

MACH 2

Concorde magazine

Concorde conquers
the USA
From struggle to success

Eastern adventure
*BA's Concorde services to
Singapore*

Concorde Watch
*News from Scotland
and France*

Issue 13
December 2017

INTRODUCTION

We end the year at Mach 2 with a special issue looking back at two 40th anniversaries for Concorde. The first – of huge significance for both the French and the British fleets – is the start of scheduled services to New York, on 22 November 1977, with a double landing of F-BVFA and G-BOAA at JFK. Flight engineer David Macdonald looks back at the years of legal and political struggles, while we are pleased to welcome Captain Tony Meadows, who recalls his experience as one of the pilots for the British Airways flight.

The second anniversary is that for the start of British Airways Concorde services to Singapore, on 9 December 1977. Although this service ended after only three years, it was an amazing time for those involved. Again, Captain Tony Meadows was one of the initial flight crew with G-BOAD, the aircraft dedicated to the service. Captain John Hutchinson describes his time as part of the dedicated crew based in Singapore.

We close with news from East Fortune and Le Bourget.

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CONCORDE AND THE USA

In the first of our two 40th anniversary features, we look at the biggest milestone in Concorde's commercial career – the start of scheduled services to the United States, which would become the “jewel in the crown” of British Airways and Air France Concorde services.

Concorde was fitted for one route above all others – the transatlantic route from London or Paris to the USA, and in particular to John F. Kennedy airport (JFK), New York. Not only was this one of the world's most lucrative airline routes – much of the route lay over the ocean, thus avoiding the problem of sonic booms over populated areas.

Frank Sinatra's immortal words in “New York, New York” would be just as true for Concorde: “If I can make it there, I'll make it anywhere”. On the other hand, if Concorde were refused access to these Atlantic routes, it could spell the death knell for our super-sonic airliner. As it was, the national airlines

British Airways (BA) and Air France would be the only major operators of Concorde; the chance to secure the prize of the Atlantic route was the last roll of the dice.

The struggle to gain permission for the New York service took several gruelling years, but finally Concorde won. On 22 November 1977, Air France Concorde F-BVFA touched down at JFK, followed 90 seconds later by British Airways (BA) Concorde G-BOAA. Thus began a 27-year Concorde service that brought prestige and worldwide admiration as well as revenue to BA and Air France, until the final BA flight returned from JFK on 24 October 2003 to end the services for good.

The pioneer: Concorde F-WTSB

Concorde F-WTSB (French development aircraft 201) played a significant role in proving that Concorde would meet the noise limits set by the Port of New York and New Jersey.

On 19 October 1977, F-WTSB landed at JFK to carry out proving flights for noise testing. Commanded by Jean Franchi, Chief Test Pilot for Aérospatiale, F-WTSB had Air France Pilot Pierre Dudal as co-pilot, and also carried BA Captains

Brian Walpole and Tony Meadows, plus CAA representative Gordon Corps and a team of technicians.

The aircraft was greeted by anti-noise protesters, but Sierra Bravo's landing on runway 04L gave a noise reading of 105.5 PNdB (perceived noise decibels) – well within the limit of 112 PNdB set by the Port of New York Authority. Afterwards, the British and French pilots (and Sierra Bravo) attended a press conference.

The next day, F-WTSB, this time commanded by Brian Walpole, took off from runway 31L, using what would become the customary tight left turn from just 100ft above the runway. The take-off did not even trigger the Port's noise detection instruments, which were set to detect any noise over 105 PNdB. The aircraft carried out several more test take-offs and landings from JFK before returning to Toulouse on 22 October.

Franco-British ambassador

F-WTSB in his retirement home at the Musée Aeroscopia, Toulouse. He still carries the logos of BAC and Aérospatiale, the British and French manufacturers of Concorde.

Photo source: Duch.seb / Wikimedia Commons



Entry into the USA

Former BA Flight Engineer David Macdonald recalls the legal and political struggle involved in gaining permission for the Concorde services to the USA, and in particular to John F. Kennedy (JFK) airport, New York.



