When I Think Back...

by Neville Williams

`Smithy and the Southern Cross - 2
Radio essential for long distance flights

If the epic flights of Sir Charles Kingsford-Smith helped pave the way for today's national and international airlines, they also served to emphasise that reliable two-way radio and direction-finding facilities were not just an option; they were an essential adjunct to pioneering long-distance flights, and would be no less so for future intra- and inter-continental airline services.

Reminiscing in the NZ amateur radio magazine *Break-In* (March 1972) about the first-ever flight across the Pacific, described last month, Tom Clarkson ZL2AZ emphasises the key role played by amateur operators on that occasion. The on-board operator, Jimmy Warner, was himself a licensed amateur.

By way of interest, Tom Clarkson quotes excerpts from the logbook of NZ amateur station 1FQ, for June 4-5th, 1928 — examples of which appear in the accompanying panel.

For Kingsford-Smith and Ulm, the flight was a dream fulfilled against daunting odds. But back in Sydney, having attended to urgent matters and bidden farewell to Warner and Lyon, they faced the inevitable question: What next?

Both were convinced that the time was ripe to establish an Australian national airline. But before committing themselves to such a venture, they were keen to fly from Australia to Britain, thereafter crossing the Atlantic ocean and continental USA to California to become the first aviators to circumnavigate the globe.

At that juncture, however, Keith Anderson complicated matters by suing Smithy in the NSW Supreme Court, to recover expenses which he claimed to have incurred for the Pacific venture on the understanding that he was to be a member of the crew. It was a divisive issue which polarised the press and public and, while Smithy ultimately won the case, it was not a victory which gave him any pleasure.

According to Ward McNally, he met Anderson privately afterwards and insisted that he accept an ex gratia refund of $1000. Anderson reportedly accepted it

TYPICAL MESSAGES:

Hawaii-Fiji, June 4-5, 1928

4.55pm QST de KHAB — hr TR 6 p.m. position lat three deg thirty five north longitude one sixty nine and zero eight — sumthing made a sharp turn — banks of heavy cloud — altitude now six thousand smithy still making for altitude first right then left irs a great game dodging these dark douds — a bit bumpy now.

5.35pm — hr we still trying to gain altitude to avoid storm clouds motors apparently OK there is our friend the moon peeking over a bank of clouds — our altitude now seventy-eight hundred feet but still clouds above us and all around us — that man Smith deserves credit he's a good pilot — one generator quit only three hours out and no chance to charge both batteries — a nice full moon.

6.50am hr wil ga for 5 mins on 700 metres pse get QTE QRX nw

7.30am hr Southern Cross to westwards of course abt approx position now due north of Suva — Only about five hours at most left speed 75 knots may be able to make it to Suva but yet doubtful QRX.

(Excerpts from the log of 1FQ, from *Break-In* for March 1972)

cheque, with the stated intention of using it as a down payment on a Westland Widgeon aircraft, with which to earn a future living. Christened *Kookaburra*, the Widgeon was to haunt Smithy in the years ahead.

Taking advantage of the delay, Smithy and Ulm decided to set a record for a non-stop flight across Australia. Ignoring bad weather, they took off from the RAAF base at Point Cook, Victoria, reached and circled Adelaide in record time and completed the overall 3200km to Perth to an enthusiastic welcome. On their return, they registered themselves as Australian National Airways.

Then came the idea of flying the Tasman to New Zealand, which both regarded as a logical passenger/mail route for ANA. This was despite the fact that the Tasman was seen as 1425 miles (2300km) of treacherous ocean. To complete the crew, they chose M.A. Litchfield as navigator and T.H. McWilliams as radio operator.

It did indeed prove a hazardous, if ultimately successful, journey with storms and severe icing problems. (Which suggested a reason for the disappearance of Moncrieff and Hood, two young Australians who had previously attempted the crossing.) At the height of the storm, McWilliams reported that he could not contact either Australia or New Zealand by radio.

Following another warm welcome, the Royal New Zealand Air Force undertook to service the *Southern Cross* free of charge, while the fliers toured the country in a borrowed NZ Air Force Bristol. Ironically, while Ulm had proved himself a capable pilot, he was not officially certificated and this, too, was made good under NZ Air Force supervision.

Dark days ahead

Back again in Sydney, the same four-man crew set about preparing for the doubly delayed flight to Britain — one that was to result in a major setback for Smithy and Ulm.

