURE 1 The combined DC-6 and DC-7 safety card used by American. Note the remark concerning exit availability as varying between aircraft. These cards would be in violation of today's FARs. (From the collection of, and courtesy of, Danny Matter)

Although this issue is devoted to Zeppelins and Airships, unfortunately little positive information exists to enable an article to be written concerning Safety Cards.

It is with some certainty that a passenger safety briefing, of some sort, must have been used (particularly in the case of the Teutonic operators and their absolute pre-occupation with thorough efficiency) to warn Airship passengers of the particular dangers of fire inherent to that mode of transport.

Therefore, with little available of Airships, I'll devote this article to more nostalgic and unusual Safety Cards.

Illustrated in Figure 1 are both sides of the AMERICAN AIRLINES DC6-DC7 "Important Information" card issued as OP102A. This revision is printed on plastic and dates from the early to mid 1960s. Following the retirement of the piston airliners, American retained this form number (OP102) for use on the Boeing 720 (which until then appeared on a "fleet" card for 707/720/990 as Form OP100, issues -A, -B and -C).

Many true nostalgia buffs may remember an operator named BRITISH SOUTH AMERICAN AIRWAYS which flew the ill-fated Avro Tudor 4 aircraft between the United Kingdom and Bermuda, the Caribbean and South America. Figure 2 shows both sides (flat) of the folding paper leaflet used on the Tudor 4 entitled LIFE-SAVING WAISTCOAT, including the two aircraft that vanished without trace in the Bermuda Triangle. If only this leaflet could talk, it'd be intriguing to know if it was once in a seatpocket aboard either the "Star Tiger" or "Star Ariel", the two aircraft lost in 1949.

Of particular interest to many Safety Card collectors is the paper leaflet used on the vintage MEXICANA Comet 4 jetliners which spent many years deafening collectors during their childhood years near LAX. Marketed as MEXJET ROLLS-ROYCE, Figure 3 shows both sides of the tri-fold leaflet which is highlighted in black and hot pink.

Certainly not to be considered a very common find is shown in Figure 4: "Safety on Board" card used aboard the YAK-40 by GENERAL AIR, a unique example from the few Soviet transports operated in the West. This card is glossy cardboard and folds,

**GENERAL NOTES FOR SURVIVORS DURING FORCED LANDING ON SEA**

Loosen clothing round neck.  
Keep calm and remember that all possible provision for your safety has been made.  
During the actual landing on the water you should brace yourself in such a way that you will not be thrown forward.  
Once the aircraft has come to rest, leave it in an orderly fashion and follow the instructions of the crew, who have been specially trained for such emergencies.

**NOTAS GENERALES PARA SOBREVIVIENTES, DURANTE UN AMERIZAJE FORZADO EN EL MAR**

Aloje la ropa alrededor de la garganta.  
Mantenga la calma, y recuerde que se ha hecho cuanto sea posible para su seguridad.  
Durante el amerizaje propiamente dicho, afirmese bien, para no ser arrojado hacia adelante.  
Una vez que el avión esté en reposo, abandónelo en forma tranquila, siguiendo las instrucciones de los tripulantes, quienes han sido instruidos de ex profeso para tales casos de emergencia.

**OBSERVAÇÕES GERAIS PARA CASOS DE POUSO FORÇADO NO MAR**

Afrouxe bem a roupa em torno do pescoço.  
Conserve a calma e lembre-se de que foram tomadas todas as providências possíveis para a sua segurança.  
Durante a amerissagem propiamente dita, segure-se bem, para evitar ser atirado à frente.  
Depois do avião pousar, abandone-o sem atropelo e obedeça às instruções dos tripulantes, que recebem treino especial para tais emergências.



