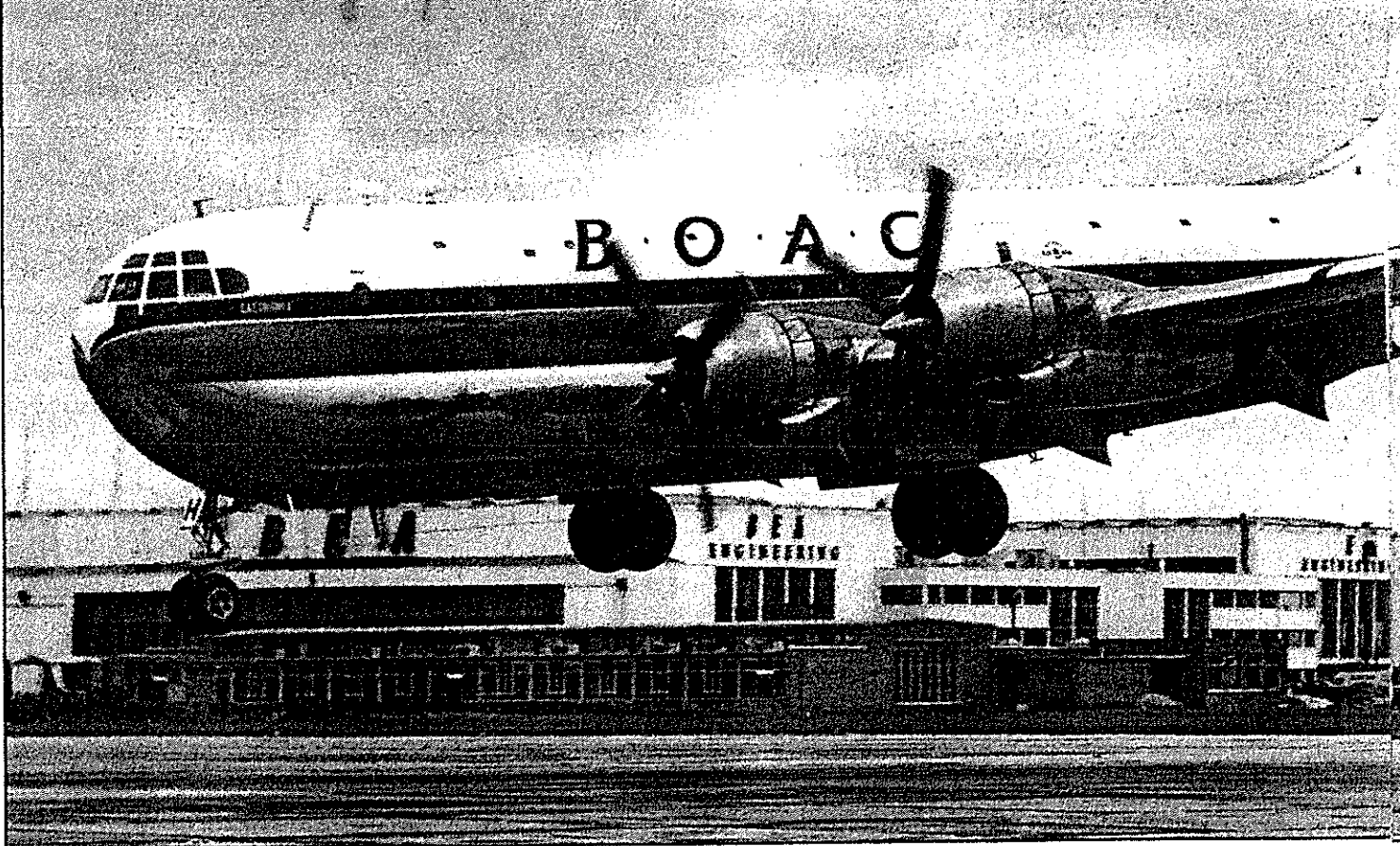


THOSE STRATOCRUISER DAYS . . . AND NIGHTS



Former wartime RAF and post-war airline pilot TONY SPOONER DSO DFC, pictured below, recalls some of the idiosyncrasies of BOAC's Boeing Stratocruisers — and some of the goings-on in the airliners' lovely big fold-down bunks . . .



The Boeing Model 377 Stratocruiser airliner of the immediate post-war period was a unique and peculiar aircraft.

Essentially, the "Strat", as everyone who flew the aircraft invariably called it, was a B-29 bomber which had been hastily converted by Boeing into a civil airliner by replacing the fuselage with a "double-bubble" cabin capable of seating 40-60 passengers on the top deck. Down below in the lower lobe there was a bar reached by a spiral staircase. The wings and the Pratt & Whitney "corncob" R-4630 engines were originally those of the B-29.

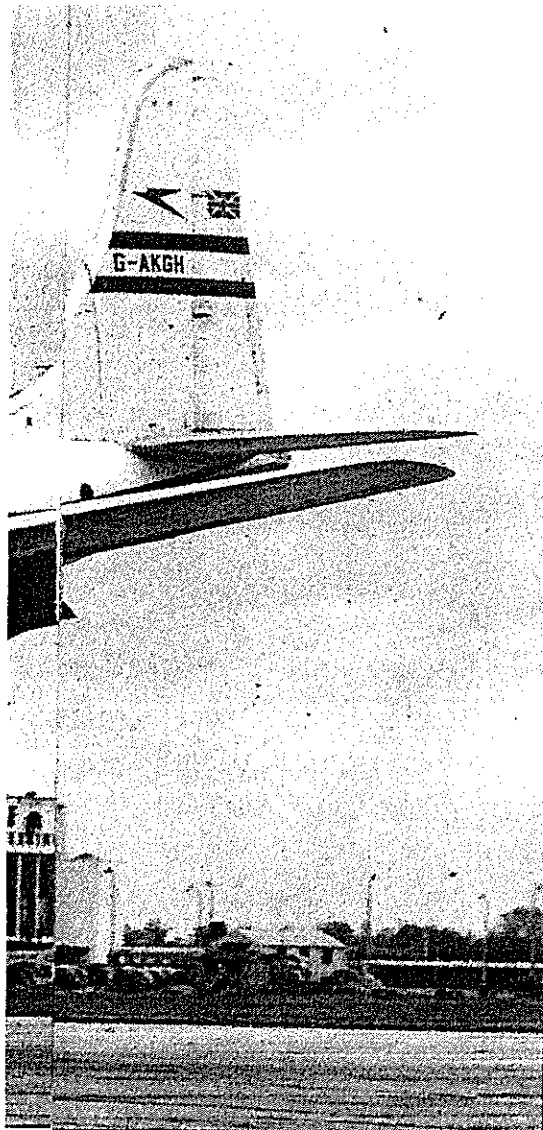
"Originally" was, however, the operative word. When the B-377 came before the FAA in order to get its all-important Certificate of Airworthiness, it failed to meet that body's stalling criteria. As the Strat stalled, it tended to drop a wing. This did not please the FAA at all. That august body, on stalling tests, liked to see the nose, and not the wing, drop first.