Can it really be 40 years since Concorde began scheduled services to New York? 1977 isn't that far away, is it: modern times, comparable to today in many ways. But now I think back a further 40 years. And that was different, almost history – my grandfather (a Teamster) in his final job with the Co-op's delivery wagon and two Shire horses!

I well recall watching Speedbird Concorde 193 on 22 November '77 – 4 reheats burning bright, Michael Aspel on Radio 2 playing 'Back in the New York Groove' for us.

It had always been anticipated that Concorde would earn its keep on the North Atlantic route. By the end of 1975, launch crews had been to school, passed their exams and were checked-out on Concorde 102s, while the Bristol-designed Olympus engine, the Concorde aircraft and the Maintenance Schedule had all received certification. We

Success at last

Concorde G-BOAA takes off from Heathrow on the first scheduled BA flight to JFK – a perfect end to a long and tortuous transatlantic battle.

Photo: BAC Pictures

were ready – but on the other side of the Atlantic, they were not.

Putting the case

In February 1975 British Airways and Air France had submitted routine requests for variation of their Operations Specifications to include Concorde services: this is where 'routine' stopped and 'unique' began.

New York Kennedy (JFK) was the target airfield. It was run by The Port of New York Authority (PONYA), and they had a fractious relationship with surrounding communities. Fake news is nothing new, but we called it scaremongering then – the false presentation of Concorde as a big, dirty despoiler of environment. The FAA were persuaded to conduct an analysis of every facet of

Concorde operation and prepare an 'Environmental Impact Statement' (EIS) on which the then Secretary for Transportation, William Coleman, would make a ruling.

It was November '75 when the final EIS was issued and a further two months before Secretary

"... a crucial phase for the Concorde project ..."

Coleman was able to call a public hearing.

At this stage the British and French governments became involved. In a wonderful piece of diplomatic language, HMG's submission combined the velvet

glove of “cooperation and harmony” with the steel fist of “rights under international agreements”.

Make no mistake, this was a crucial phase for the Concorde project. It is no exaggeration to state that once again 13 years of work and the whole supersonic future hung in the balance; without New York it was most unlikely that we could have sustained an operation.

Mr Coleman’s statement

One month later, 4 February 1976, William Coleman gave his historic decision. It is a beautifully crafted, even-handed document and is well worth while reading through. Critical points are shown below:

1. “After careful deliberation I have decided to permit British Airways and Air France to conduct limited scheduled commercial flights into the US, for a trial period not to exceed 16 months, under limitations and restrictions set forth below. (Note that the trial period flights landed at Washington Dulles, effectively a government airfield.)
2. “Given the substantial effort by French and British to initiate this technology and that US participation may well be essential, I believe this demonstration is needed to determine whether a commitment to this new technology should be embraced.”

Not exactly a ringing endorsement, but enough to open the door.

Double triumph

22 November 1977: British Airways Concorde G-BOAA comes in to land at JFK, just seconds behind her Air France counterpart F-BVFA, as the two airlines finally inaugurate their scheduled services to New York.

Photo: Marty Lederhandler / Associated Press/Rex Features

Battle commences

PONYA’s view was “Must we, the Port, abide by the Federal decision?” They thought not – and passed a resolution to ban Concorde.

There followed six further stages of litigation and the introduction of one of my heroes – Judge Milton Pollack of the Federal District Court for the Southern District of New York.

The two airlines went to court seeking an injunction and a ruling on the Port’s right to ban, with Judge Milton Pollack presiding.

The Port countered by ordering a study of 6 months’ worth of Washington operations; that takes us to the end of 1976 and well into ’77, when procrastination kicked in.

Eventually the protagonists returned to court; Judge Pollack ruled the ban to be illegal.

The Port went to the Appeal Court: their appeal was upheld, but with a rider stating that Judge Pollack should determine whether the ban was “discriminatory and unreasonable”.