Taking off from the Richmond RAAF base for what promised to be a routine trans-Australia flight to Wyndham, the

***Fig.1:** Smithy with John Stannage (left), one of the two men who found the 'Southern Cross' at 'Coffee Royal. A Professional marine wireless operator, Stannage also helped guide the plane to a safe landing in Newfoundland. (Picture supplied by the Feature Bureau, John Fairfax & Sons Ltd., Sydney).*

plane had been in the air for only half an hour when, taking a bearing on the Sun, Litchfield accidentally bumped the trailing aerial mechanism — causing the spool to unwind and the aerial to disppear into space.

Unable to receive incoming signals, McWilliams requested Smithy to return to Richmond for a replacement. But rather than dump 3000 litres of fuel to permit a safe landing, he decided to press on.

What Smithy didn't know was that the RAAF had just received news that the weather over the red centre had turned foul, and was trying desperately to warn him to return to Richmond to await better conditions. But the *message* was never received...

As a result, the Southern Cross headed straight into a deadly mix of wind, rain and dust, which coated it with red mud and reduced visibility to occasional glimpses through the windscreen and the prevailing murk.

Finally, unable to establish their whereabouts and with fuel virtually exhausted, Smithy decided to make an emergency landing at the first opportunity — which left the plane intact but bogged in thick mud. Desperate efforts to effect an emergency radio transmission were unsuccessful and, to make matters worse, they searched in vain for emergency rations which the RAAF had put aboard the plane the day before their departure.

Apparently, the food had been pilfered from the unguarded plane during the night by a hungry vagrant. As a result, the crew developed dysentry and headaches from a starvation diet of marsh mussels and coffee made on brackish water — fortified with a dash of brandy and baby food from a parcel destined for a chemist in Wyndham.

Smithy christened it 'Coffee Royal' — a term that was later picked up by the media and used to identify — and ridicule — the whole unfortunate episode!

Meanwhile seven planes based on Wyndham were searching for them in vain — one of them the *Kookaburra*, piloted by Keith Anderson with Bob Hitchcock as navigator. Forced down in the desert, without food or water, both were to die a lonely death before the Widgeon was finally located.

Reputation at stake!

Meanwhile, the rest of Australia was buzzing with allegations, attributed in part to the now-defunct Sydney *Guardian* newspaper and to *Smith's Weekly*.

The emergency was a 'put-up job', it was said, in collaboration with certain major Australian newspapers which had negotiated exclusive rights to the venture through John Ulm. Some even went so far as to suggest that Anderson was in on the deal, destined to become a national hero for finding the lost fliers. The scheme had come tragically unstuck, they reasoned, when he himself had become lost.

The *Southern Cross* was eventually found by pilot Leslie Holden and radio operator John Stannage (Fig.1) in the chartered *Canberra*.

Dragged from the bog and re-fuelled, the *Southern Cross* was flown back to Wyndham by Smithy and thence to Richmond. Once again he was greeted by a large crowd — but this time, they were booing rather than cheering.

I was only a schoolkid at the time, but I recall that to be 'for Smithy' put one in

the same dubious category as a 'teachers' pet'. Perhaps more than any other person I can remember, Smithy became a victim of Australia's infamous 'tall poppy' syndrome, to be honoured more after his death than during his eventful life.

Two days after the *Southern Cross* returned to Sydney, Prime Minister S.M. Bruce ordered a top-level inquiry into the affair by an expert committee — which was certainly not biased in Smithy's favour.

Having considered all points of view, the committee ruled that they could find no convincing evidence that the forced landing had been a hoax. Smithy and his crew were completely cleared, but to their dying day, both he and Ulm suffered at the hands of 'poppy cutters' who preferred their own 'gut feeling' to the verdict of an exhaustive inquiry.

Contemporary comment

Popular Radio & Aviation for May 1, 1929 carried an article by 'the well known radio experimenter' H.J. Asmus FRGS, entitled 'Searching the Air for VMZAB — The lesson of the Southern Cross'. From the context and the cover date, it is almost certain to have been prepared while the aircraft was still missing.

The writer says that he had listened to Warner's transmissions during the original trans-Pacific flight and found most helpful his practice of leaving the carrier run between messages. Receivers could be kept properly tuned to the transmitter and therefore instantly ready to receive the next message.

