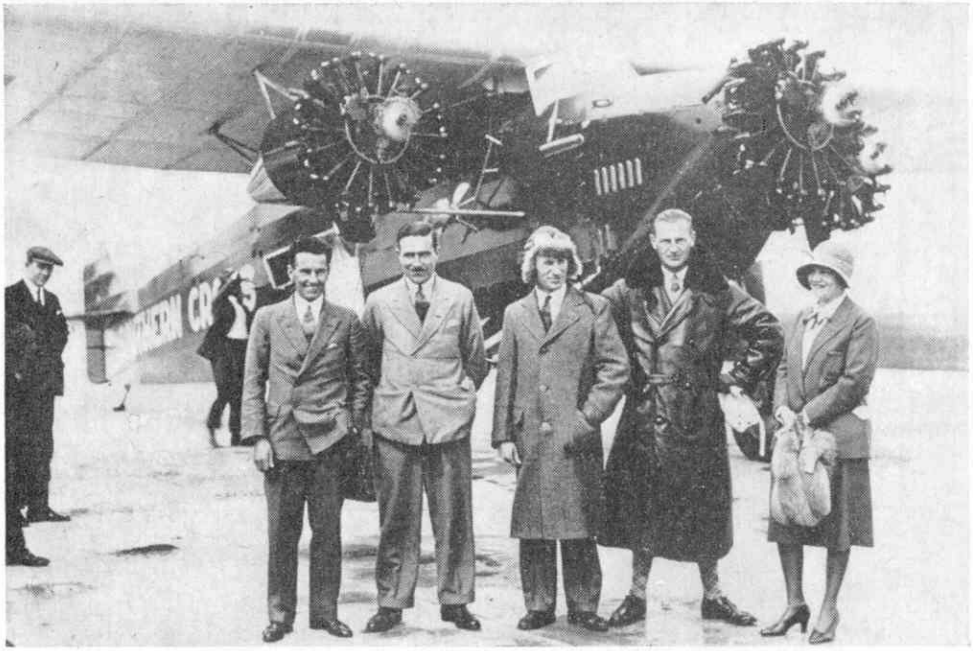


Before the Transatlantic flight, left to right: J. W. Stannage—wireless operator (New Zealand), J. Patrick Saul—navigator (Ireland), Capt. Kingsford Smith—leader (Australia) Evert Van Dyk—pilot (Holland), Miss Mary Powell (Kingsford Smith's fiancée). Photograph from P. Jarrett

SMITHY'S OLD BUS

By John W. R. Taylor

BY 1935, the three-engined Fokker monoplane, *Southern Cross*, was a very old and very tired aeroplane. Since making the first-ever crossing of the Pacific Ocean, from America to Australia, in 1928, it had carried its pilot, Sir Charles Kingsford Smith, and his successive crews, on the first non-stop flights across Australia and the Tasman Sea. It had set up a record time between Australia and England, and had completed its journey round the earth by crossing the Atlantic and the United States to San Francisco, starting point of its Pacific flight.

When an Imperial Airways airliner, carrying the first all-the-way-by-air mail to Australia, had crash-landed in 1931, it was Smithy and the *Southern Cross* that had picked up the mail and carried it on the last leg to Darwin. Later, when times had been bad, they went barnstorming across Australia, giving joy-rides to people who could boast proudly afterwards of having made their first flight in one of the great aircraft of aviation history.

Four more times, in 1933-34, Smithy had flown the 'Old Bus' across the Tasman Sea, between Australia and New Zealand. So it was, perhaps, natural that he should choose her for one more special trans-Tasman flight, with freight and mail, to celebrate the Silver Jubilee of King George V's reign in 1935.

The original plan was to use both the *Southern Cross* and the very similar three-engined Avro 10, *Faith in Australia*. This, too, was a famous aircraft. It had set up many records in the capable hands of Charles Ulm, who had been co-pilot on the first flights across the Pacific and Tasman Sea. Following Ulm's death, it was to be flown by P. G. (now Sir Gordon) Taylor, who had accompanied Smithy on his later trans-Tasman flights.

In the event, there were sufficient letters and packages to fill only one aircraft; so Kingsford Smith invited Taylor to join him once more in the *Southern Cross*, as navigator. Taylor was none too keen on this. He considered that the veteran Fokker was not airworthy enough to tackle again a sea that was often made treacherous by bad weather.

Writing the story of the flight later, he recalled that he asked himself: 'Should I issue the ultimatum that I am ready to carry out the job but will not go in the *Cross*, or should I meet the situation by going as navigator with Smithy? . . . a strong conviction that if I went I should be as good as walking the plank into the Tasman Sea made my brain rebel against doing so crazy a thing.'