**LIFE-SAVING WAISTCOAT INSTRUCTIONS**

**INSTRUCCIONES PARA USAR EL CHALECO SALVAVIDAS**

**INSTRUÇÕES PARA USO DO COLETE SALVAVIDAS**

BRITISH SOUTH AMERICAN AIRWAYS

BRITISH SOUTH AMERICAN AIRWAYS

**INSTRUCTIONS FOR FITTING THE LIFE-SAVING WAISTCOAT**  
**INSTRUCCIONES PARA USAR EL CHALECO SALVAVIDAS**  
**INSTRUÇÕES PARA USO DO COLETE SALVAVIDAS**



**IN AN EMERGENCY** remove the container from beneath the seat, draw out the waistcoat and put it on.

**EN UN CASO DE EMERGENCIA**, retire el recipiente de debajo del asiento, quite el chaleco salvavidas, y póngaselo como si fuera una chaqueta.

**EM CASO DE EMERGENCIA** retire a bolsa de baixo do poltrona, tire o Salvavidas e vista-o como se fosse um colete.



**FASTEN IT** by the hook and dec ring as shown. No adjustment is necessary.

**ABROCHELO**, valiéndose del gancho y el anillo en D, tal como se ilustra. No se precisa ningún ajuste.

**PRENDA O GANCHO** no aro, como se vé aqui. Não é preciso ajustá-lo.



**INFLATE BEFORE LEAVING** the aircraft by pulling down this lever. Later, the life-jacket may be topped up, if necessary, by blowing through the tube provided.

**INFLALO** antes de abandonar el avión, tirando hacia abajo esta palanca. Después, de ser necesario, se puede inflar más la chaqueta salvavidas, por medio del tubo provisto.

**ENCHALO ANTES DE SAIR** do avião, baixando esta alavanca. Mais tarde, se necessário mais ar, o salvavidas poderá ser soprado por meio do tubo de que é dotado.



**TO ATTRACT ATTENTION** when in the water use the torch and whistle provided.

**PARA LLAMAR LA ATENCIÓN**, cuando se está en el agua, vágase de la linterna y del pito provistos.

**PARA ATRAIR ATENÇÃO** quando estiver na água, use o apito e a lanterna.

*FIGURE 2 BSAA Life Jacket instructions that were in use at the time of the unexplained loss of two Tudor 4s. (Courtesy R. Wilson via B. Carver)*

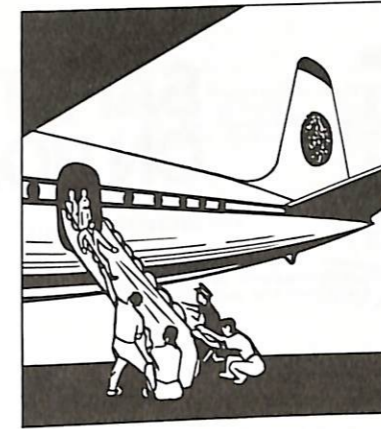


**CHALECOS SALVAVIDAS**

- 1.- Tome el salvavidas con las dos manos por dentro de las cintas, pase la cabeza por la abertura del cuello y meta los brazos por entre las cintas.
- 2.- Jale las puntas de las cintas para asegurar éstas a la cintura.
- 3.- Para inflarlo automáticamente, jale las perillas negras hacia abajo. NO LO INFLA DENTRO DEL AVION.
- 4.- Si el inflado automático fallase, desatornille parcialmente la punta de los tubos laterales, sople hasta inflarlo y apriete rápidamente las puntas otra vez. NO INFLA EL CHALECO DENTRO DE LA CABINA, PUES UNA VEZ INFLADO DIFICULTARA SU SALIDA DEL AVION.

**LIFE VESTS**

- 1.- Grasp life vest with both hands, inside of straps, and place the life vest over your head through the collar opening and arms through straps.
- 2.- Pull end of straps to fasten belt around your waist.
- 3.- To inflate pull back knobs straight down. DO NOT INFLATE WHILE INSIDE AIRCRAFT.
- 4.- If this fails to inflate the vest, open the valves on the two rubber hoses by turning the tips counter-clock wise. Inflate by blowing through the pipes and close the valves. IMPORTANT DO NOT INFLATE THE VEST INSIDE THE CABIN, AS THIS MAY HAMPER YOUR EXIT THROUGH THE DOORS.