On 17 August 1977, Judge Milton Pollack did just that, stating that the ban *was* “discriminatory, unreasonable and for good measure, arbitrary, with the aircraft deprived of the opportunity to prove itself”.

The Port appealed again; their appeal was rejected. They were ordered to end their 19 months ban.

The Port appealed yet again, at the US Supreme Court; the Court declined to hear the case and would not intervene in Judge Milton Pollack’s ruling.

Result ...

We made it!

Finally, on 22 November 1977, Concorde services to New York began. They built rapidly to twice daily, and lasted until 2003.

And the Coleman limitations?

In summary:

- no aircraft movements outside 7am to 10pm
- don’t drop a boom on land
- be a good neighbour.

We stuck rigidly to these limits – and it must have worked, as we were good neighbours to New York for 26 years.

What would my grandfather have thought of that?

Captured on film

A video of the two Concorde arriving in New York can be seen on YouTube, on this page: <https://www.youtube.com/watch?v=XSFBJutqdL0>



A bite at the Big Apple

Tony Meadows, former Concorde Captain with British Airways

Captain Tony Meadows recalls his experience as part of the flight crew on the first scheduled LHR-JFK Concorde service for British Airways – including the spectacular joint landing with Air France’s Concorde, and then flying the tight take-off manoeuvre needed to comply with noise limits.

The 22nd of November 1977 was to be an exciting day – we were at last going to fly passengers to New York. After a successful trial period flying into Washington, we were now granted access to John F. Kennedy (JFK) airport.

This was enormously important commercially; BA Deputy Chairman Ross Stainton said: “Concorde is expected to earn more revenue for British Airways in the next four months than in the whole of the previous financial year.” It was also extremely significant to me, because I was responsible for Concorde Noise Abatement, and noise was the crux of this matter.

Test flights

Each runway at New York had a special noise abatement procedure for take-off. We cooperated with the British Aircraft Corporation (BAC), who were building the British Concordes, and Air France to develop procedures that would produce the desired result, while being flyable and safe.

First, theory; then simulator trials; then Brian Trubshaw (chief test pilot for BAC) and I flew actual take offs from Fairford using the JFK procedures; finally, Brian Walpole (BA Flight Technical Manager) and I flew with Jean Franchi (Chief Test Pilot for Concorde’s French manufacturers, Aérospatiale – and famous for doing a barrel roll in Concorde!) in a French aeroplane to Kennedy on the 19–21st of October to try things out for real. The three test flights were all successful – we were ready.



Making history

The British flight crew for the inaugural Concorde service pose with a statue of aviators John Alcock and Arthur Whitten Brown, who made the very first Atlantic crossing by aeroplane in 1919. From left to right: Captain Tony Meadows; Captain Brian Walpole; Captain Leo Budd; Senior Engineering Officer George Floyd. *Photo: British Airways*

Perfect timing

Brian Walpole was in command for the outbound flight, with myself as co-pilot, George Floyd Senior Flight Engineer, and Captain Leo Budd to look after VIPs and any contingencies. Conscious of the importance of the flight, the photographer suggested a picture in front of the Alcock and Brown memorial at Heathrow.

The aircraft was G-BOAA and it was chocks away at 09:58, to arrange a synchronised arrival with Air France from Paris. The mood was very upbeat; before we left we received a telex from BAC Deputy Chief Test Pilot Jock Cochrane: “Trust your inaugural will be re-

ceived like the three wise monkeys. Our thoughts and best wishes for all success in the New York service.”

The Atlantic crossing was uneventful, until we were told that a severe solar flare had been observed (if we detected solar radiation above our limit, we would have had to descend to a subsonic cruise – what a start for our New York service!). In fact, it was a non-event; our detector showed nothing abnormal. Meanwhile, our plane full of VIPs dined on bone china and fine wines at twice the speed of sound.

We landed to the north-west on runway 31R. Brian Walpole used our decelerating approach technique, to reduce noise – flying at 210 knots

to 900 feet, then reducing power to achieve stable power and landing speed by 450 feet. This gave a noise reading of 89 decibels, well within the limits.