Despite his fears he knew he could not let Kingsford Smith and wireless operator John Stannage leave without him. The decision almost cost him his life.

The *Southern Cross* took off from Richmond, New South Wales, at 25 minutes after midnight on May 15, 1935, carrying 34,000 letters and other freight. It headed for the coast at Long Reef, north of Sydney, and then set course for New Plymouth on New Zealand's North Island, 1,200 miles away.

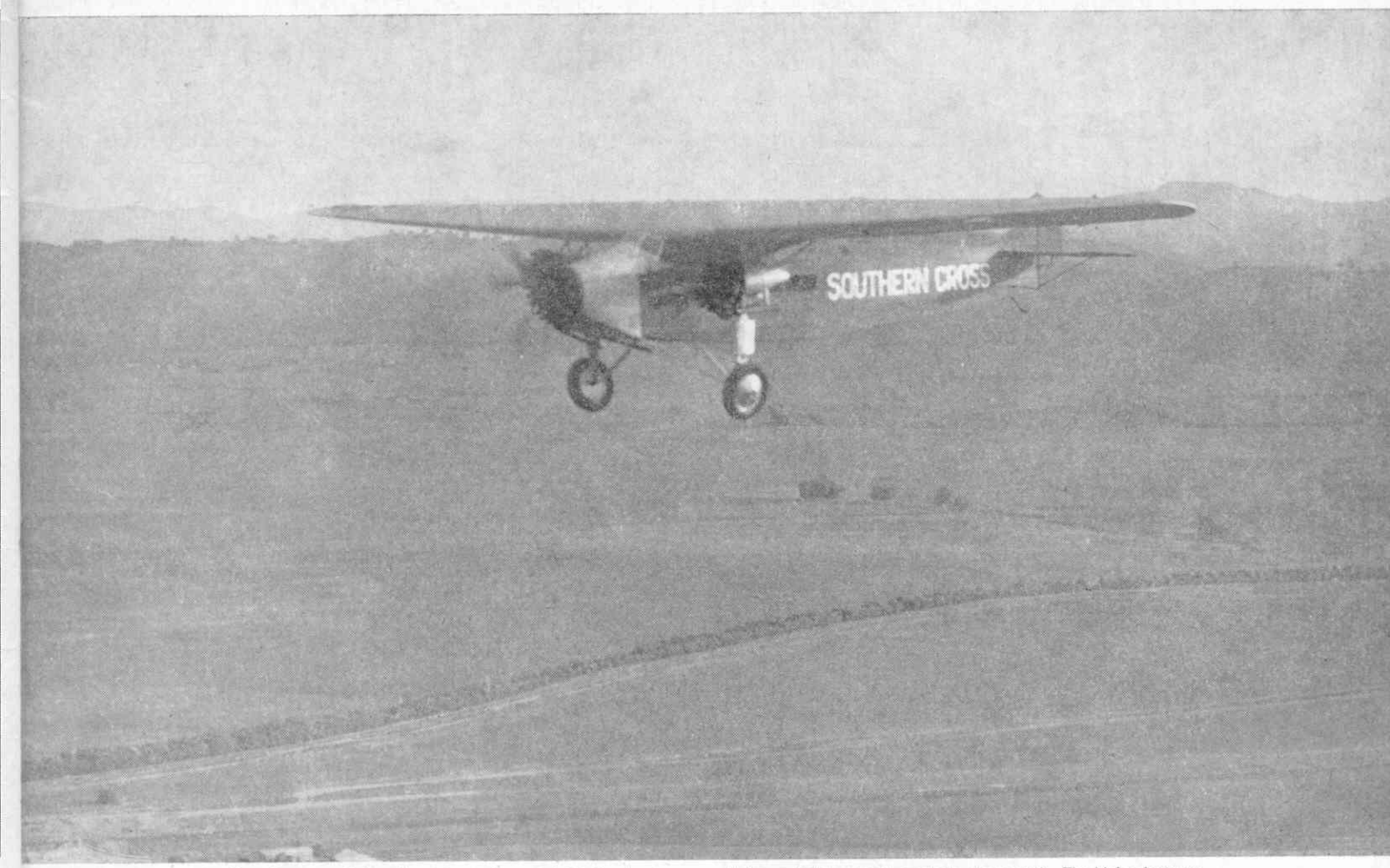
A crack like gun-shot!

Apart from a few showers, all went well until seven o'clock. Then, Taylor noticed that part of the exhaust system on the starboard side of the centre engine was burning away. Suddenly, there was a crack like a gun-shot. A piece of the exhaust had broken off and smashed into the propeller on the starboard engine, causing the whole aircraft to vibrate alarmingly.