A quick fix was devised. Along almost the full length of the Strat's nice clean wing, Boeing were obliged to add lift spoilers. Yes, Lift Spoilers! The FAA was happy. The aircraft now dropped its nose obligingly as it reached the stall; but we poor pilots of BOAC, and the few other airlines which had ordered the type, were left with an aircraft which possessed

several mighty odd characteristics.

Before dwelling on these characteristics, it is worth recording that after the Strat had been operated commercially for about 10yr, the FAA decided that the lift spoilers were *not* really necessary at all. So, off they came. By then, of course, the aircraft had long passed into oblivion as a front-line airliner.

In a flying career which began with Tiger Moths in 1937 (see *Halcyon days at Brooklands*, February & March 1991 *Aeroplane*) and which ended about 30yr later — and never forgetting 6yr of flying overloaded RAF types under wartime conditions — the B-377 remains in my mind as by far the most difficult aircraft to fly. For one thing, no matter how hard you pulled back on the stick while rounding out and landing, it was always the nosewheel which first made contact with the runway. It was much the same on take-off; heaving back hard at the correct speed made not the slightest difference, the Strat was still determined to run the last few hundred yards with only her nosewheel on the ground. In a good crosswind, the stresses on that nosewheel must have been considerable owing to the tendency of the aircraft, with its huge tail, to weathercock into wind. Fortunately Boeing had designed a nosewheel which could — and daily did — soak up a lot of cruel punishment. This



was just as well, as the Strat was almost wildly unpredictable. If it just wasn't "one of her days", she would decide to fall out of your hands whenever anywhere near a landing runway. Bang! Crunch! She would hit with some quite horrible noises. However, to her maker's credit, the nosewheel always seemed able to take whatever blows befell it. I never once heard of one giving way. It was solid Boeing engineering at its best.

The corncob engines were not so forgiving. They derived their nickname because they were a four-row air-cooled radial. The 28 cylinders were arranged in four banks. To the best of my knowledge this was the only engine so designed. The difficulty about such a wedge of cylinders was to keep the back rows sufficiently cool. It was usually the third row, not the aftmost one, which suffered most from lack of coolth. As a consequence, engines on long flights were always liable to pack up. Yet, oddly enough, this did not pose too much of a problem. This was because of two things. First, the engines seldom overheated and failed during take-off; secondly, once the Strat could be persuaded to leave Mother Earth — something which at times it was most reluctant to do — then it was in its true element. It flew like a bird. Many of us collected scores, if not hundreds, of three-engined hours on Strats. Some of us even collected a few two-engined hours. These were *not* so comfortable.

Left, Boeing 377 Stratocruiser G-AKGH Caledonia landing at Heathrow in April 1954. The characteristic nosewheel-first landing attitude is very apparent in this photograph. Below, the same aircraft undergoing overhaul at BOAC's Heathrow maintenance base. BOAC ground engineers became very proficient at changing the aircraft's Pratt & Whitney Wasp Majors.

It tells its own story that, although the engine was in commercial use for at least a dozen years, it started and ended its life with exactly the same power rating. No attempt was made to uprate it in the light of experience. I can think of no other engine which was so restricted. Enough was enough.

Another unusual Strat feature was that it was virtually an all-electric aircraft. There was scarcely a hydraulic pipe in it. I remember talking with "Digger" Ifold, the engineering chief at Dorval, Montreal, where I and the rest of the post-war BOAC Atlantic base were then located. The first Strat delivery had just arrived and Digger had been all over it.

"I've never seen so much electrical stuff in any one aircraft in all my life", that worthy man was saying. "Come to think of it, I've never seen so much electrical stuff in any TWO aircraft in all my life." That wonderfully strong retractable undercarriage was electrically operated: even down to the emergency lowering system. This had to be seen to be believed. The drill went like this:

1. Remove all the drinkers from the lower bar (NOT easy);
2. Remove the big mirror at the front of the bar;
3. Remove from behind the mainspar the emergency hand electric motor. This was a heavy duty mechanism, a bit like a roadman's drill;
4. Connect this to the drive of one of the main undercarriage legs and operate so as to lower that leg;
5. While flying along with "one hung low", repeat the process for the remaining undercarriage leg.

As I remember it, all that had to be done to lower that remarkably tough nosewheel was to heave it out manually. This was accomplished by sending a man down through a hatch into an area which was always known as "Lower 41" and having him disconnect a catch or two and then manually throw the nosewheel out. It was a task for the crew member with the most muscles. It was not a weakling's job.

With luck and a tailwind . . .

A basic drawback to the Stratocruiser as a transatlantic airliner — and BOAC used it for little else — was that it lacked the endurance to fly between London and New York, or even Montreal. Occasionally, with a good tailwind, you could do it the other way; but I never once could find enough range to complete a west-bound crossing non-stop. This meant that the skipper, and that included me, had to devise some means of overcoming this shortage. At times, the journey required four stops. London to Prestwick, to pick up passengers: thence to Shannon for a max all-up weight take-off to Gander or Goose Bay; then on to New York's Idlewild airport, as it was then called. Alternatively, a London—Prestwick—Keflavik (Iceland)—Sydney (Nova Scotia) or Moncton (New Brunswick)—New York route might be preferred. Pan Am, which for most of the time was the only other airline using Strats on the Atlantic routes, had a liking for routes to New York which took them via Lisbon, the Azores and Bermuda; but we, in BOAC, seldom if ever went that far south. In a



Right, the flight deck of a Pan American Stratocruiser, with the flight engineer's panel in the right foreground. All major controls were located within easy reach of the right hand of the pilot and the left hand of the second pilot.