**TOBOGAN DE ESCAPE**

Los toboganes o "resbaladillas", de escape en éste avión, se encuentran instalados de la siguiente manera:

Frente a la puerta de entrada; en la puerta de salida de emergencia y en la puerta delantera de la tripulación. Estos toboganes fueron instalados con el objeto de que los pasajeros puedan salir deslizándose rápidamente del avión en caso de efectuarse un aterrizaje de emergencia. La tripulación ha sido debidamente adiestrada en su uso y sus instrucciones deberán seguirse sin vacilación.

**EMERGENCY EXIT CHUTES**

The chutes are installed in this plane in front of the main door, at the emergency exit doors and at the forward crew's door. These chutes were installed so that passengers may quickly abandon the ship by sliding in case of an emergency landing. The crew has been adequately trained to use these chutes and their instructions should be followed without hesitancy.



**MEXJET ROLLS ROYCE**

**PROCEDIMIENTOS DE SEGURIDAD**  
**safety procedures**

*FIGURE 3 Mexicana's Comet 4 safety card. Note hand-held chutes rather than today's inflatable versions.*



**MEXJET ROLLS ROYCE**

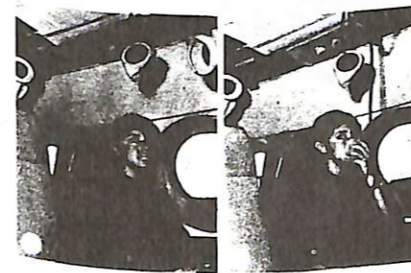
**PROCEDIMIENTOS DE SEGURIDAD**

Está usted volando a bordo del MEXJET Rolls Royce de MEXICANA. Este maravilloso avión es uno de los más seguros dentro de la aviación comercial en el mundo; sin embargo y a pesar de que MEXICANA ha sido merecedora de muchos premios de seguridad, es lógico aceptar la conveniencia de que todo el que viaja en cualquier medio de transporte, esté familiarizado con el equipo y los procedimientos de emergencia. Por lo tanto, le suplicamos leer cuidadosamente las instrucciones que, como medida de precaución, aparecen a continuación:

**SAFETY PROCEDURES**

You are now flying aboard the MEXJET Rolls Royce of MEXICANA. This airplane is one of the most efficient in the commercial aviation world of today. However, and even though MEXICANA has been awarded several safety citations, it is common sense to be familiar with the equipment and emergency procedures when you travel by whatever means of transportation.

Therefore, suggest that you read carefully the following instructions:

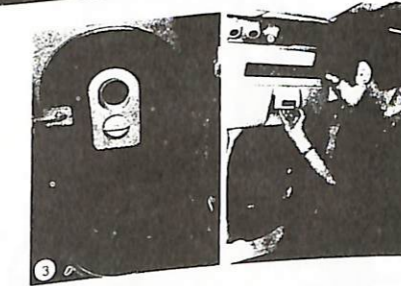


**MASCARILLA DE OXIGENO**

- 1.- En caso de una descompresión de la cabina, las mascarillas de oxígeno que están colocadas debajo de la repisa para sombreros y artículos de mano, caerán al alcance de usted al abrirse automáticamente el depósito que las contiene.
- 2.- Jale la mascarilla y colóquela sobre nariz y boca respirando normalmente.

**OXYGEN MASKS**

- 1.- In case of cabin decompression, the oxygen masks under the hat rack will automatically drop and be within your reach.
- 2.- Pull down the mask, put it over your nose and mouth and breathe normally.



**SALIDAS DE EMERGENCIA**

Con el objeto de que los pasajeros puedan abandonar rápidamente el avión, existen varias salidas de emergencia además de la puerta principal. Estas salidas corresponden a determinadas puertas y ventanillas en ambos lados de la cabina. Para su localización se encuentran marcadas en la ilustración (ver Figuras Nos. 3 y 4).