Smithy quickly stopped the starboard engine and opened up the other to full power in an effort to maintain height. With more than a foot of the propeller tip broken away, there was no hope of using the starboard engine again. So, as Australia was still nearer than New Zealand and bad weather had been forecast for the second half of the trip, they decided to turn back.

The rest of the flight was a nightmare. Kingsford Smith used every scrap of his strength and skill to keep the aircraft in the air, straight and level, against the drag of the dead engine. Even so, the *Southern Cross* lost height steadily until they were only 500 ft. above the sea. The only hope was to dump overboard all the freight, luggage, tools and spares—everything except the precious mail. Later, with the aircraft's wheels skimming a mere 50 ft. above the waves, even the mail sacks had to go.

Southern Cross in her original condition (above) and below as she is today—preserved in a glass case at Brisbane Airport



Southern Cross was in her element over the vast Australian landmass—well shown in this very atmospheric photograph. The high adventure recounted in this story, gained for the 'Cross' navigator, P. G. Taylor, the Empire Gallantry Medal (later changed to the George Cross)

Worse was to come, for the overworked port engine began to blow out a thin trail of blue smoke, showing that it was burning its oil. Before long, the oil pressure had dropped from 63 lb./sq. in. to 35 lb./sq. in. and Stannage told the anxious radio operators in Sydney that the port engine was expected to seize up in a quarter of an hour, after which nothing could prevent a ditching.

It seemed to Taylor that there might still be a chance if the port engine could be revived with oil from the useless starboard engine. So, after taking off his shoes, he tied one end of a thin cord round his waist and the other round a strut inside the fuselage. He then clambered out of the cockpit window and shuffled out along the tubular strut connecting the starboard engine nacelle to the fuselage.

He managed to remove the cover plate over the oil tank without much difficulty. Stannage then handed him a spanner with which to loosen the drain plug under the tank. Sitting astride the strut along which he had walked, and with one arm hooked round another strut, Taylor drew off some of the precious oil into an empty kerosene flask. He then passed it to Stannage, who emptied the oil into a small suitcase that had been used to carry tools and spare parts. Not until the case was full did Taylor re-enter the cockpit.

Forced back . . . .

He was almost exhausted by the physical and mental effort, for he knew that the thin lifeline would have snapped under his weight if he had lost his footing. Nevertheless, a glance at the oil pressure gauge's 15 lb./sq. in. was sufficient to show that the effort would be wasted if the oil were not transferred quickly into the dying port engine.

Once more he squeezed out of the cockpit; but the combined slipstream from the centre and port engines soon forced him back. By opening up both engines to the limit, Smithy coaxed the *Southern Cross* to a height of about 700 ft. and then switched off the port engine to give Taylor a second chance. The effort required was so great that the aircraft had again sunk almost to sea level before Taylor could get at the almost-empty oil tank.

Without trace

Desperately, he clung to the struts, against the full force of the slipsteam, as Smithy restarted the engine and climbed to a safer height. With the engine again stopped, Taylor then removed the cap on the tank and hastily poured in a flask full of oil passed to him by Stannage. Signals from the cockpit told him that the oil pressure was slowly rising, but his heart must have sunk when Kingsford Smith again had to start the port engine to stay in the air.

After what seemed an interminable time to the cold, lonely, exhausted man hunched over the engine cowling, the port motor again became silent. Flask after flask of oil was passed to him and poured into the thirsty tank. Before he could rejoin his friends in the comparative safety of the cockpit, Smithy again had to restart the engine to gain height. Only then could Taylor climb wearily back to his seat.

The time was 12.45 p.m. and they were about 200 miles from land. Simple arithmetic told them that the oil transferred to the port engine would be used up long before they reached land. Five more times Taylor had to go out to fetch oil from the starboard engine and use it to keep the port engine alive. It was not done in vain. Soon after 4 p.m. the *Southern Cross* flew slowly over Mascot aerodrome, Sydney, escorted by seven other aircraft that had flown out to meet it, and touched down after what was to be its last-but-one venture.

The last one was in 1946, when it re-enacted scenes from its famous career in a film about Sir Charles Kingsford Smith. It was flown this time by Taylor, who had been awarded the Empire Gallantry Medal (changed later to the George Cross) for his bravery on the Tasman flight.