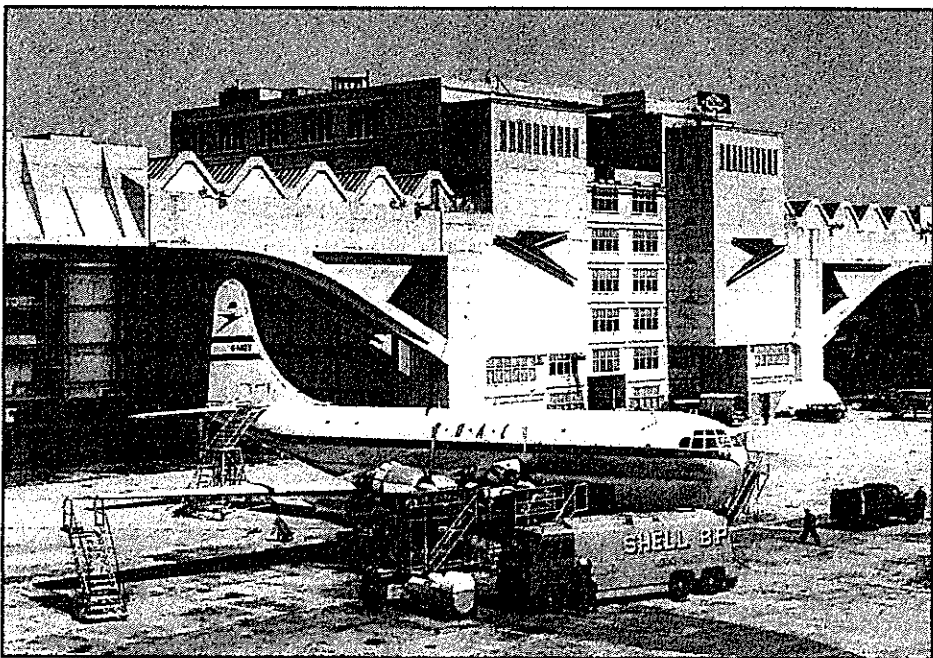
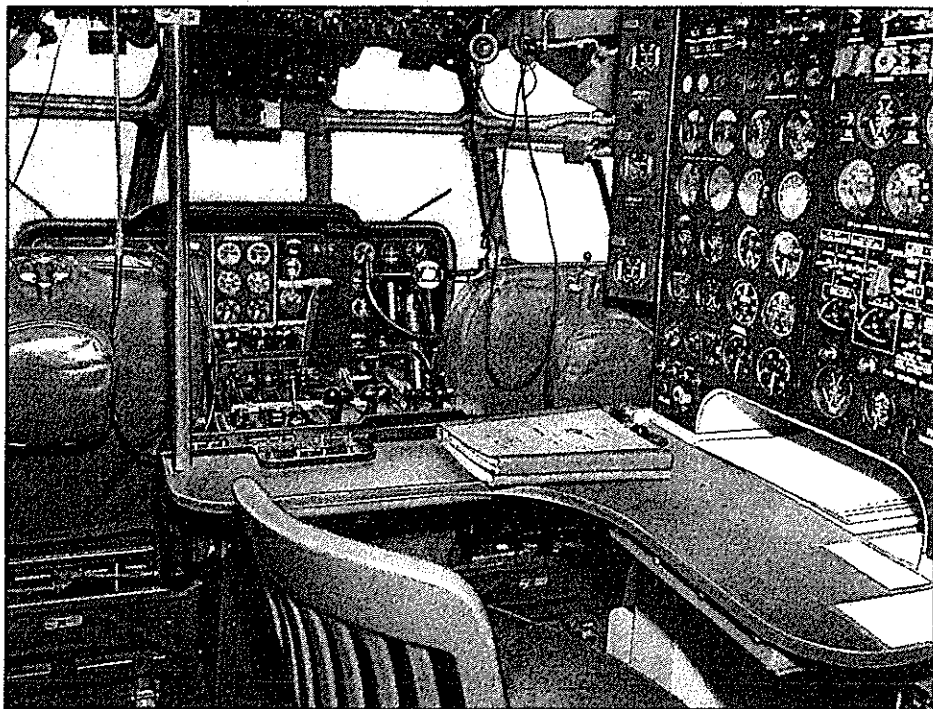
Strat, heading for New York, I have several times been over the centre of the huge ice-cap of Greenland. I can even recall, again heading for New York, being over Hudson Bay heading south by east but "sailing" downwind, west of the low. Captains soon became meteorologists first and pilots second, and in BOAC it was the individual captains who decided which route to take. We had no flight despatch system as used by Pan Am.

Despite its engine failures and shortages of fuel, the Strat was much loved by its passengers, especially by those who were able to adopt a tolerant attitude to the many delayed or truncated services. This was for two reasons: that downstairs bar; and those lovely bunks.

The bar was an obvious attraction, especially for the many first class Monarch crossings when drinks were free. It recalled the gentler pre-war days of the leisurely, comfortable Empire Flying-boats of Imperial Airways. It also prompted TWA, which was the only serious rival to BOAC and Pan Am, to produce a most ingenious publicity campaign. Having no downstairs bar in the Constellations it was using, TWA is reputed to have launched the slogan of: "Fly the Atlantic in comfort: no stairs to climb!"

The bunks were a great selling point. As the flights to the Americas was liable to take as long as 20hr even without any engine failure or other unscheduled delay, it was a real joy to be able to spend a large part of that long and often bumpy journey in the comfort of one of the aircraft's wide and spacious bunks. They could be uppers or lowers, but both were splendid.

Right, Stratocruiser G-ANTY Coriolanus receiving attention at Heathrow — the BOAC headquarters building in the background had recently been opened. Below, Stratocruiser G-ALSA Cathay taxis in with outer engines stopped in time-honoured fashion.