**EMERGENCY EXITS**

Besides the main door, there are several emergency exits provided so that the aircraft can be evacuated rapidly. These exits are located underneath several windows at both sides of the cabin as shown in figures numbers 3 and 4.



**ATERIZAJE DE EMERGENCIA**

En caso de que tuviese que efectuar un aterrizaje de emergencia, siga las instrucciones que se indican a continuación:

Añólese el cuello de la camisa y corbata; quítese los anteojos y saque los cigarrillos, plumas y demás artículos punzantes que puedan tener en los bolsillos. Las damas deberán quitarse los zapatos de tacón alto. DÉJESE TODA LA ROPA PUESTA. Ajuste el respaldo de su asiento a la posición vertical y abróchese el cinturón de seguridad dejándolo tan apretado como sea posible.

Unos momentos antes del aterrizaje, usted escuchará la orden "LISTOS" inclínese hacia adelante colocando la cabeza entre las rodillas; entrelace las manos apretadamente debajo de las piernas. Una vez que el avión se haya detenido, NO ANTES, desabróchese el cinturón de seguridad y esté listo para seguir las instrucciones de la tripulación para abandonar el avión. RECUERDE UNA SALIDA ORDENADA ES LA MAS RAPIDA.

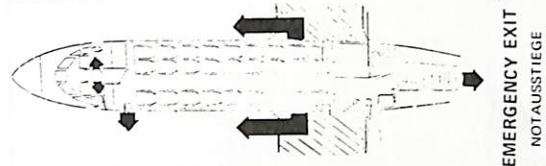
**EMERGENCY LANDING**

Should the need arise for an emergency landing kindly follow the instructions given below.

Loosen the collar of your shirt and tie, take off your glasses and take out of your pocket any pencils, knives or similar sharp-edged articles you may have. Ladies should take off high-heeled shoes. LEAVE ALL YOUR CLOTHES ON. Adjust the back of your seat to the vertical position and fasten your seat belt as tightly as you can.

A few moments before landing you will hear the Captain's command "ready"; lean forward putting your head between your legs and hold your hands tightly around them. Once the plane has stopped, NOT BEFORE, unfasten your seat belt and be ready to follow the crew's instructions to abandon the ship. REMEMBER THAT THE QUICKEST WAY OUT IS TO EXIT IN A CALM, ORDERLY MANNER.

**EXITS**



EMERGENCY EXIT  
NOTAUSSTIEGE

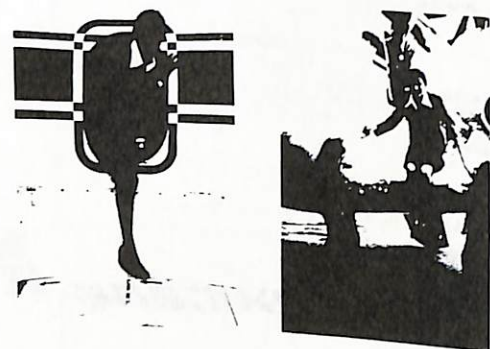
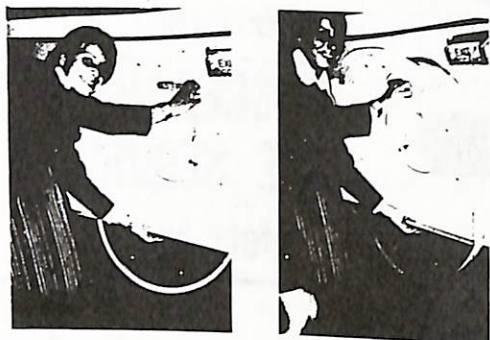
**SAFETY ON BOARD**