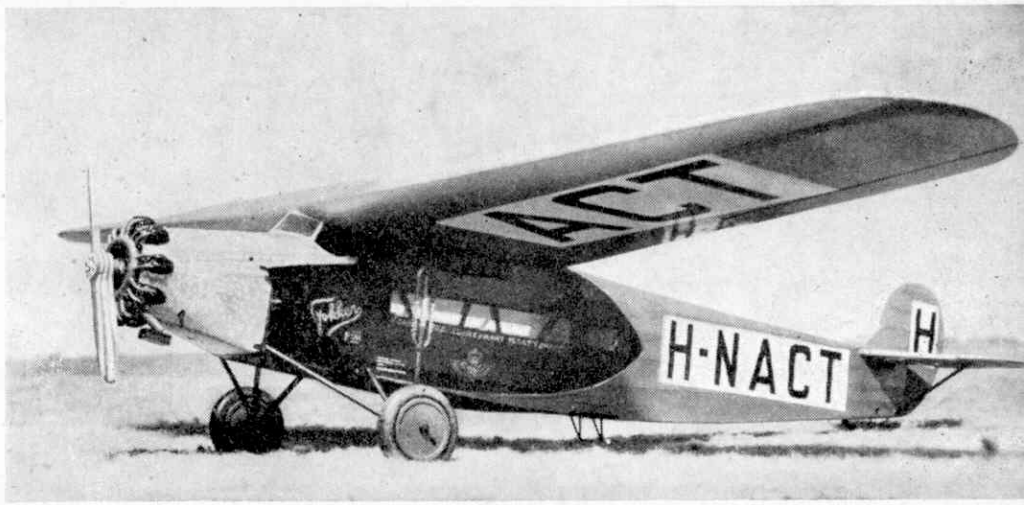
Smithy disappeared without trace somewhere off the Burmese coast in November 1935, while attempting to set up a new England-Australia record in the Lockheed Altair *Lady Southern Cross*. His 'Old Bus' survives, in a glass-fronted memorial at Brisbane Airport. It was at this airfield (then known as Eagle Farm Aerodrome) that the Fokker had landed at 10.13 a.m. on June 9, 1928, at the end of the 7,389-mile trans-Pacific flight that had earned it its first headlines in the newspapers of the world.

The memorial cost £30,000—just ten times what Smithy paid for the *Southern Cross* when he bought her second-hand, without engines or instruments, from the polar explorer, Sir Hubert Wilkins!

Data: **Fokker F.VIIB-3M** *Southern Cross*, **VH-USU. Powered by three 220 h.p. Wright Whirlwind J5C engines. Span 71 ft. 8½ in. Length 47 ft. 6¾ in. Max. take-off weight 15,807 lb. Max. fuel (Pacific flight) 1,081 gallons. Max. speed 120 m.p.h. Cruising speed 94 m.p.h. Max. range 3,645 miles.**

Here's another much-requested plastic kit conversion. From the "Southern Cross" emerges a Fokker F VIIa with

JUST ONE JUPITER



IN the pioneer days of air travel, back in the 1920s, one of the most reliable planes in the sky was the eight-seater, 120 m.p.h. Fokker F VIIa, built in Holland and usually powered with a British Bristol Jupiter engine of a mere 400 h.p. Today's 300 m.p.h. Fokker Friendship is its direct descendant, carrying up to 52 passengers and using two British Rolls Royce Dart 'turbo props, each developing over 2,000 h.p.

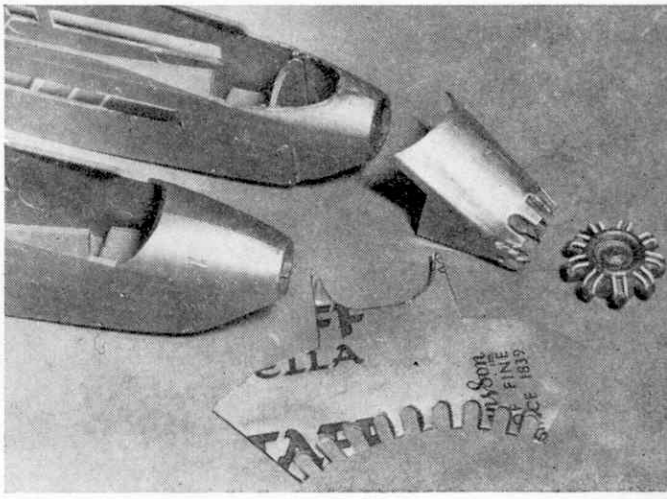
The Frog Trailblazers kit of the three-engined Fokker 'Southern Cross' can, with care, be successfully converted to represent the earlier F VIIa, and these photos show how Doug McHard set about it.

Ian Stair presents another fine drawing and, from it, you can make your own F VIIa conversion just as detailed or as basic as you wish.