The welcoming crowds were enormous. Amidst the euphoria, we departed to the Waldorf Astoria for a press conference and a lunch hosted by New York Business. At the top of the menu card it said: "The Concorde today brings New York closer than ever before to the rest of the world. The business men and women of New York take pride in honouring those whose vision and foresight have helped to make this possible." Then in the evening we were invited by Ross Stainton and Pierre Giraudet, his opposite number in Air France, to a reception at the Pierre Hotel on 5th Avenue.

A good first day!

Complex take-off

The next day it was my turn. To leave the Big Apple and take Concorde G-BOAA back home; to fly the procedures that my colleagues and I had worked out to make our take-off noise acceptable.

The runway in use was 04L, but this was unacceptable to us from a noise abatement point of view. I visited ATC in the tower and said that I wished to use runway 31L; Walter Mitchell, who was on duty, was very cooperative, but said that there would probably be a delay (using a non-conforming runway). Accordingly, I doubled the taxi fuel.

31L is an excellent runway from the noise abatement point of view, because most of the track is over the water of Jamaica Bay; however, the procedure is a little complex.

Take-off is at full power with reheat, to get maximum height, prior to the community. At V_R , rotate to θ_2 (the calculated initial attitude after take-off). At 20 feet, with a positive rate of climb, raise the undercarriage. When the rate of climb reaches 500 feet per minute, turn left with 25 degrees of bank

Flight path

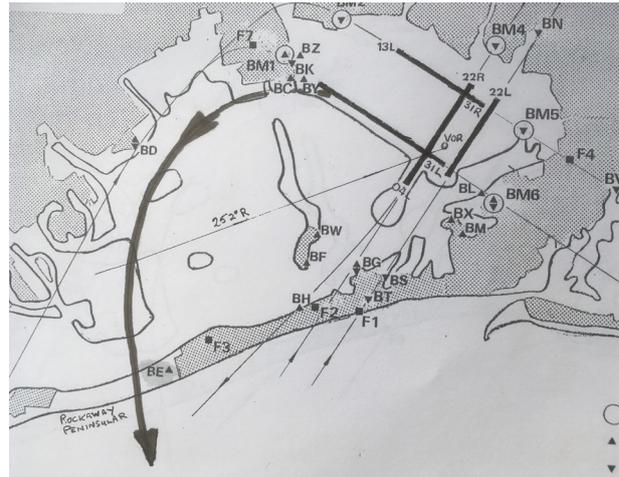
This map shows the take-off path from runway 31L, over Jamaica Bay and the Rockaway Peninsula.

Source: Tony Meadows

Low-level turn

Concorde taking off from runway 31L, demonstrating the left turn over the bay.

Photo: Tony Meadows



(achieved in 5 seconds). At the calculated noise abatement time, switch off reheat and reduce to noise abatement power; maintain the achieved speed between 240 and 250 knots. We have now dealt with the community on the end of the runway, but there is more.

On reaching a heading of 235 degrees, increase rapidly to climb power, and reduce the bank to $7\frac{1}{2}$ degrees (increasing aerodynamic performance); this is to ensure reaching the ATC required height of 2,500 feet before crossing the 252 radial of the Kennedy VOR, whilst continuing to maintain 250 knots.

Once above 2,500 feet, continue a shallow climb of 500 feet per minute at 250 knots, and intercept the Carnarsie 176 degree radial (this ensures tracking between the Rockaways communities at minimum power). Finally, once 5 miles DME from Carnarsie, climb power can be applied (now over the ocean).

All went according to plan. We were well within the noise limits and achieved results comparable to subsonic jets on the day. The rest of the flight went without incident. All the work had been worthwhile; we had successfully taken our first bite at the Big Apple.