Left, the Stratocruiser offered exceptional standards of comfort, and on long flights passengers on the top deck could stretch their legs by descending the spiral staircase to the lounge and cocktail bar below.

If those bunks could speak, what tales they could tell! Each could easily accommodate two persons and a good time could be had therein with the curtains drawn. *I know!*

Before you all leap to the wrong conclusions: I was a passenger, and I was journeying with my wife.

One story I well remember. I found, greatly to my annoyance, that an empty bunk was being occupied by a handsome young steward and the stewardess. I got ready to "throw the book" at the amorous pair. I was a stickler for inflight discipline and had earned the nickname of "Toilet Tony" from my constant blitzing of the cabin staff about keeping our big, well-appointed toilets spotlessly clean.

However, the ingenious young steward quite disarmed me. At that time there were a number of seasoned BOAC stewards — usually, incidentally, our best ones — who were known homosexuals. One such was in charge of the cabin that night.

"What the Devil do you mean by

shacking up with the stewardess?", I demanded angrily.

"It's like this, sir, we were both off-duty for a rest period, and I figured that it was the only way that I could feel safe from the Chief." Ten out of ten for quick thinking. I had to laugh.

Note that I said "the stewardess". At that time we only carried but one stewardess plus a number of stewards. Compare this to a modern big jet where the cabin staff seems to consist of almost the entire chorus line from Radio City or the Bluebell Girls en masse.

A story I liked to repeat was to say how nice it was to be helping Elizabeth Taylor out of her bed! This happened when she was clambering out of a top bunk at a time when I was passing by. I can still see those lovely green silk pyjamas and those fascinating violet-green eyes. At that time she was a very young, rather unhappy little girl trying to come to terms with life after the collapse of her marriage to the young son of the man who had built up the Hilton chain of hotels. I also

remember the 600lb or so of excess baggage she and her Scotch Secretary were travelling with. Their trunks nearly filled our lower holds.

Many of the great and famous used our all-first-class Monarch service to New York. Errol Flynn spent quite a time in the jump-seat. I recall Marlene Dietrich, immaculately dressed and with impeccable manners, and Margaret Sullivan, whose manners were as good. There were Prime Ministers galore: British, Canadian, New Zealand, Australian; authors Nevil Shute (real surname Norway), A. J. Cronin, and others. It was then a real novelty to fly the Atlantic, and the mystique seemed to affect some. It was always the policy to invite VIPs on to the flightdeck and, as we droned on under a canopy of stars, some started to tell me their life stories.

Among them were Sir James Dunn, reputed to be the richest man in the British Empire; Charles Laughton, the huge actor with the wonderful reverberating voice; Sir Robert (or was it Sir Malcolm?) McAlpine, and Sir Thomas Beecham. These and others held me almost spellbound as the night, and possibly the free alcohol, loosened their tongues.

The Strat had a most impressive cabin pressure system: about 6.5lb/in², I think. This was because Boeing always had hopes that the engines would eventually come right and that a greater altitude could then be reached than possible by the rival Constellations and DC-6s. Sadly for Boeing, the aircraft was never certified above 25,000ft. However, I do not know of any BOAC skipper who hesitated to exceed this maximum. Personally I cannot recall climbing higher than about 32,000ft, but I know of greater heights.

Below, Stratocruiser G-AKGH Caledonia in the early all-silver BOAC livery. In August 1958 this aircraft was sold to Transocean and became N137A.



The passengers never suffered. The engines were the critical factor. The turbosuperchargers were apt to overheat or run wild. There were gauges to warn you: they would soon go into the yellow warning range whenever exceeding 25,000ft but, to avoid icing up or becoming ensnared in a mammoth cumulonimbus, it was preferable to keep climbing. The drill was to watch those gauges like a hawk and to keep them in the yellow, but just out of the red range. Fortunately BOAC soon fitted, as an extra, Sperry vibration gauges. These gave an early indication of engine trouble and enabled us to anticipate the next failure or even to avert it. They were great. Pan Am for quite some time did not have these, and I believe that they experienced even more failures than we did. They certainly ditched at least one Strat, with passengers aboard, in the Pacific. Ours, thankfully, never had to land in the cold grey waters of the Atlantic.

One of our captains, Val Croft, for once did not manage to prevent an engine failure turning into a good raging fire in the air. His Mayday call was picked up by a Pan Am aeroplane whose skipper was able to inform Val that he had experienced a similar fire in the air. "Not to worry", he explained. "It will burn for about 20min. The wing won't come off but the engine will then drop away. After that you'll be OK." The fire *did* burn for about 20min; the fuel in the wing did not

A superb photograph of Stratocruiser G-ACGH, BOAC's flagship, painted in early all-silver livery.

ignite. The engine *did* drop off and Val was able to land safely.

Pan Am had received its Strats ahead of BOAC. Those of us who were on early command courses were, as a consequence, first trained on the Pan Am flight simulators at La Guardia Field, New York. None of us had ever seen a flight simulator, and the Pan Am instructors really put us through the mill grinder. They had an "RIP list" for those of us who crashed and "killed ourselves" during their gruelling workout. My name was certainly on it.

However, the simulator really paid off. On my very first max all-up-weight take-off, I had barely got the gear up after departing at night from the runway at Keflavik in a 30kt crosswind when I experienced a runaway propeller. It was so much like being in the simulator, which I had recently left, that I thought nothing of it. I was waiting for the next engine to fail, as that was what I had come to expect. To be able to get back and land on three engines and with a runaway prop which actually feathered OK, was, relatively, a "piece of cake".