On the more recent flight, he heard McWilliams' message to VIS in Sydney indicating that the receiving aerial had carried away. Some time later, he heard a copyright message from Ulm for the Melbourne *Herald* and 'Sunflight' Sydney — presumably the Sydney *Sun.*

Throughout the day and into the night, Asmus continued to listen, noting that McWilliams did not normally leave the key down between messages.

For the listener there was therefore no carrier to indicate that the flight was progressing normally. Sometime after midnight he went to bed. Signals were heard again briefly on Sunday morning and then silence.

Asmus says that having personally monitored the plane across the Pacific and most of the way across Australia, he was left in no doubt that two-way radio communication was an essential adjunct to long distance flights.

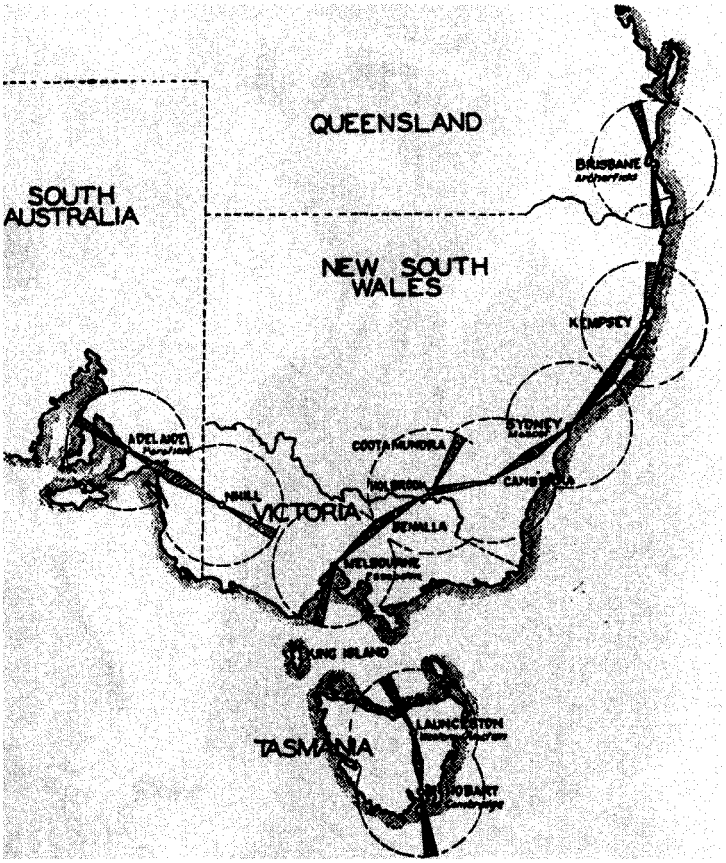


Fig.2: From D.L. Erben's 1938 IRE paper, this map shows the Lorenz type radio beacon system, then In the process of installation by STC to serve the main east coast routes.

The *Southern Cross* should either have been carrying sufficient spares to restore equipment in flight — or have returned to base when communication was impaired. Provision should also have been made for a possible forced landing.

By implication, he added, it was not appropriate either, for planes to have to rely on scattered coastal long-wave stations or even on amateur operators — helpful as they had undoubtedly been.

The Australian Government should immediately set up shortwave communication facilities, along with guidance and direction finding equipment to cope with the needs both of shipping and the coming era of inter- and trans-contintental air transport.

In practice, the establishment of a national aeronautical communication and guidance network was much easier for *Popular Radio & Aviation* to suggest than for the government to implement.

As independent hobbyists, amateur radio operators can react to a new technique and assemble functional equipment within a matter of days or weeks.

To devise and install an official national aeradio network was a much more involved process, which could — and did — take years, as I was able to verify from professional radio engineering literature.

From radio engineers

For example, several of the technical papers contributed to the IRE World Radio Convention (Sydney, 1938) had to do with the evolution of Australian aeradio services to that date. One by AWA engineer H.M. Lamb provides useful contemporary comment.

In the paper entitled 'Radio Aids to Navigation', Lamb admits that

In Australia, the development of aircraft radio services has tended to lag behind air transport itself.

Rightly or wrongly, he claims that this had come about not so much because of tardiness on the part of the authorities, but by reason of the rapidity with which private enterprise had established Australian commercial air services.

According to Lamb, the first dedicated aeradio station to be opened in Australia was set up 'as recently as April, 1935' at Melbourne's Essendon airport, with a

companion station following shortly afterwards at Western Junction in northern Tasmania.

