

Composed by Bill Lofting shortly after the cancellation in 1965

First But Last

It was to be a most remarkable machine. To foil the enemy radar it must fly very low, very fast, hugging the surface contour and then skimming the sea to rear up over the rising shore line and flatten out again, onwards to the target.

Conversely, it must fly very high, very fast, and as a bonus thrown in for good measure by the operational specification, mix the two capabilities whilst going out or coming back or both.

As yet, the machine was an inanimate mass of alloy and plastic brooding at a government research and testing establishment in the West Country, and I, with two associates, was driving down in the early morning mist to witness its initial flight.

My first introduction had been six years earlier when I had been shown into a small partitioned off drawing office and there perused the rather incomprehensible at first, I must confess, many schemes and layout from which workings had to be prepared.

Much later, against the background of the scream and clatter of pneumatic riveting guns and drills, as it was being constructed at the factory, I had stood on its broad delta wing reminiscent of some huge Manta Ray. Whilst standing there discussing the many and varied installation problems, perhaps to be disturbed by a dwarf-like fitter, especially engaged for his diminutive stature, he would emerge from the depths of a wing fuel tank through one of the many small manholes in the wing surface, dragging with him and inspection lamp with seemingly a cable of infinite length. Then many times during its embryo stage, in the sweating confines of a fuselage bay or cockpit whilst miles of cable and pipes of all diameters and descriptions were fitted to their associated equipment.

At this intermediate stage even the most phlegmatic or individuals would marvel at the density of installation packaging and the coils of electrical cable, entrail like, yet to be housed within its alloy belly.

Gradually the machine came to life with red, amber and green indicator lamps, the size of a sixpence glowing dully in the cockpits.

At times the whirring of pump or motor heralded the actuation of some mechanism or other on test and the flaps, dive brakes or undercarriage would extend or retract. The geometric evolutions of the undercarriage would be prefixed or suffixed by the snap of the locks in the bay doors serving as a brief warning to the unwary who might have strayed inside the red barriers despite adequate warning. All the while the pervading odour of aviation kerosene permeated the machine and its immediate surround. It was virtually impossible to return from a visit to the machine without collecting a souvenir in the shape of a smear of paint or process treatment on hand, trouser leg or cuff.

Apart from individuals from the Ministry and Establishment in groups or singly who regularly appeared on the scene, the pilot and navigator were now increasingly evident. They were to be found either in the mock-up cockpits or actually in the prototype aircraft for familiarisation and 'trying for size'.

The pilot, a beefy man, was a veteran of experience whose career ranged from the pre-war RAF days on through the war and then many hundreds of flights supersonically with the advent of Jet propulsion.

He had the reputation for executing exceedingly tight turns whilst flying very fast and low, thus imposing very high 'G' forces on his physical frame without blacking out. There was some medical opinion, not without some foundation, that his bulk contributed towards this attribute, apart from being of course, very fit.

The navigator, of smaller build, was equal in his own professional field and would in the initial flying programme assist the pilot in the flight management of the aircraft's complex systems.

When fully operational, his task would be a formidable one, navigating the airborne weapons systems and operating its many radar devices whilst flying at subsonic and supersonic speeds. To this end, an entirely new electronic navigational system had been evolved. Using a central computer, all the flight information was gathered from its various sensors and fed in and monitored. To the layman, a bewildering mass of

'black boxes', switches, knobs and indicators would meet his gaze on the three viewing faces of the cockpits surrounding the ejector seat.

Nevertheless, the two men would sit blindfolded and carry out cockpit drills and programmes to order, such was the order of their professional standard.

It was planned that when the machine had finally reached a certain standard of preparedness it would be transported by road for final assembly and pre-flight inspection at the establishment's airfield.

This day finally came and the machine emerged from the contractors sheds heavily shrouded to present a featureless shape to the peasants' gaze for its journey by trailer to the airfield. With warning amber lights flashing and police outriders in attendance, slow progress was maintained all day.

Finally it was reported that it was safely housed in a special hangar at its destination ensnared with all the security wraps that an experimental and testing establishment of that nature can provide.

The actual date of the maiden flight depended on the state of the airworthiness attained during the next few weeks and soon assumed a day-to-day basis.

Eventually, after a protracted delay of irritating snags a particular Sunday in late-autumn was secretly announced.