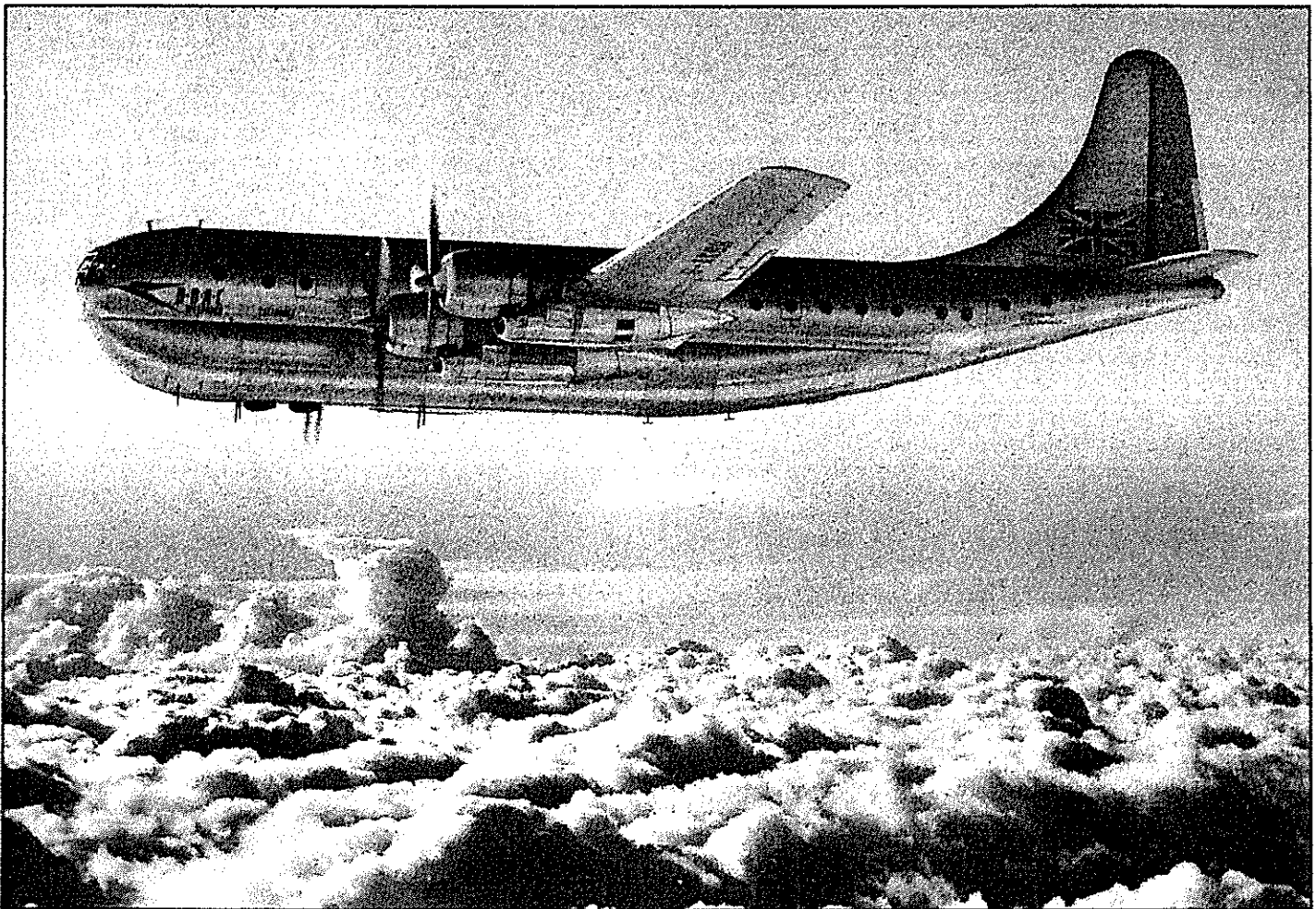
A friendly lot

The few airlines then operating over the Atlantic were a friendly lot, as also were their pilots. We all knew one another by name and could even recognise a voice in the air. We generously helped one another with spares. I even once exchanged a couple of passengers with a Pan Am aeroplane on the runway at Goose Bay, as they had boarded the wrong flight. It was relatively common to

see a Pan Am engine on a BOAC aeroplane or vice versa. Fortunately the two airlines used similar paintwork. However, during the brief period when American Overseas Airlines operated a few Strats over the route, I recall once arriving at Idlewild with one engine, borrowed from AOA in Iceland, which was a glaring orange-red in contrast to the other three in our normal refined blue. It looked as incongruous as the proverbial pork chop in a synagogue.

I doubt that I will ever forget that ghastly period when our engines were failing on almost every flight. It only seemed to be a matter of time before one of us would be left with, perhaps, only one of the four working. I took off from Heathrow but was soon back with one feathered to pick up the spare aircraft. By now I was scared. After reaching Prestwick without incident, I delayed the flight by an hour or more by insisting that the engineers remove every filter from each engine and examine it for the tell-tale signs of white metal. Not until assured that all were clear was I prepared to venture across the Atlantic. By the time I reached my destination, Montreal, the fleet had been grounded. I was relieved, although it meant that I was stuck there for about ten days. By then the base, and my home, was back in England.

The trouble was eventually traced to a pernicious habit which had developed in extremely cold winter weather. At places such as Goose Bay, the thermometer can drop below anything known in UK. The coldest I ever experienced there was MINUS 47°. As aircraft could get stuck





Another view of the BOAC Stratocruiser flag-ship, this time in the later blue, white and silver scheme. A total of 16 Stratocruisers flew with BOAC over a 9yr period.

there for a long night or longer, it was then extremely difficult to start an engine or even to get a prop to turn over once. The oil had become almost solid. To dilute the frozen oil, the engineers had got into the habit of diluting it with 100-octane petrol. Do that a few times and you can imagine the lack of lubrication then remaining in the oil. It was little wonder that our engine bearings were packing up daily.

Bermuda flights were soon added. The schedule was only about once a week. These, too, had to be routed via Gander owing to the aircraft's lack of fuel and range. It was one hell of a job to explain to a passenger, who had booked to fly to Bermuda for some winter sunshine, that he was on the right aircraft when, as often was the case, Gander would be out of action with its usual early morning fog and I had to announce to the customers that our first stop would be in Iceland!

The captains had to spend a lot of their time pacifying passengers and in explaining delays etc. Not all passengers took the bad news well. Captain "Bart" Lazelle had one particularly obnoxious one. Try as Bart did, nothing would soothe him. Again and again, he was announcing to all within earshot that nothing on God's Earth would ever persuade him to fly with God-Damn BOAC again. So it went on. In the end Bart had had enough. "You'll never fly with us again, sir?" he enquired. Bart was ever polite.

"No way. Never! never! never!"

"On behalf of my country, my company, my crew and myself, I thank you, Sir." The other passengers applauded. They, too, had had more than enough of Loud Mouth.