Communication was on 324kHz, with D/F (direction finding) based on a Bellini-Tosi system. The two stations provided a valuable service to planes on the Bass Strait run — their only recourse, before then, having been to the Melbourne coastal radio station.

In another paper, an overview of `Australian Radio Communication Services', L.A. Hooke (then General Manager of AWA) stated that aircraft providing scheduled services within Australia during calendar 1937 had flown nearly eight million miles (12.8 million km). By the end of that year, at least 24 intra-Australian planes had been fitted with wireless communication equipment, mostly using pilot operated telephony.

The Government's early response, much of it implemented by AWA, had been to arrange for coastal stations around Australia to communicate with aircraft — initially sharing the marine channels.

Over the two years preceding the Convention, facilities had been provided at the capital cities and key intermediate locations to service the internationally recognised aircraft channels on 900 and 930 metres. Most stations had D/F receivers installed by 1938.

The above arrangements offered reasonably good communication over the southern regions of Australia, but atmospheric noise was a major problem in the more northerly latitudes. A back-up service had been made available on 45 metres at Melbourne, Sydney, Brisbane, Darwin and Forrest as an interim measure.

However according to Mr Hooke, the Australian Civil Aviation Board had decided on 115 and 119 metres for normal working, with 45 metres for long distance communication. The 925-metre channel would be retained to provide access for overseas aircraft entering Australian airspace. Said Mr Hooke in April 1938:

Work is now in progress for the erection of a number of modern stations capable of working on these wavelengths.

He also indicated that the Civil Aviation Board had contracted for the installation of a chain of directional beacons operating on nine metres and servicing the major east coast routes.

The system would provide marker approach beacons, but would not extend to a blind landing facility. (This was probably a tender subject for Mr Hooke, as the relevant contract had been let to STC — a major competitor).

Approach beacons

In fact, a separate paper was delivered to the Convention by D.L. Erben, an engineer from C. Lorenz A.G. in Berlin, who had been seconded to Standard Telephones & Cables of Alexandria, NSW. Entitled 'Approach Beacon and Blind Landing', his paper detailed a system of aircraft beacons being currently installed in Australia, operating on nine and 9.05 metres (Fig.2).

In his introduction to the paper, Erben was conservative about the 'state of the art' in which he was involved, particularly in relation to neo-blind landing aids. I quote:

Fig.3: For the Sydney-London-USA flight, the 'Southern Cross' carried professionally built radio equipment, anti-shock mounted in a frame in the after cabinet. (From 'Wireless Weekly' for July 4, 1930.)

When we attempt to apply to the navigation of aeroplanes our existing knowledge of the high frequency field, we must realise that we are within the sphere of the two younger technical fields (radio and aeronautics), and that some of their main aspects are still in a rapid process of development. Therefore we must not expect to solve immediately the problems engendered by the application of high frequency to aerial navigation in a manner which will be satisfactory for all time. But there are hundreds of airlines working to extended schedules throughout the world which are in (urgent) need of improvements to their available radio aids in navigation. The industries concerned are therefore working along parallel lines.

According to Winston Muscio, who was working at STC at the time, Erben was subsequently killed in a road smash during the course of the installation. But by then, STC's own engineers had become sufficiently familiar with it to complete the work.

As if to emphasise that AWA did not lack expertise in this specialised area, a further three papers on radio navigation were presented by AWA engineers D.G. (Don) Lindsay, Dr O.O. Pulley and J.G. (Joe) Reed.

Reflecting on past practice, Don Lindsay pointed out that the mixed vertical/horizontal components from a low frequency trailing aircraft transmitting antenna could falsify the bearing indicated by a D/F loop by as much as 20 - 30° when the aerial was at right angles to the direction of the D/F site. The sense of the error (+ or -) depended on whether the plane was headed from left to right or vice versa.

In a companion paper sub-headed `Ultra-High Frequency Beacons', Joe Reed (engineer, radio amateur and an active member of the WIA) claimed that AWA had been researching UHF beam technology since 1924. Against that background, he envisaged the way ahead for the aeradio industry.

Such was the situation in Australia in 1938 — the best part of 10 years after Smithy, Ulm and commercial pilots of their generation had had to navigate the hard way — which brings us back to 1929 and our central theme.

Off to London again

His name cleared in the 'Coffee Royal' affair, Smithy and his crew set off in June 1929 for Derby WA, en route to London. Decidely 'underwhelmed' this time around, he was farewelled from Richmond by a comparatively small group of well-wishers.