SICHERHEIT AN BORD

**YAK 40**

EXIT B  
AUSGANG



**GENERAL AIR**

AT TAKE-OFF AND LANDING  
BEI START UND LANDING

FASTEN SEAT BELT  
SITZGURTE SCHLIESSEN

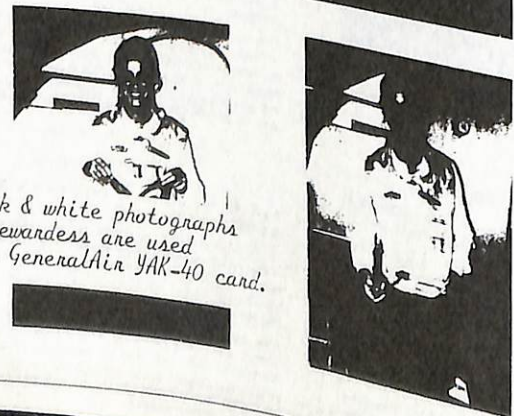
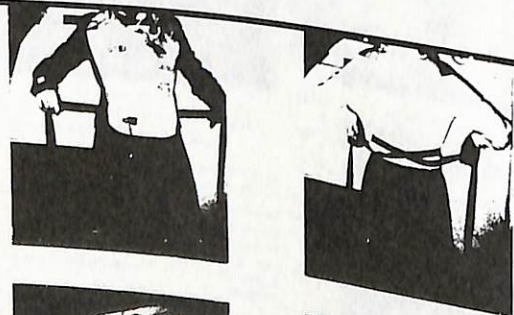
NO SMOKING  
NICHT RAUCHEN

BRACE POSITION



BITTE NICHT MITNEHMEN  
PLEASE DO NOT REMOVE FROM AIRCRAFT

EMERGENCY EXIT  
NOTAUSSTIEGE



EXIT A  
AUSGANG

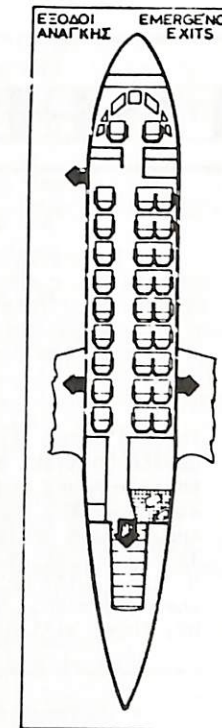
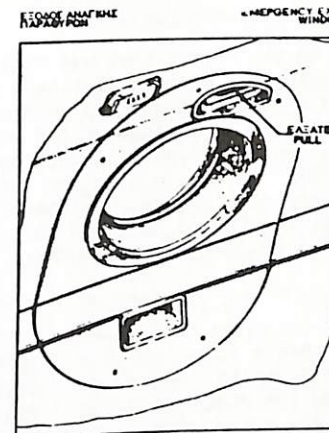


FIGURE 4 Black & white photographs with smiling stewardesses are used throughout this GeneralAir YAK-40 card.

FIGURE 5 Exit details from the unique Olympic YAK-40 safety card similar to the more common YS-11 and Skyvan style employed.

ΕΞΟΔΟΙ ΑΝΑΓΚΗΣ  
Υπάρχουν δύο θύρες εξόδου. Μία έμπρός άριστερά και μια εώς τó τέλος του θαλάμου.  
Υπάρχουν δύο εξοδοί ανάγκης (παράθυρα) έπάνω από τά φτερά. Τά παράθυρα αυτά άνοιγουν προς τά μέσα.

EMERGENCY EXITS  
There are 2 (two) exit door. One in the front left and one in the rear of the cabin.  
There are 2 (two) emergency exit windows over the wings. Those windows open inside.



using black & white throughout. Another Western operator of the YAK-40 was OLYMPIC AIRWAYS and Figure 5 reproduces exit details of that unusual card. Using blue and black print, the card resembles the fairly common style used on their Skyvan and YS-11 aircraft. Another known YAK-40 card exists for Avio-Ligure of Italy and upon its availability, it will be shown in a future article.