The stewardesses were rather special persons. Although usually the most junior of all aboard, they came from fairly

good homes. The other stewards did not always relish their conversation, which tended to include phrases such as "My Daddy's Bentley . . ." Nor did the other cabin staff appreciate their popularity on the ground with the flight crews! Some were young and naive. Others were definitely not so. One notorious stewardess could boast of a "logbook" into which the names of 400 flight crews had been entered, alongside, it is said, some assessment of their prowess. She was an honest, straightforward lass. "I'm not married", she was heard to exclaim, "and I like it, so I don't see why I shouldn't have my share!" One by-product of her generous nature was that she found she never had to buy a meal nor a drink when overseas. It was said that, kindly person that she was, this had enabled her to save so much of her daily overseas subsistence allowances that she had bought her parents a house.

When operating Strats on the transatlantic routes, you never knew on which day you would be returning. Delays en route would often lead to a mass of rescheduling, consolidation of flights, reappraisals of the roster. If stuck overseas for days on end, swift romances were brewed. On the other hand, a crew member returning home a few days early, owing to rescheduling, might surprise a unexpected overnight "visitor". I know of two such "surprises" that led to divorce actions.

An aeroplane with character

For all its quirks and shortcomings, one grew used to, and very fond of, the Dear Old Strat. It was also an invigorating challenge to be opening up such popular post-war air routes. For many of us who had worn a different uniform between 1939 and 1945, it made a welcome change to be flying aircraft without others shooting at you. The Strat was an aeroplane with character; even if one never quite came to terms with all her oddities, this made the job more interesting. She never had enough range for the

Atlantic crossing and her engines were always suspect. Yet, as the years rolled by — and my 7-8yr with her was by no means exceptional in length — one became really fond of her despite occasional misgivings. In a way, it was a bit like taking up golf or being married to an attractive wife. There was always that element of nagging doubt. What exactly *did* she mean? Why *won't* that pesky ball go straight? What *will* the Strat feel like today? One never could be quite sure. Life became a lot more mundane when she was replaced, first by the DC-7C, and later by the Boeing 707. Those aircraft carried nearly enough fuel to fly across the Atlantic and back non-stop. The 707 did not even ice up: always a major consideration with the Strat. Their engines seldom failed.

Progress marches on, and we shall not see the likes of the Strat again. Much of the "fun" of finding a way across the Atlantic in the face of a 60kt headwind has gone for ever. Even the navigation, another real challenge in those days, is now all done by numbers fed into a black box. As for meteorology, who today knows the significance of the temperature and dew point? Would any pilot today ever care if the two were rapidly approaching each other at Gander at dawn, with the Point Of No Return behind and with barely enough Alternate fuel to reach Stephenville?

Almost every take-off was an event. The engines would be opened up to full power with the brakes on. By then everything on board would be shuddering and juddering. The brakes would be released. The Strat then remained quite motionless for what seemed to be seconds before commencing to lumber down the runway.

"Ready to charge". I once heard a Pan Am skipper announce to the tower at Idlewild when all set to depart. This is how I think of a Strat take-off: a Charge, with an element of The Charge of the Light Brigade about it.

Them were the days . . . and the nights, too!



ment but a pair of podded 3-kg (5,200-lb) thrust General Electric J47 jets under the wings to a speed to 715 km/h (444 mph) for compatibility with jet aircraft.

50K: modification of TB-50Hs to a standard identical with the KB-50J

4A: proposed production version

4B: proposed reconnaissance version

54A: proposed reconnaissance version of the YB-50C

Specification
ing B-50A

er: four-engined heavy bomber

erplant: four 2610-kW (3,500-hp) Pratt & Whitney R-4360-35 Wasp radial piston engines

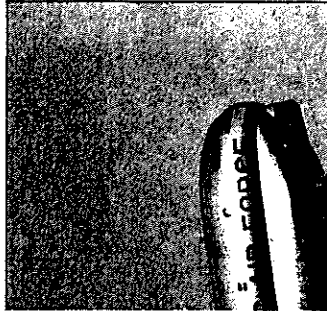
ormance: maximum level speed 604 km/h (385 mph); cruising speed 483 km/h (235 mph); service ceiling 9,205 m (30,200 ft); range 7,483 km (4,650 miles)

ghts: empty 36,764 kg (81,050 lb); maximum take-off 76,389 kg (168,400 lb)

ensions: span 43.05 m (141 ft); length 30.18 m (99 ft 0 in); height 9.755 m (32 ft 0 in); wing area 161.55 m² (174,000 sq ft)

ament: twelve 12.7-mm (0.5-in) machine-guns, comprising two in each rear remotely-controlled turrets, one in a nose turret, and two plus one in cannon in tail turret, and up to 20 kg (20,000 lb) of bombs

3-4360-35C engines. The **KC-97F** variant which followed differed only in the engines. Both the KC-97E and KC-97F were convertible aircraft transports, but for full transport capability the flight-refuelling equipment had to be removed. The most numerous variant, with 592 built, was the **KC-97G** which had full tanker or full transport capability without any on-unit equipment



being designated **TK-1** in that service. Several have served in many roles with Israel's air force.

Variants

C-97D: designation applied to the third YC-97A, the YC-97B, and two C-97As following conversion to a

TC-97A: final designation of two KC-97Gs converted for USAF use as flying test-beds, each with four 4250-kW (5,700-shp) Pratt & Whitney YT43-P-5 turboprop engines

Specification

KC-97G

Type: long-range military transport or flight-refuelling tanker

Powerplant: four 2610-kW (3,500-hp) Pratt & Whitney R-4360-59B radial piston engines