Fortunately for their peace of mind, the crew received an enthusiastic welcome at Derby, and were hailed by a wildly cheering crowd at Singapore. Apart from minor incidents, the flight to London went smoothly, in the official time of 12 days and 18 hours.

At this point, Anthony Fokker offered to arrange a complete factory overhaul of the *Southern Cross* at no cost. And since there was no special urgency about the Atlantic crossing, the crew returned home by ship, with Smithy and Ulm taking the opportunity to put more time and effort into their fledgling airline. After a few

months, Smithy left Ulm to carry on and headed back to Holland.

There, Anthony Fokker suggested that a Dutch test pilot Ewart *van* Dyke would make a capable co-pilot for the Atlantic crossing. Smithy completed the crew with Irish navigator Paddy Saul and Australian marine radio operator John Stannage, who happened to be in London at the time, between ships.

The Atlantic flight went smoothly at first, but half-way across they ran into bad weather which blocked all visibility and caused the compasses to malfunction by reason of condensation effects. Fortunately, Stannage was able to obtain directional fixes from shore stations and from ships in the area, and they were able to put down at Harbour Grace in Newfoundland before running out of fuel.

As it happens, our own ancestor *Wireless Weekly* covered the event in its issue for July 4, 1930. According to the article, before leaving Australia the *Southern Cross* had been fitted with a new Heinz and Kaumann transmitter designed to operate on 33.3 and 600 metres.

The receiver had been built by New Systems Telephones, in collaboration with the British General Electric Co. Using plug-in coils, it covered from 18 to 2900 metres and had provision to switch off the final audio stage if not needed.

As shown in Fig.3, the equipment was mounted in a framework in the after cabin of the *Southern Cross,* using elastic shock absorbers to protect the valves from vibration.

It was checked out before leaving Australia by operator McWilliams and a Mr Huckell, who was presumably a radio pioneer by that name well known in the Sydney area around that time. In Britain, the receiver was modified to use 2-volt rather than 4-volt valves.

A small map of Newfoundland in *Wireless Weekly* (Fig.4) shows the radio stations at Belle Isle (beam dotted) and Cape Race, with Harbour Grace in between. Earlier observations about the importance of functional on-board radio equipment are validated by a paragraph in the article:

While the fliers attribute their safety to the many radio devices which were brought into service, the most remarkable thing seems to have been the continued reception in the plane itself; everything depends on that.

Largely because of the intervening distance, along with interference from the American shortwave station WEC, Australian amateurs heard only snippets of the drama, enacted in Morse code. The one exception was Mr J. Duffy of Waverley, Sydney, secretary of Harrington's Radio Club.

Using a `Super Wasp' receiver, he apparently managed to keep track of the *Southern Cross* throughout the Tuesday night (June 24, 1930) until 4.30am.

The final paragraph in the article may well have been written tongue-in-cheek — *Wireless Weekly* being, by then, a stablemate of the Sydney *Sun:*

The messages which Mr Duffy took down were printed in the 'Daily Guardian' on Wednesday morning.

Arriving in New York on June 26, 1930, they were greeted by the Mayor and a 6km tickertape parade, and taken to meet President Hoover.

There the team split up, with Van Dyke returning to Holland and Saul to Ireland — leaving Smithy and Stannage to complete the full circle to California. But, for Smithy, the end of his round-the-world flight was not to be a time for relaxation.

A few days later, stricken with appendicitis, he had to undergo surgery. While still recuperating, he learned from the papers that no less than four separate airmen were planning to challenge Bert Hinlder's record for a solo London-Australia flight.

London-Darwin solo

It was too much for Smithy. Convinced that the record should be retained by an Australian, he set up arrangements for a personal challenge using an Avro Avian IVA biplane to be called *Southern Cross Junior.*

Taking off from Heston airport in the UK on October 9, 1930, he maintained such a punishing schedule that he overtook the RAF's Lieut. Hill (who had left two days earlier) and reached Darwin in nine days 22 hours — cutting Hinkler's time by one third. The flight had been so meticulously planned and executed that Smithy was once again welcomed home as a genius and a hero.