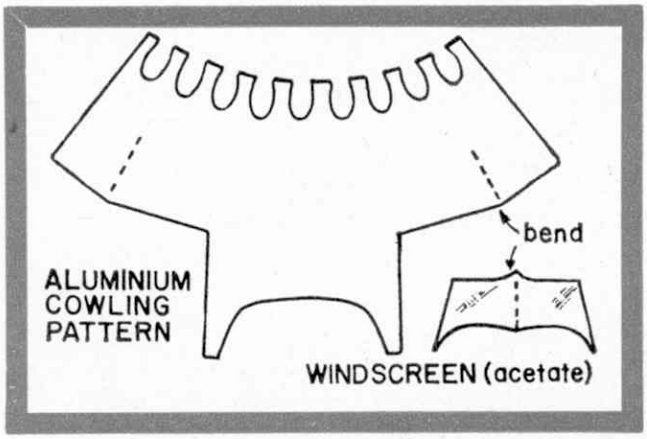
The blue, black, white, orange, gold and silver colour scheme makes this particular machine one of the most colourful of all airliners. It was one of the first F VIIa's operated by K.L.M. (Royal Dutch Airlines) and after years of faithful service it was retired and preserved at Schipol airport, only to be destroyed by bombing during the last war. Another F VIIa was afterwards painted up to look like the original, and can be seen at Schipol to this day, but many details differ from the older machine, including the style of the lettering which is smaller and less well formed.

For a really basic model conversion all you need to do is shorten the wing and omit two engines from the Southern Cross Kit, but the experts can have a field day and a study of these photo pages will reveal hints of use to *any* plastic modeller!

These unretouched photographs of the real Fokker FVIIa and our model show you just *how* realistic your conversion can be. Trying to simulate an exact 'full size' angle like this, is the most cruel test to which any model can be subjected and it will show up several discrepancies particularly, as in this case, when the model originally set out to be an entirely different aeroplane! Nevertheless, we were modestly pleased with our efforts and with a little patience and the aid of these detailed plans and pictures you can do just as well! Thin tubular members not included in the original Southern Cross Kit, were made from stretched plastic sprues as described last month.