Timeline of events: the battle for New York

1975

- **February** British Airways and Air France notify the US Federal Aviation Authority (FAA) of their intention to operate Concorde to Washington and New York.
- **March** The US Department of Transportation publishes a draft Environmental Impact Statement (EIS) on Concorde for public discussion. Over the next month, the FAA holds hearings. The EIS says that there is insufficient evidence to deny Concorde services on environmental grounds, but Concorde has begun to attract vociferous opposition in the USA, and particularly in New York.
- **November** The US Department of Transportation publishes the final version of the EIS.
- **December** The US Environmental Protection Agency (EPA) publishes a highly critical report on the likely noise impact of Concorde services to Washington Dulles airport. The British Embassy in the US holds a press conference to refute the report's claims. The US House of Representatives votes for a 6-month ban on all Concorde flights into the USA except for those to Washington Dulles.

1976

- **5 January** The US Secretary of Transportation, William T. Coleman, Jr., holds a public hearing on permitting Concorde services to the USA. Speakers supporting Concorde include the deputy administrator of NASA, the director of supersonic development at

McDonnell Douglas, and William Magruder, former SST director at the US Department of Transportation, who had fought for continuation of the US supersonic transport (SST). Opponents include the US Environmental Protection Agency (EPA) and the Governor of the State of New York.

- **4 February** William Coleman delivers his judgement. He finds many of the arguments made against Concorde either untrue or unproven. The trial would be monitored, and the resulting data from the first 12 months would be analysed during the following 4 months, to determine whether or not the services could continue.
- **11 March** The Port Authority of New York and New Jersey, which owns JFK, bans Concorde from landing at its airports until at least 6 months of evaluation have been completed at Dulles. In contrast, Dulles is under direct FAA control, so this limitation would not apply.
- **24 May** After various legal attempts to overturn Secretary Coleman's decision, BA Concorde G-BOAC and Air France's F-BVFA inaugurate scheduled Concorde services to Washington Dulles airport.

1977

- **February** Incoming US President Jimmy Carter, having previously opposed Concorde, re-affirms the Coleman decision but says he cannot compel the Port of New York Authority to admit Concorde.

- **March–April** BA and Air France put proposals to the Port Authority on how they intend to comply with the noise limits for JFK. The proposals show that Concorde would be able to use runways 31L and 22R for most flights.
- **11 May** Judge Milton Pollack overturns the Port Authority's ban. The Port Authority appeals this decision twice, but both appeals are rejected.
- **17 August** Judge Milton Pollack at the Federal District Court rules that the ban on Concorde operations is illegal and that the Port has been "discriminatory, unreasonable and ... arbitrary".
- **17 October** The US Supreme Court finally decides to end the ban on Concorde flights to JFK.
- **19 October** Concorde F-WTSCB, with a combined British and French flight crew, lands at JFK to carry out proving flights for noise testing. The aircraft carries out repeated tests over the next two days, before returning to Toulouse on 22 October.
- **22 November** Air France Concorde F-BVFA, commanded by Pierre Dudal, and BA Concorde G-BOAA, with Brian Walpole as Captain, make simultaneous flights to New York. They touch down within 90 seconds of each other to inaugurate the Concorde services to JFK.

THE SINGAPORE SERVICE

The following pages describe the other great milestone of 1977, this time just for the British fleet – the inauguration of BA's Concorde service to Singapore, which began on 9 December 1977. Although it ran for only three years, this service proved Concorde's astonishing capabilities as an airliner.

Timeline of events: London to Singapore

1976

- **21 January** British Airways (BA) Concorde services begin with G-BOAA flying from London to Bahrain. This route is intended to be the first leg of new routes to south-east Asia and on to Australia.
- **28 May** The Australian government gives permission for Concorde to begin regular services to Australia.

1977

- **26 October** BA and Singapore Airlines (SIA) announce their agreement to begin a thrice-weekly Concorde service from London to Singapore via Bahrain. Con-

corde will slash the usual travel time to just 9 hours.

- **9 December** Inauguration of the Bahrain to Singapore service.
- **13 December** BA and SIA are compelled to withdraw the Concorde service after only three return flights, due to objections from the Malaysian government about sonic booms in the Straits of Malacca (see article overleaf).