The Tupolev TU-154M is also employed in the West. Figure 6 shows the cover art of the laminated cards now seldomly found in seats aboard GUYANA AIRWAYS flights to the U.S. from Georgetown. Printed in limited quantities, the cover (and exit illustrations) are revamped from those aboard the aircraft on its delivery from TAROM. Internal drawings are of original design and contain highlights in green, yellow, red and black.

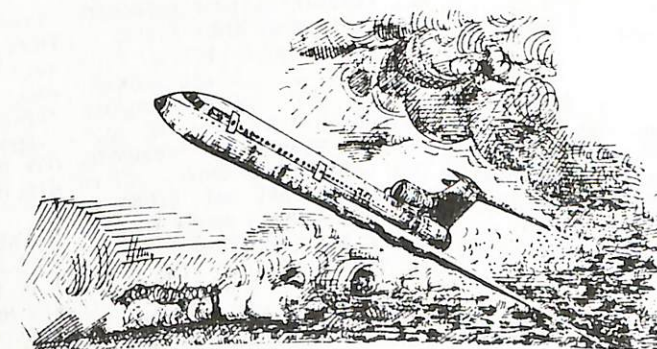
I have also learned (from a Flight Attendant aboard an IL-62 in Paris) that Cubana does have TU-154 cards printed. Although I've not seen one, I would be delighted to cover this card in the future if anyone near Mirabel or Mexico City can gain access to an example.

**SAFETY INSTRUCTIONS**

**TU-154M**



**Guyana Airways**



For the safety of other passengers please do not remove this card from the aircraft.

FIGURE 6 Front cover of the Guyana Airways TU-154M safety card that are already difficult to locate.

CONTENT  
DELETED DUE  
TO PRIVACY  
CONCERNS

GEORGE CEARLY, JR., P.O. Box 12312, Dallas, TX 75225 still has copies of the following airline history books that he has written: (1) American Airlines--Americas Leading Airline; (2) Braniff 1965-1986; and (3) The Delta Family History. Each book is \$15.00 plus \$1.00 postage and handling. New book coming out soon--the history of Western and PNA--watch for it!!!

BEN LA CASCIA, 16162 Kipling Circle, Westminster, CA 92683-7710 has recently started a collection of US airline pilot's wings. He is interested in buying US airline wings from the 1920's thru the 1960's. Ben is willing to pay a fair price for any wings that you might have for sale in this time period. All letters will be answered.

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

by  
Paul F. Collins

This issue of the LOG will be reaching you shortly after the convention is over. I hope those of you that attended had a good time. I have yet to go to one of these meetings and not have a great time. The report on the convention will be in the next issue of the LOG, along with information about the site of the 1988 meeting--Denver, Colorado!

As mentioned in this column in the last issue, the roster published and mailed along with the last LOG was somewhat on the "slim" side due to the fact that a number of you had not sent in your renewals by the March 30 deadline. The only answer that I can come up with is that the renewal form that was mailed with the last issue of Volume XII was hacked with an order form for Society jackets. I can only guess that many of you did not look on the other side of this form, thus you missed seeing the notice that your membership renewal was due. I honestly feel that I sent all members renewal notices that should have received them, both with the number 3 and 4 issues of Volume XII. As I have mentioned in this column before, taking care of memberships is a very time-consuming job and it can be made a lot easier if you folks send your renewals in on time. No more said, at this time, and will appreciate your support on this matter in the future.

There continues to be a problem with those members that MOVE. PLEASE send in a change of address to Society HQ when you plan on moving. It is very important that you keep HQ advised of your current address! Also of a somewhat lesser problem is those of you that take extended vacations and advise the post office not to hold your mail, but have it returned to the sender. I am now holding LOG's from about three or four members that the post office has returned to me with the notation: Temp Away. If you fall in this category, please advise and your LOG will be remailed. I have no way at all to know when to remail your LOG, unless you advise me that you are now home and accepting your mail!