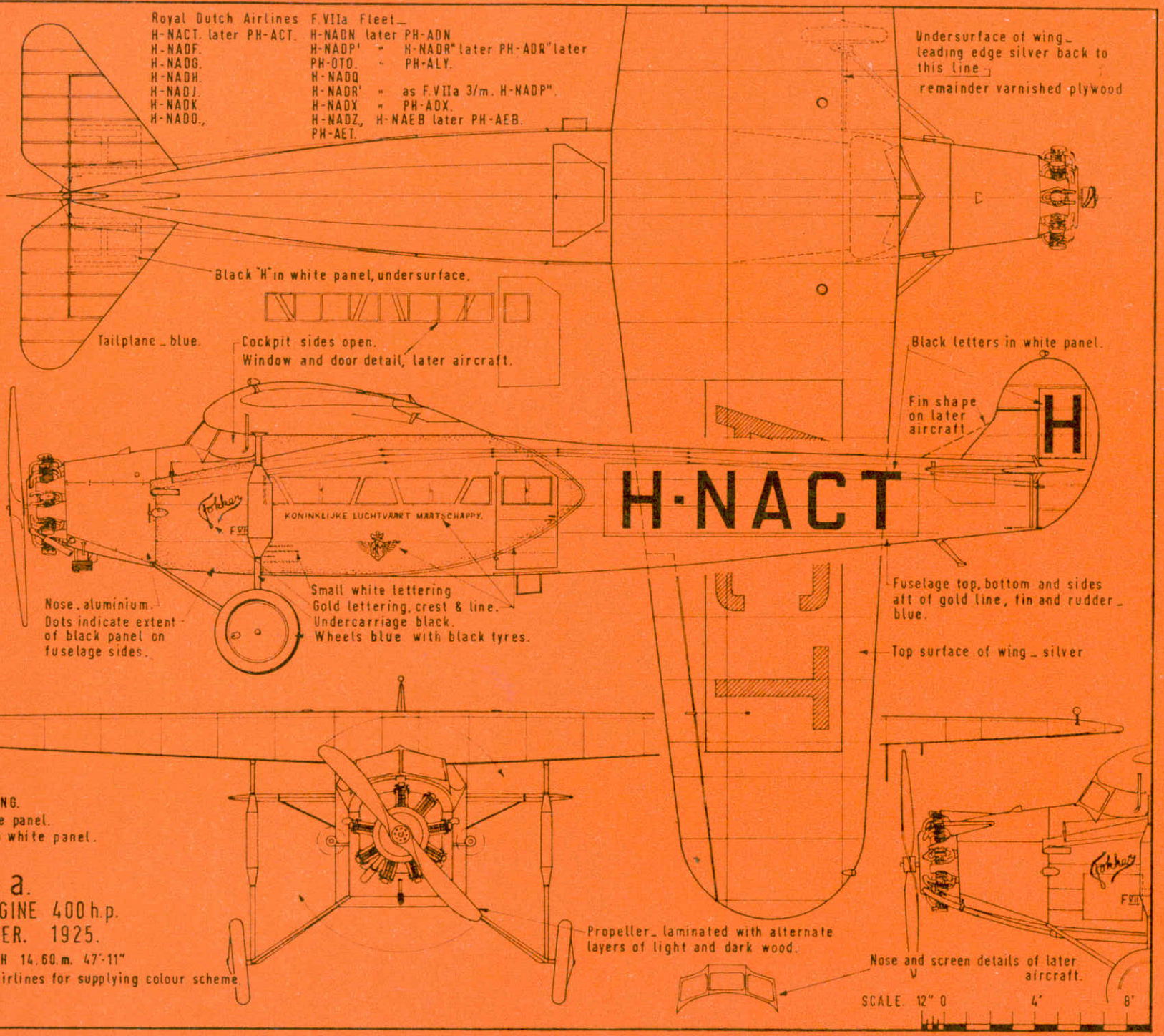
Plans overleaf



The Fuselage

1 The nose requires considerable alteration to accept the larger engine but this provides an opportunity to introduce *real* aluminium panelling! First of all shorten the nose by ¼ in. then cut away the top surface ahead of the cockpit and file to a rounded contour. Open out an aluminium cigar tube and mark on it the outline of the nose cowling (shown full size here). This can be cut roughly to shape with nail scissors and then finished off with sandpaper or needle files. Polish off the printing with Duraglit metal polish and bend to the shape shown to fit neatly round the fuselage nose. If you wish, the plastic underneath the aluminium sheet can be slightly filed away to produce a flush joint.

H-NACT



REGISTRATION LETTERS ON WING.
Top_ orange letters on white panel.
Underside_ black letters on white panel.

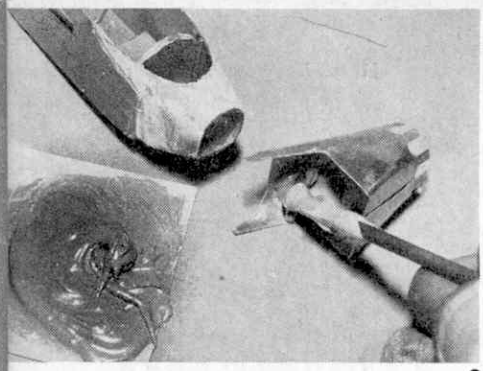
FOKKER F.VII a.

BRISTOL JUPITER ENGINE 400 h.p.
8 PASSENGER AIRLINER. 1925.

SPAN 19.31m. 63'-4" LENGTH 14.60.m. 47'-11"

Thanks to KLM Royal Dutch Airlines for supplying colour scheme.

Drawn by_ IAN R. STAIR.



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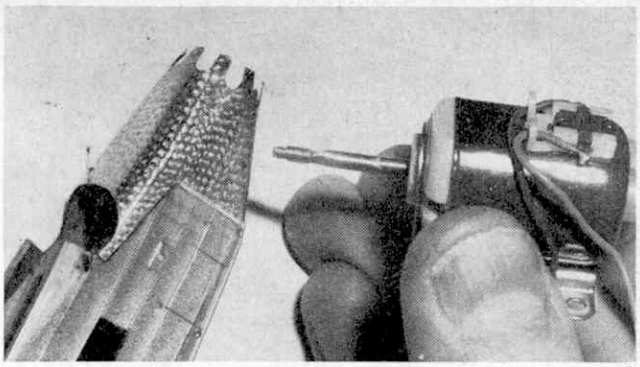
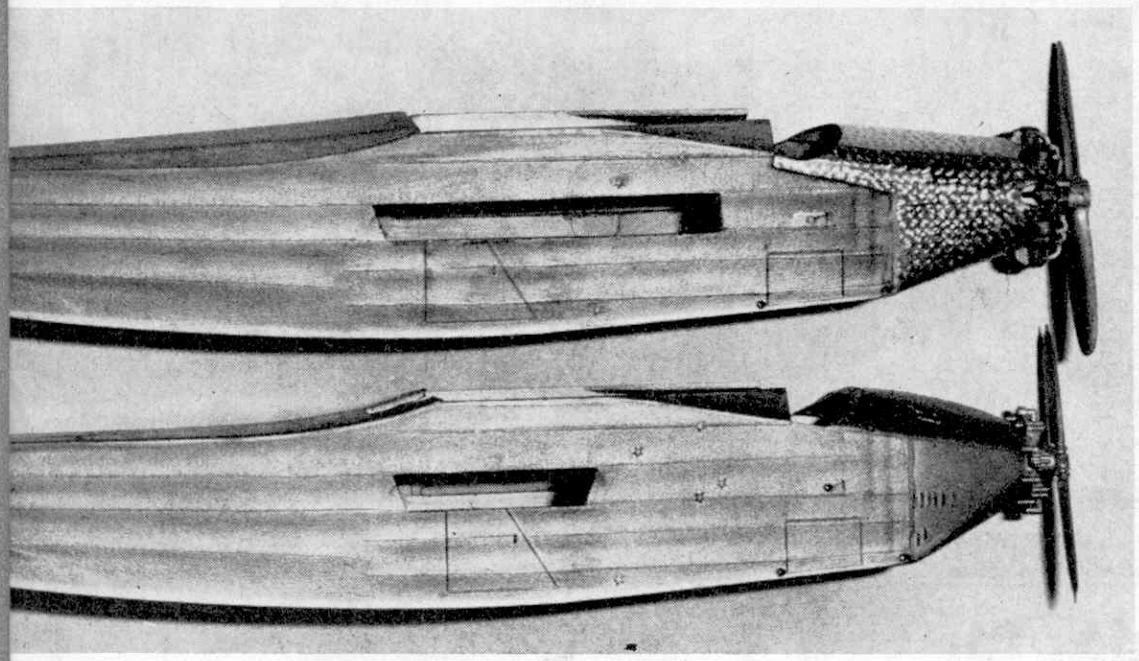