Performance: maximum speed

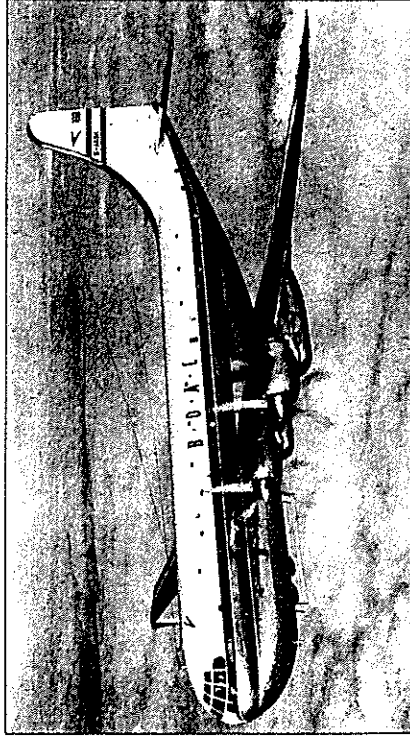
604 km/h (375 mph); cruising speed 483 km/h (300 mph); operating ceiling 9,205 m (30,200 ft); range 6,920 km (4,300 miles)

Weights: empty 37,421 kg (82,500 lb); maximum take-off 79,379 kg (175,000 lb)

Dimensions: span 43.05 m (141 ft)

Boeing Model 377 Stratocruiser

The **Boeing Model 377 Stratocruiser** was a commercial transport development of the Model 367 (military C-97), and based on the improved-structure YC-97A with Pratt & Whitney R-4360 engines. The first flight of the prototype **Model 377-10-19** was made on 8 July 1947, and it was delivered subsequently to Pan American World Airways, which was the biggest user of the Stratocruiser. There were a variety of interior configurations in the **Models 377-10-26, -28, -29, -30, -32** accommodating from 55 to 112 passengers or, if equipped as a 'sleeper', with 28 upper- and lower-berth units, plus five seats. The main cabin was in the upper lobe of the 'double-bubble' fuselage, with a luxury lounge or cocktail bar seating 14 on the lower deck, reached via a spiral staircase.



Caledonia was the first of only six Boeing Model 377-10-32 Stratocruisers ordered directly from Boeing by BOAC. The airline eventually acquired another 11 Stratocruisers from other airlines for its popular North Atlantic service and other routes.

fleet of 17; only six of these were original purchases from Boeing, the remainder acquired from other airlines. After just over nine years' service with BOAC, 10 were sold to Transocean Airlines in the USA during 1958. Of these, four were converted to 117-passenger high-density seating, the remainder each having an additional 12 seats added to their standard 63- and 84-seat layouts.

Before Stratocruisers disappeared

Seen in company with an F-86 chase plane, this is one of the YC-97J transports converted from KC-97G tankers with YT43 turboprops.

3 in); length 33.63 m (110 ft 4 in); height 11.66 m (38 ft 3 in); wing area 164.34 m² (1,769 sq ft)

from service during 1963, a few had been modified to a cargo configuration, but by far the strangest conversion resulted from those airframes acquired by Aero Spacelines Inc. Under the designation **377-PG**, this company built an oversized cargo aircraft which it named 'Pregnant Guppy' and subsequently built other examples, using both Model 367 and 377 airframes, under variations of the Guppy name.

Specification

Boeing Model 377 (basic airline Stratocruiser)

Type: commercial transport

Powerplant: four 2610-kW (3,500-hp) Pratt & Whitney R-4360 Wasp Major radial piston engines

Performance: maximum speed 604 km/h (375 mph) at 7,620 m (25,000 ft); maximum cruising speed 547 km/h (340 mph) at 7,620 m (25,000 ft); service ceiling above 9,755 m (32,000 ft); range with maximum fuel 6,759 km (4,200 miles)

Weights: empty 37,875 kg (83,500 lb); maximum take-off 66,134 kg (145,800 lb)

Dimensions: span 43.05 m (141 ft 3 in); length 33.63 m (110 ft 4 in); height 11.66 m (38 ft 3 in); wing area 164.34 m² (1,769 sq ft)

Boeing Model 400 (XF8B)

US Navy carriers operating in the Pacific during World War II were, like similar vessels of any nation, very vulnerable to air attack. When the changing fortunes of war made it clear to the US Navy that a day could dawn when they would need to attack the Japanese home islands, concern was expressed at the need to deploy these vessels within easy range of large numbers of land-based aircraft.



400. Submitted to the US Navy, Boeing's design study was sufficiently interesting to warrant the award of a contract for three **XF8B-1** prototypes on 4 May 1943. The first of these aircraft made its initial flight during November 1944, and was immediately seen to be the largest single-seat piston-engine fighter to be built in the USA. In fact, it subsequently proved to be one of the most powerful single-engine fighters to be developed by any nation involved in World War II, for its powerplant consisted of a Pratt & Whitney XR-4360-10 radial piston engine, which had four banks of seven cylinders, the 2237-kW (3,000-hp) power output being used to drive two three-blade contra-rotating metal propellers.

Boeing's Model 400 was the heaviest carrier-based aircraft of

Only the first prototype was completed and flown before the end of World War II, but although the remaining two prototypes were completed and handed over after VJ-Day, the overriding interest in the development of turbine-engined aircraft meant that further test and evaluation of the XF8B-1s was abandoned.

Specification

Type: single-seat carrier-based long-range fighter/fighter-bomber

Powerplant: one 2237-kW (3,000-hp) Pratt & Whitney XR-4360-10 radial piston engine

Performance: maximum speed 695 km/h (432 mph) at 8,200 m (26,900 ft); cruising speed 306 km/h (190 mph); service ceiling 11,430 m (37,500 ft); range 4,506 km (2,800 miles)



60 YEARS LATER...

... ..

... ..

... ..

... ..

B-50A: designation of initial production model (59 built)

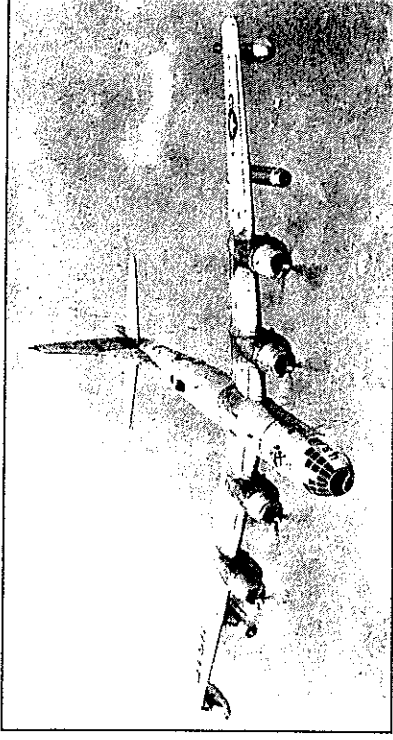
TB-50A: under this designation 11 B-50As were modified to trainers for Convair B-36s

B-50B: improved version, with maximum take-off weight increased by 590 kg (1,300 lb) to 77112 kg (170,000 lb) and numerous improvements (45 built)

EB-50B: B-50B retained by Boeing for experimental purposes, including at one time investigation of tracked landing gear

RB-50B: all 44 in-service B-50Bs were modified to this standard with a rear bomb bay capsule for photographic and

The KB-50J was the ultimate variant, with J47 turbojets in pods under the wings to boost speeds.