The sale of Society jackets and caps has slowed somewhat, but I am sure it will pick up again in the fall. Starting with the next issue of the LOG we will be offering some books that we here at HQ feel that you might be interested in purchasing. The first of these will be the new, all color book, by Don Thomas, our label Editor, on Pan American called, "Pan American to the Tropics!" This is truly a labor of love and shows in the work that went in to it. This book will contain 64 pages, all in Color! The book will sell for \$16.00 plus postage and handling. The price is well worth it. Several other books that we will be handling include several books by author Stan Cohen. "Wings to the Orient" is a pictorial history of Pan Am during the period 1935 to 1945. Well illustrated with some fantastic photos of the big flying boats in all sections of the Pacific. Another book from Mr. Cohen is "Hawaiian Airlines-A Pictorial History of the Pioneer Carrier in the Pacific." This again is a very well illustrated book on an airline that we don't think much about, but has had a very colorful and exciting history. There will be additional information on our book offer in the next issue of the LOG.

There are a number of letters stacked up on my desk that I have not had a chance to answer, as yet. If you have written Society HQ and have not received an answer, please be patient with me and I will work to get all correspondence caught up as soon as I possibly can. Thank you for not complaining to much about this.

Once more I would like those of you that hold "area" meetings to keep me advise of such events so we can publish dates and times in future issues of the LOG. I would also like to receive a report of the meeting, once it is over, so that to can be published in the LOG. Your cooperation in this matter will be greatly appreciated.

That about wraps it up for this issue. Once again the Editors have come up with another good issue for you. These fellows are all doing a great job and if and when you have the time, you might drop them a line letting them know you appreciate the "volunteer" work they are doing for ALL of us. Once again, if you attended the "big bash" in Indianapolis, I hope you had an enjoyable time. Happy collecting!

*Paul* →

NEW CARDS FOR THE COLLECTOR

The International Airline World Publishing Co has produced several hundred Historical Collector Post Cards. Only 500 copies of each of these cards is being printed. The cards represent many aircraft and color schemes never before printed as post cards. There are eight different paint schemes on the Air Florida Electra alone. If your interested in getting in on purchasing this attractive set of cards, write to the address below for additional details and their current listing of cards.

I.A.W.P. Company  
140 W. Possum Road  
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**LOG Advertising Rates**

A number of people of inquired about the rates for advertising in the CAPTAIN'S LOG. The following should be used as a guide in charges for advertising in the LOG.

Full page	\$80.00 per issue
Three/quarter	60.00 per issue
Half page	40.00 per issue
Quarter page	20.00 per issue
1/8th page	10.00 per issue

If a photo is to be used in any of the above, please add an additional \$5.00.

If you wish to run an advert more than once, please write for multiple discount rate.

If you wish to have your advertisement inserted in the LOG envelope, the charge is \$30 per sheet (if it is a two sheet advert, then the charge would be \$60). If the insert is larger than 8 1/2 by 11 it must be folded before being accepted for insertion into the LOG envelope.

If you have any questions with regards to advertising rates, please write to Paul Collins at Society HQ.



**AVIATION HOBBY CANADA LTD.**  
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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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WORLD AIRLINE HISTORICAL SOCIETY

President & Membership Co-ordinator  
Paul F. Collins  
3381 Apple Tree Lane  
Erlanger, KY 41018 USA  
(606) 342-9039

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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

The CAPTAIN'S LOG will be mailed quarterly to all members on approximately the 15th of January, April, July and October. The CAPTAIN'S LOG is mailed by permit in the U.S. so please allow ample time for delivery. One year membership/subscription equals four issues of the LOG the first year and 12 months/four issues the second year. When you join the Society, you will be sent all current issues of the LOG for the year.

SUBSCRIPTION RATE

U.S.	\$14.00 (Permit delivery only)
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NEW ZIP CODE ←

NEW EDITOR ←

Please send material for publication to the staff members listed above, paying attention to which department each handles. When in doubt, forward material to the Editor, Joop Gerritsma.

Thank you