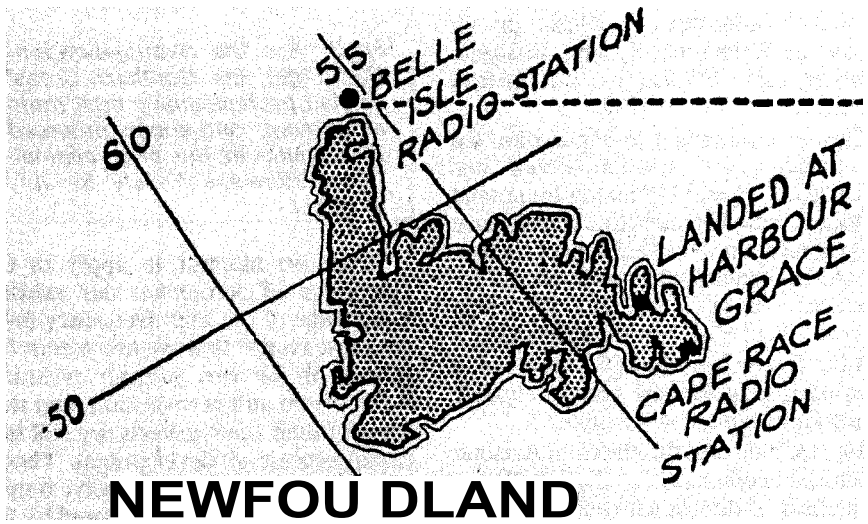
In the meantime ANA, with a fleet of four tri-motor Avro 10's and a team of outstanding pilots, was setting up regular services between Sydney, Brisbane, Melbourne and Tasmania.

Ironically, Smithy and Ulm had earlier been criticised for selecting a Fokker plane with its distinctly German connotations. Ian Debenham of Sydney's Power House Museum confirms that the British '-10' airliner was a very similar tri-motor high wing monoplane built under licence to Fokker by Avro.

With provision for two pilots and up to 10 passengers, it was fitted with 7-cylinder Lynx radial engines. These were more powerful than the Wright 225hp `Whirlwinds' on the *Southern Cross,* giving the Avro a speed margin of about 10mph.

No less to the point, Fokker's high wing tri-motor configuration found favour with quite a few of the American airlines being set up at the time, demonstrating the soundness of Smithy's original choice.

The ANA enterprise lasted only a few months, however. This was partly by reason of the great depression and partly because of the loss on March 23, 1931, of the ANA *Southern Cloud* in the Snowy Mountains, with Captain 'Shorty'



Flg.4: A sketch map of Newfoundland showing the two wireless radio stations which, along with ships In the area, provided critical guidance for the 'Southern Cross' to a landing at Harbour Grace. (Again from Wireless Weekly, July 41930.)

***Fig.5:** The ill-fated 'Southern Cloud' being checked and refuelled at a deserted aerodrome. Although manufactured in the UK by A.V. Roe, its resemblance to the original Fokker 'Southern Cross' is obvious. (Picture supplied by the Feature Bureau, John Fairfax & Sons Ltd., Sydney).*

Shortbridge, co-pilot George Dunnell and six passengers. It resulted not from pilot or equipment failure but from late delivery of a message that would have warned 'Shorty' of wild storms over southern NSW.

Once again, the need for reliable on-board communications had been emphasised and the proposition was put to subsequent inquiries that all airliners should, in future, be required to carry effective two-way radio.

During the search there were reports of a tri-motor aircraft having been seen near Melbourne, leading to a theory that the *Southern Cloud* had overflown its destination and come down in the sea. Ironically the plane sighted had probably been another ANA airliner, being used by John Ulm to carry out preliminary *tests* of radio equipment in conjunction with AWA and General Electric.

In fact, the missing plane was only discovered in October 1958, by a workman from the Snowy Mountains scheme. It had crashed and burned in a depression on a mountainside, with passengers and crew being apparently killed instantly. For all practical purposes, ANA's operation as a passenger-carrying airline died with them.

As it happened, however, the British and Australian governments had been investigating the idea of a regular airmail service between the two countries, with a possible extension to New Zealand. Planning involved a number of overseas flights, including one by Smithy in ANA's Avro-10 *Southern Star* in December 1931 — carrying the first bulk mail delivery from Australia to Britain.

It was widely assumed that the Australian share of the UK mail service would be handled by ANA, but Prime Minister John Scullin directed the franchise be given instead to the fledgling Qantas group under Hudson Fysh, a man who had never flown beyond the borders of his own country.

Political decision?