Y1 types: four-engine heavy bomber

Powerplant: four 2610-kW (3,500-hp) Pratt & Whitney R-4360-35 Wasp Major turbocharged radial piston engines

Performance: maximum level speed 620 km/h (385 mph); cruising speed 378 km/h (235 mph); service ceiling 11280 m (37,000 ft); range 7483 km (4,650 miles)

Weights: empty 36764 kg (81,050 lb); maximum take-off 76389 kg (168,408 lb)

Dimensions: span 43.05 m (141 ft 3 in); length 30.18 m (99 ft 0 in); height 9.96 m (32 ft 8 in); wing area 161.55 m² (1,739 sq ft)

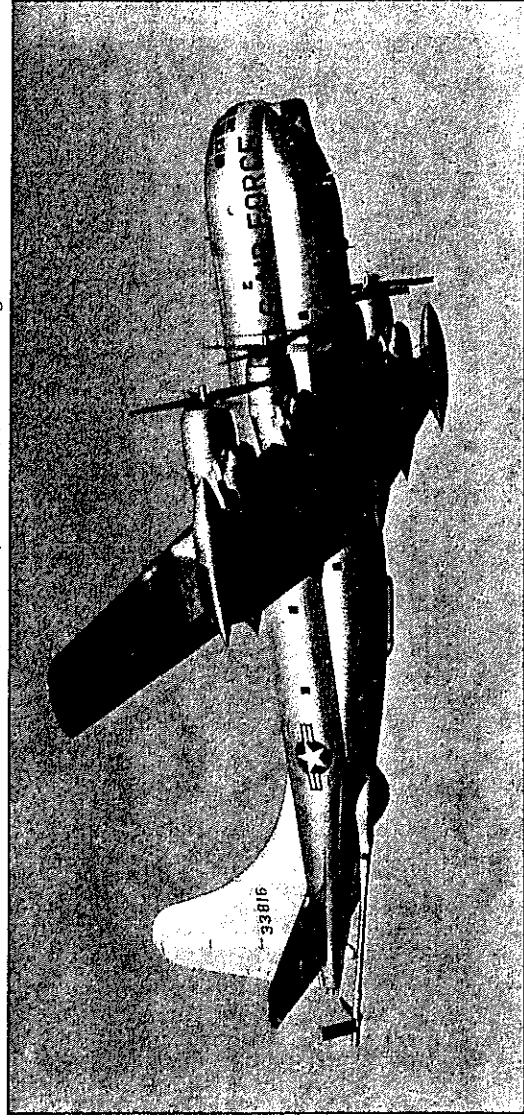
Armament: twelve 12.7-mm (0.5-in) machine-guns, comprising two in each of three remotely-controlled turrets, four in a nose turret, and two plus one 20-mm cannon in tail turret, and up to 9072 kg (20,000 lb) of bombs

Boeing Model 367 (C/KC-97)

In early 1942 Boeing initiated a design study to examine the feasibility of producing a transport version of its B-29 Superfortress. In due course the company's proposal was submitted to the USAAF for consideration and, because at that time the long-range transport was a much-needed type of aircraft, a contract for three prototypes was awarded on 23 January 1943, identified by the company as the **Boeing Model 367**, and designated **XC-97** by the US Army Air Force, the first made its maiden flight on 15 November 1944.

The XC-97 had much in common with the B-29, including the entire wing and engine layout. At first view the fuselage, of 'double-bubble' section, appeared to be entirely new, but in fact the lower 'bubble' was basically a B-29 structure, and so was the tail unit attached to the new (and larger) upper 'bubble'. On 6 July 1945, following brief evaluation of

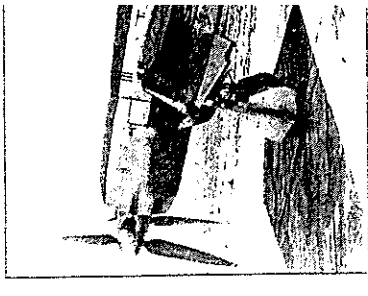
R-4360-27 engines, specified accommodation for 134 troops, or the ability to carry a 24040-kg (53,000-lb) payload. Two transport versions followed, under the designation **C-97C** and **KC-97D**, and following trials with three **KC-97A** aircraft equipped with additional tankage and a Boeing-developed flight-refuelling boom, **KC-97E** flight-refuelling tankers went into production in 1951. This version was powered by 2610-kW (3,500-



hp) R-4360-35C engines. The **KC-97E** variant which followed differed only in having R-4360-59B engines. Both the **KC-97E** and **KC-97F** were convertible tanker/transports, but for full transport capability the flight-refuelling equipment had to be removed. The most numerous variant, with 592 built, was the **KC-97G** which had full tanker or full transport capability without any on-unit equipment change.

Boeing Model 377

US Navy carriers operating in the Pacific during World War II were, like vessels of any nation, very vulnerable to air attack. When the changing of war made it clear to the US Navy that day could dawn when they would attack the Japanese home islands, concern was expressed at the prospect of these vessels within easy reach of large numbers of land-based



Caledonia was the first of six Boeing Model 377-10-32 Stratocruisers ordered directly from Boeing by BOAC. The airline eventually acquired another 11 Stratocruisers for its population of other airlines for its popular North Atlantic service and routes.

The KC-97G introduced the ability to carry freight or passengers without any internal modification. Permanent underwing tanks were fitted, and these were often replaced by a pair of J47 turbojets to produce the KC-97L.