3

2 Mix up a small quantity of Plastic Padding and spread it liberally inside the aluminium cowling. To form a good 'key' to which the padding will stick, the nose is first smeared with Humbrol Body Putty—*this is important.* Now press the cowling over the nose (wiping off any adhesive that happens to escape onto the fuselage) and hold it in place with Sellotape until the Plastic Padding is dry—it will only take about ten minutes so work quickly!

3 A scale 'engine turned' finish may be applied to the nose by using a piece of thin plastic-covered radio hook-up wire fixed to an electric motor shaft in a piece of brass tube.

Stick the tube to the shaft with Plastic Padding or 'nip' it with pliers. Practice on a spare piece of aluminium before ruining your model!



4

4 Here's the finished nose compared with that of the standard 'Southern Cross.'

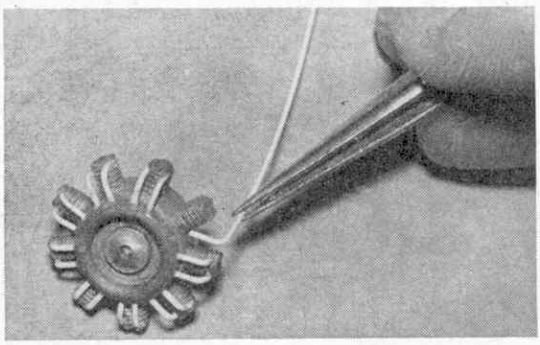
Note that the side windows have been enlarged and the top of the rear-fuselage has been built up with Plastic Padding filed to shape.

5 The 'Jupiter' engine was adapted from the one in the Frog 'Wallace' kit in the manner shown last month. The main difference is in the shape of the exhaust pipes (from heated and stretched sprues) which should be curved as shown, and the front collector ring is also cut back (see drawing).

6 If you have no spare 'Jupiters' around you can build up your own, making the cylinders from throw-out sprues, down which a 5 B.A. die is run to simulate finning. The cowling automatically provides correct cylinder spacing and a crankcase can be fabricated from a discarded plastic wheel.

WING AND TAIL
(see photos below)

The FVIIA wing is considerably shorter than that of the Southern Cross but the tapered main panels are similar except for smaller ailerons. It is, therefore, only necessary to shorten the wing centre section. These photographs show how it is done.



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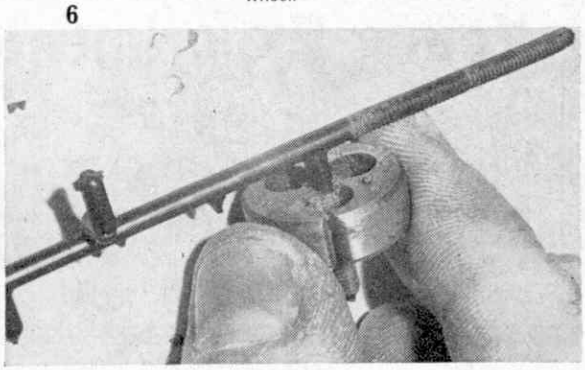