It was suggested at the time that responsibility for the decision really rested with British PM Ramsay MacDonald. Keen for the UK to be the dominant partner, he felt that this might not be the case if the Australian operation was in the hands of someone with the experience and stature of Charles Kingsford-Smith — ranked by the RAAF as Air Commodore, recognised as the world's most notable long distance flyer and soon to be knighted by King George V.

The choice of Qantas was a body blow to ANA, which had to sell its Avro 10's to clear its debts. Smithy was left with his faithful 'old bus' as his only personal resource — by now fitted out to carry 12-passengers and two pilots.

Once again, he had to earn a living by barnstorming thoughout Australia and New Zealand, offering rides for 'ten bob' a time.

The situation recalled Smithy's retort to the accusations levelled at him following the Coffee Royal affair. He pointed out, and I quote: *that the Southern Cross was his sole means of earning a living, and that he was not likely to risk an aircraft worth £10,000 by playing silly bastards.*

About this time Smithy was offered a position by both Lockheed and Fokker. But although they must have been tempting, he was not finished with either records or Australia.

In October 1933, flying a Percival Gull *Miss Southern Cross,* he overcame extreme in-flight nausea to break Jimmy Mollison's solo UK/Australia record in a new time of six days, 17 firs and 45 mins.

In August 1934, teamed up with P.G. Taylor, Smithy undertook a series of demonstration flights in a new Lockheed Altair, which he christened *Lady Southern Cross.*

In the process, the pair set new records between the Australian capitals. Then, when engine trouble forced them to abort their entry into the London to Melbourne Centenary Air Race, they headed out over the Pacific again to achieve the first crossing in a northerly direction.

In May 1935, back in Sydney and in the 'old bus', Smithy, Taylor and Stannage headed across the Tasman to New Zealand carrying special Jubilee Airmail. Some 900km out, a cowling failure damaged a propeller, rendering one engine useless. They managed to keep the aircraft airborne by dumping personal effects, then fuel and finally the mail.

When the remaining under-wing engine began to falter under the strain, P.G. Taylor in a display of incredible bravery, climbed five times out onto the struts to recover oil from the useless engine and-