1978

- **January–December** BA and SIA, and the British government spend the entire year in negotiations with the Malaysian government, to obtain permission to re-start the service.

1979

- **24 January** The London–Singapore service is resumed, with new routings and take-off procedures to avoid overflying Malaysia.

1980

- **1 November** The Singapore service is brought to an end due to low passenger loads, heavy operating costs, and continuing overflight issues.

Destination Singapore

Concorde G-BOAD takes off from Heathrow on the inaugural flight from London to Singapore on 9 December 1977.

Photo: Adrian Meredith



The Eastern Bullet

Tony Meadows, former Concorde Captain with British Airways

Captain Tony Meadows describes the excitement of inaugurating the BA route to Singapore, just two weeks after Concorde began its service to New York, only to be brought back down to earth by politics.

Life for me was very exciting in 1977. David Loney flew myself and my crew to Bahrain on the 7th of December – two weeks after I had flown the New York inaugural – to be ready to operate the inaugural flight to Singapore on the 9th in G-BOAD. Alpha Delta was to be the only aircraft used on this route; we were operating in partnership with Singapore Airlines and one side was painted in their colours.

The last time that I had flown Concorde to Singapore was in August 1975, during the route-proving flights with the BAC test pilots. In fact, it was after a flight from Bombay to Singapore on the 19th of August that I was first cleared to act as Captain on Concorde.

Firing the Eastern Bullet

Ross Stainton, BA Deputy Chairman, had termed London to New York the “Western Bullet”. We were about to fire the “Eastern Bullet” to Singapore, a hub with great potential, linking to Melbourne, Hong Kong, Bangkok and Tokyo.

It had been hoped that we would be able to fly virtually in a straight supersonic line from Bahrain to Singapore, but that was not to be. India refused permission to overfly supersonic, so we had to go around the subcontinent, adding around 200 miles to the flight. But it was still an ideal supersonic leg. You opened the throttles on take-off and left them there until top of descent for Sin-

Route-proving

G-BBDG in Singapore, 1975, during the route-proving flights, in which Tony Meadows participated.

Photo: BAC Pictures

gapore; transitioning from a climb at maximum speed to a climb cruise at Mach 2.00; switching the reheat off at 500 feet after take-off, then briefly on again for the supersonic acceleration in the high drag zone, between 0.93 Mach and 1.7 Mach.

Landing – and after

The flight was uneventful, and I was anticipating a great reception and party with crackers and colourful costumes, as my co-pilot Captain Dave Bristow greased Concorde onto the tarmac with a perfect landing. But it was not to be.

Our manager met me on the tarmac with the news that the Malaysians were not going to permit the return flight through their airspace,

on safety grounds. He asked if I would be willing to take an immediate flight to Kuala Lumpur to see their Aviation Minister; naturally I agreed. The Minister raised issue after issue, and each time I patiently explained that it was not a problem, until he finally said, “I’m afraid there are other matters, Captain.” But he did agree to three further flights as an interim measure.

I returned to Singapore, too late for any merriment. I later learned the real issue – that they were using Concorde as a bargaining chip for “5th freedom” rights (the right to fly a revenue flight between two foreign countries on a flight originating or ending in one’s own country) into Heathrow.



From Bahrain to Singapore

John Hutchinson, former Concorde Captain with British Airways

Captain John Hutchinson recalls his postings to Singapore as part of the dedicated team on the Concorde service between Bahrain and Singapore – a time marked by the camaraderie of the crew and the thrill of giving Alpha Delta her head.

Concorde started commercial operations on 21st January 1976 with a flight to Bahrain. The intention was that once the Bahrain route had been established, the route would be extended to Singapore and then, eventually, Australia.

Clearance was obtained for flights to Singapore during 1977, and the first flight from Bahrain to Singapore took place in December of that year. Sadly, after three return flights the Malaysians withdrew supersonic overflight rights down the Malacca Straits (see opposite page). Further negotiations took place during 1978, and the route was reopened in January 1979 with Concorde G-BOAD, which was painted in Singapore Airlines colours on the left-hand side and British Airways colours on the right side.