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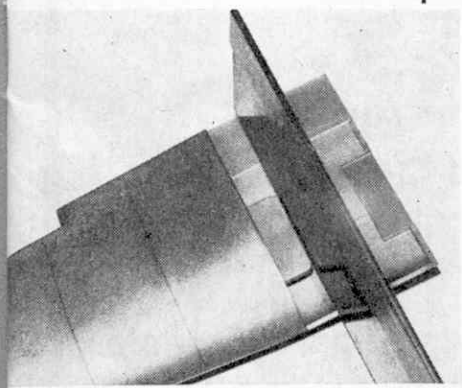
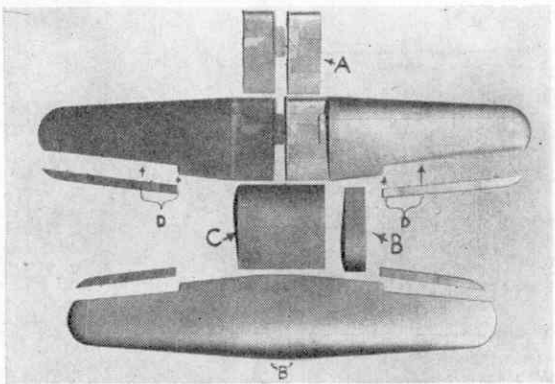
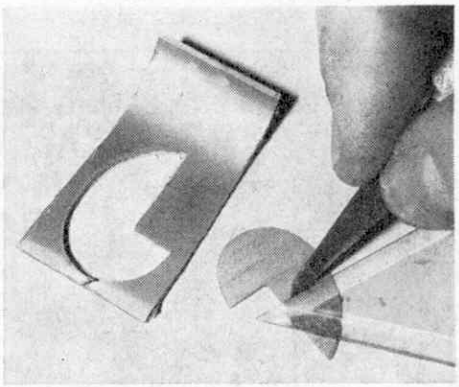




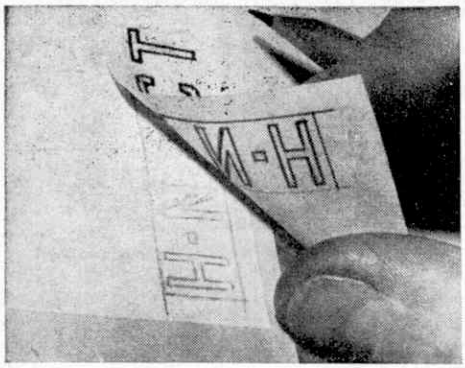


1 The upper and lower surfaces of the outer panels are cemented together and allowed to dry and the projecting inner ends of the lower surface are then sawn off at the end of the upper surface tongues (photo 1).

2 Photo 2 shows these sawn-off pieces as 'A'. Centre section 'C' is cut down so that it just fills the gap between the inner ends of the upper wing surfaces when the shortened lower surfaces are joined together. Make sure the upper wing surface has no dihedral, when the assembly is cemented together.

The inner section of the ailerons 'D' are cut off and cemented to the wing, filling in any cracks with body putty.

3 The new, larger and more rounded rudder is cut from the discarded upper centre section using a fretsaw or piercing saw. It is filed and sanded to a streamline section, and the rib lines scored on with a sharp knife. 'Fabric sag' can be simulated by sanding between the ribs with No. 360 wet-or-dry paper wrapped round a pencil. **MORE→**



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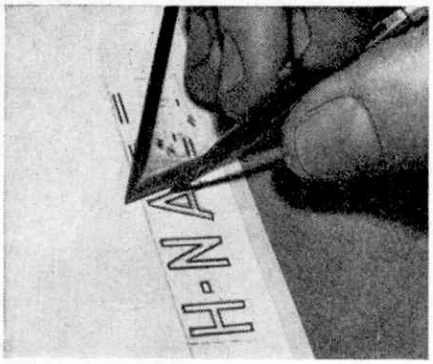

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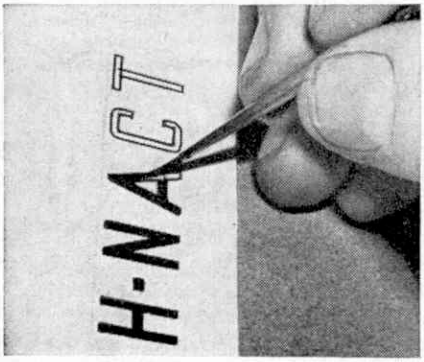

3

4

JUST ONE JUPITER

Making the Transfers

1 Trace the outline of the registration letters from the full size plan and rub them onto a piece of 'Yeoman' white transfer strip.
2 Using a draughtsman's ruling pen charged with black enamel (orange for the upper wing lettering) outline each letter. Do all the horizontal lines first, then the verticals and diagonals.
3 It is now a comparatively easy matter to 'fill in' the letters, using a No. OO brush.
4 Allow the transfers to dry *completely* and then soak in water and apply in the normal way, gently pressing them in place with a clean handkerchief.

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