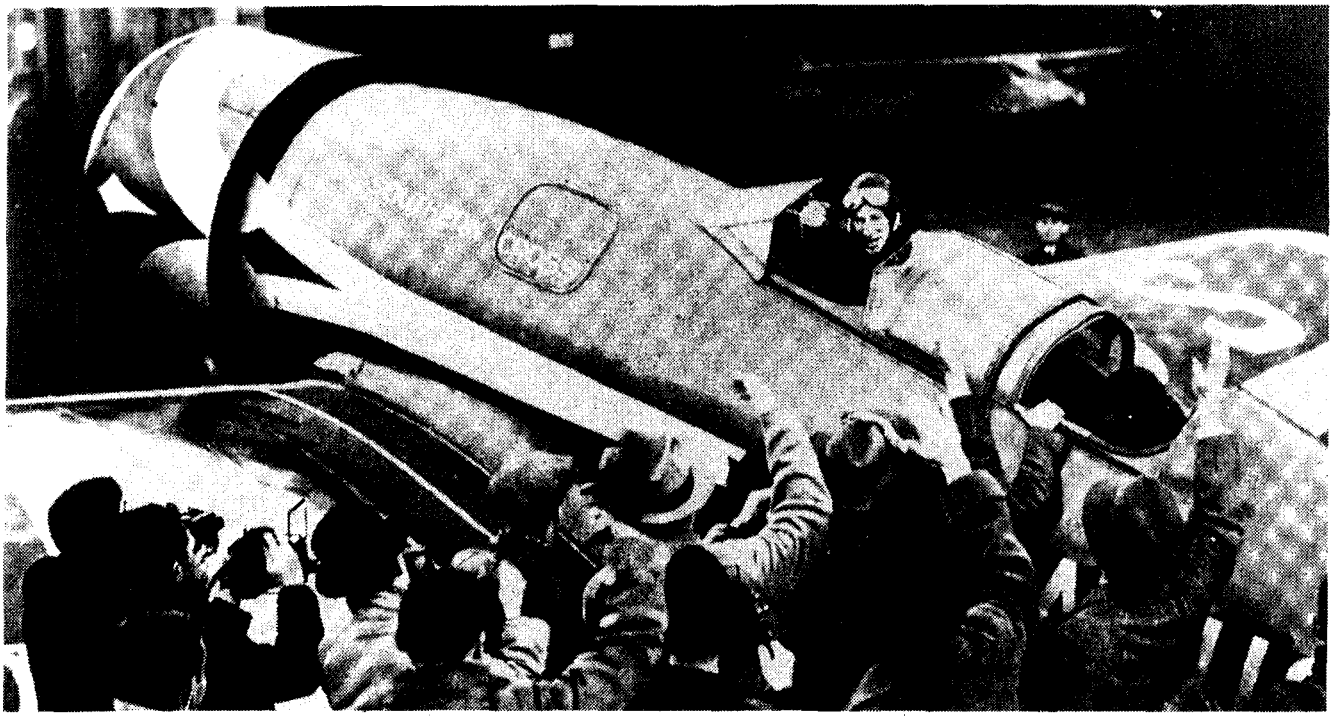


***Fig.6:** The Lockheed Altair 'Lady Southern Cross' which featured In a number of record breaking flights, but which finally carried Smithy to his death in the Bay of Bengal. (Picture supplied by the Feature Bureau, John Fairfax & Sons Ltd., Sydney).*

transfer it to the one that was still serviceable.

Meanwhile S tannage, operating new radio-telephone equipment which had previously been installed, kept the authorities and listeners in both countries informed of the plane's plight. They finally made it back to Mascot, climaxing a real-life radio drama that I still remember — eclipsed only by the unforgettable broadcasts many years later from the surface of the moon.

Sadly, Smithy realised that the 'old bus' had reached the end of its serviceable life. After negotiation with Prime Minister Lyons, it was patched up and flown to Richmond RAAF base for storage as a piece of Australian aviation history. The price, grudgingly offered and tardily paid, was £3000.

The final chapter in Smithy's life was bound up with an attempt to establish a new UK/Australia record in the *Lady Southern Cross.*

Accused of not wanting a new record to be set by an Australian crew in an American plane, the British establishment refused to allow extra tanks to be fitted to the Lockheed — even though they had raised no objection to such installations on earlier, much less powerful British planes.

As it was, Smithy and Tommy Pethybridge decided to fly the plane back to Australia anyway — as much as anything because tardiness of payment by the Australian Government had left them without the wherewithal to return with their plane by ship.

Their journey ended somewhere over the Bay of Bengal, with no radio to alert the waiting world of an impending crisis.

So Smithy passed on, but his imprint remained on Australian aeronautics.

In the year following his death, the initials which had identified Smithy and Ulm's airline, 'ANA', were recycled by another group comprising Holman Airways, Adelaide Airways and West Australian Airways. It was acquired in 1957 to become Ansett-ANA.

According to Sir Gordon Taylor, Smithy was a perfectionist. QEA (Qantas) the company that inherited Australia's overseas passenger and mail services has built up a similar reputation, proudly carrying the Australian flag across the world.

Smithy demonstrated the wisdom of picking the best plane for the job, politics nowithstanding. Qantas, too, has pursued a policy of maintaining a fleet based on cost-effectiveness rather than country of origin.

As QEA began re-equipping with Lockheed 'Constellations' in 1952, the first was christened *Charles Kingsford-Smith.* Their first 'Super' model in 1954 was called *Southern Constellation.* Then followed *Southern Sky, Southern Aurora* and *Southern Zephyr.* The QEA service across the Pacific was publicised as the Southern Cross route.

The legacy

Today Qantas' huge home base is sited adjacent to the one-time cow paddock at Mascot, now identified worldwide as Sydney's Kingsford-Smith airport. In Brisbane, his name identifies a scenic drive along the river. Every time we reach for a $20 note, we're faced with his portrait.

In the hundreds of passenger planes that fly in and out of our airports, the uniformed crews are surrounded by a mass of supportive devices and accommodated in a sound-proofed; air-conditioned flight deck, with provision for meals and refreshments as appropriate.

The planes can have access, as necessary, to an array of electronic systems — right through to satellite-based navigation aids which can pin-point their exact position at any time in terms of latitude, longitude and elevation. In some cases, computers even give effect to, and monitor, pilot control and intervene if a manoeuvre trangresses prescribed operational procedures.

How would Smithy and commercial pilots of his day react to the present scene? With interest, gratitude, amazement? Undoubtedly — but perhaps with a touch of concern about the native skill that they were said to have developed based on `the seat of their pants'! ❖