The service to Singapore continued until November 1980, operated by BA flight crew and BA/SIA (Singapore Airlines) cabin crew operating alternate sectors. The flight crew operating the Bahrain to Singapore route were all based in Singapore, and I was lucky enough to do two 3-month postings in succession between December 1979 and August 1980.

Spectacular flights

Take-off out of Bahrain was quite dramatic as there were no restrictions on when we could go supersonic, so I would go through Mach 1.0 about 8 or 9 minutes after take-off. The routing thereafter took us in a south-easterly direction past Masirah Island and then around the south-west corner of Sri Lanka, at



which point we headed due east on a course that took us south of Great Nicobar and north of Aceh on the northern tip of Sumatra. Then we would head south-east again down the Malacca Straits for Singapore.

One of my abiding memories will be the sight of a sunrise in the east at 60,000 feet as we were heading towards Aceh. I could see Sumatra and the Malacca Straits as though I was looking at it from space, and there would be isolated thunderheads with tops going well above our altitude. It really was one of the most beautiful sights I have ever seen in the air. I well remember singer Elvis Costello taking a video of a sunrise over the Malacca Straits, accompanied by a vivid and descriptive commentary with liberal use of a certain Anglo-Saxon word to emphasise the beauty of what he was looking at!

A dedicated team

There were other aspects of this operation that made it unusual when

Ocean route

The route from Bahrain to Singapore is shown in red – over the Arabian Sea, skirting Sri Lanka, then due east and down the Straits of Malacca.

Image: mapwire.com / Katie John

compared with flying in and out of London. For instance, the flight crew on the Singapore posting were teamed up as a dedicated crew, in contrast to Heathrow where I would turn up at Crew Reporting and fly with whichever co-pilot or flight engineer the rostering system had allocated to the flight.

This led to some of the best flying I have ever experienced. I especially remember a period when Jock Lowe was my co-pilot and Bill Brown my flight engineer. We reached a level of crew understanding and empathy that I have never known before or since. We almost reached a level where all checks and drills were carried out by thought transference! Without doubt it was the pinnacle of all the flying that I have ever done in my life.

Fighter-like performance

Another and very dramatic difference was the performance of the aeroplane. Flying across to New York the typical temperatures at 50,000 feet and above were around -55 degrees. Flying out of Singapore for Bahrain at those same heights the temperatures were -85 degrees, some 30 degrees colder. This meant that the engines were producing much more power, the thrust of a jet engine being in part a function of the density of air coming into it. The colder the air the greater the density of air and, therefore, the greater the thrust. So, unlike a transatlantic flight where I would cruise climb for the crossing and rarely reach 60,000 feet before throttling back to descend and decelerate, out of Singapore I would reach 50,000 feet and carry on climbing (sometimes at rates of climb of 6,000 feet per minute!) straight up to 60,000 feet, at which point I engaged Mach Hold on the autothrottles and

Altitude Hold on the autopilot, and that is where we stayed for the rest of the flight until descent for landing. It was a remarkable difference and gave Concorde a fighter-like performance.

So, in summary, those few months I spent living in Singapore and flying Concorde to and from Bahrain were probably the best time of my life. The lifestyle in Singapore was fantastic and the social life non-stop. Going to work was the greatest pleasure I could wish for as I looked forward to another four hours or so of flying that iconic and beautiful aeroplane. Out of a typical 4-hour flight time, about 3¼ hours of the flight was supersonic. I have always said that I never worked in my life and that I was paid to enjoy my hobby. Well, those months in Singapore were the ultimate peak of all the flying I have ever done over 50 years of flying. Thank you Concorde for so many wonderful memories.

Eastern colours

Concorde G-BOAD at Heathrow, July 1980, in her unique dual livery.
Photo © Steve Fitzgerald (Wikimedia Commons)

G-BOAD

Concorde G-BOAD (production aircraft 210) was the sole member of the BA fleet dedicated to the Singapore service. She is the only Concorde ever to have carried another airline's colours in addition to those of the main operating company. During the time of the London to Singapore service, she carried the livery of Singapore Airlines (SIA) on the port side, while retaining BA livery on the starboard side.

The service was halted for over a year, almost as soon as it had started, but Alpha Delta was left bearing the dual livery throughout this time – and providing the ultimate advertisement for Singapore Airlines as well as BA as she carried out flights to New York and beyond.





CONCORDE WATCH

Concorde G-BOAA

British production aircraft

Location: Museum of Flight, East Fortune, Scotland

Reporter: Katie John

Date: 4 November 2017

I went up to visit Alpha Alpha in advance of the 40th anniversary of this aircraft inaugurating scheduled British Airways Concorde services to New York, on 22 November 1977. The Museum of Flight was aware of this anniversary, although they said they would not be commemorating it in the hangar as the date fell at mid-week and the museum is only open at weekends during the winter months.

Paul Hazelwood, the Visitor Services Manager, told me that the Museum of Flight is beginning plans to construct a new “super-hangar” on land adjacent to the existing site. The new hangar will eventually house Alpha Alpha, together with the museum’s BAC 1-11, Comet, and Viscount. The intention is to have the new hangar complete and open by 2022. More immediately, the museum is planning to fit a Red Arrows aircraft into the hangar with Concorde.

G-BOAA is looking clean along the sides, but a little dusty on the top of the fuselage and the upper surfaces of the wings. The museum staff are also aware that the carpet in the cabin is getting worn. At least it shows that the aircraft is popular and has plenty of visitors! The plan is to do a major clean and refurbishment for Alpha Alpha before she goes on display in her new hangar.

For information and any updates on the planned new hangar, please see the museum website: <https://www.nms.ac.uk/national-museum-of-flight/things-to-see-and-do/the-concorde-experience/>



Top: Busy hangar

Alpha Alpha is a popular exhibit, even in winter. Also in the hangar are a Trident flight deck and the front of the UK’s only remaining Boeing 707.

Photo: Katie John

Above: New features

The museum has added a new screen on one wall, with a short film about Concorde. They also plan to show a Red Arrows aircraft in the hangar.

Photo: Katie John

Concorde F-BTSD

French production aircraft

Location: Musée de l'Air et de l'Espace, Le Bourget, France

Reporter: Laurent Dupessey **Date:** 17 September–26 November 2017



Concorde F-BTSD was a central feature of this year's European Heritage weekend (journées européennes du patrimoine) at Le Bourget – the 34th year in which this event has been held in France.

The museum offered guided tours of Concorde, as well as of the Boeing 747 and the Dassault Mercure. The tour of Sierra Delta included a look at the technical features; the cowling for engines 3 and 4 was opened and the team of Concorde engineers and volunteers gave talks on the engines (still in situ). This was the first time the engines had been exposed to view since 2013.

Anniversary weekend

On 25 and 26 November the MAE also held an event to mark the 40th anniversary of the first Air France Concorde flight to New York. Once again the cowling for engines 3 and 4 was opened to reveal the engines; this time, one of the covers for the aft section's exhaust was also opened.



Further details

For news and further information on events featuring Concorde at the Musée de l'Air et de l'Espace, please visit their website: <http://www.museeairespace.fr/agenda/>

Top: European heritage

Concorde F-BTSD, with F-WTSS, on display as part of the 34th annual European Heritage Days, in which museums across France host events to introduce European culture and achievements to a new generation.
Photo: Laurent Dupessey

Above: Engines on display

The cowling of engines 3 and 4 is seen fully open, to display the engines to visitors.
Photo: Laurent Dupessey



Generating interest

Visitors view F-BTSD's engines. The Museum also hosted talks on Concorde given by the team of volunteers and former engineers at Le Bourget.
Photo: Laurent Dupessey

Exhaust section

On 25–26 November the aft section of No.4 engine was also exposed to view.
Photo: Laurent Dupessey