So here we were gloomily contemplating the misty damp weather speculating on the chances of it clearing by noon. We finally turned off the main road and drew up by the heavy iron gates and the security police block of the establishment. After successfully clearing the security hurdle by the display of discreet coloured identity cards with signed photographs, we parked the car by the hangars and strode through the wet grass in the general direction of the engine running pad.

As we approached, the mist-veiled pad we became conscious of movement and voices and the faint hum of electrical generators. The machine gradually took shape perched on its stilt-like undercarriage and with its nose down attitude and rakish fin, although stillborne, conveyed to the senses and impression of great speed and dash.

The pre-flight ground checks were proceeding satisfactorily and already as noon drew nearer the pale orb of the sun could be seen through the lightening mist. With the weather improving fast, we decided to get lunch in the nearby village pub, a few miles away and return early for the final engine testing which we now learnt was scheduled for the early afternoon.

The saloon bar of the local was alive with people associated with the project, representatives of the various equipment manufacturers, establishment personnel, press, technicians, all contributing to the hubbub and tobacco smoke. The main topic, as one might have guessed, was the probability of the machine becoming airborne that day and the pundits, complete with check sports jackets and half pints of bitter, waxed loud and long.

Suitably fortified with sandwiches and beer, we returned to the pad. The afternoon was now bright and sunny with a faint breeze and the temperature had risen to quite a comfortable level.

Two blue-grey overalled figures complete with plastic helmets were standing by the short aluminium ladders attached to the cockpits, surrounded by engineers. The transparent cockpit hoods were hinged up, 'with gently smiling jaws', ready for their entry. I realised with a twinge of excitement that the test flight was really on.

Apart from the starter trucks and a few personnel, complete with ear muffs, involved in the starting, the pad was cleared. I retired with the other onlookers to a vantage point to the side of the runway threshold, possibly 100 yards away to the rear quarter.

The ground starter trucks throbbed into life and I waited for the pressure wave on my eardrums as the aircraft's jet turbines lit and burst into life. The air suddenly trembled and I was aware of the shrill whine of the turbines as on and then the other rose in crescendo above the dull rumble of the ground starter.

With the turbines spinning satisfactorily at low revs, the starter cable was disconnected and the truck moved off, leaving the machine alone on the deserted pad. After a period of running at low constant speed whilst the crew performed

their cockpit checks, the cockpit hoods closed and the engines ran one at a time at a higher throttle opening. Even at the distance I was standing, the sound waves generated made me wince with pain as my eardrums protested.

Eventually, after a period of stable throttle settings and short bursts of power, the machine began to slowly taxi towards the commencement of the runway, gently teetering on its nose wheel, its brakes squealing shrilly.

Before actually becoming airborne, the machine would carry out one or two fast runs along the runway to test wheel brakes handling and braking parachute. The latter would be deployed as the machine decelerating approached the end of the runway. To coincide with the take-off and test flight, two aircraft had been allocated to accompany, observe and report the whole operation from take-off to landing. In addition, a helicopter would be used to help monitor and programme the event and this was soon to be seen hovering in the middle of the airfield.

No one quite expected such a maelstrom of noise and surge of power as the throttles were pushed to the take-off setting, the brakes were released, and the pilot steered down the runway. It virtually blasted itself from zero to something like 130 knots in a few seconds to become a diminutive alloy bird dwarfed by the huge runway to disappear over the notorious hump and speed on to the middle distance.

Suddenly power was out and the braking parachute streamed out behind. The chase aircraft soared up into a steep climbing turn to the left and I could see the machine at the far side glinting dully as it turned in preparation to return.

Feverish activity could be discerned at the far end as the parachute was repacked and stowed in its compartment above the jet orifices in the tail. Various consultations could be seen progressing between the crew with hoods open and the occupants of a small vehicle which had detached itself from the control tower. Apparently, all was satisfactory as the engines were restarted and the machine slowly taxied back gently, weaving from one side of the runway to the other. This was to test the response of the nose wheel steering and differential braking systems.

Having now turned once again into wind, the brakes were on and turbines set at idle to await the chase aircraft to appear

from behind to synchronise with its low run over the runway, accompanied by the helicopter now hovering in the middle of the airfield. The turbines suddenly blasted into take-off power and after being held back briefly by the brakes, the quivering machine plunged forward on its take-off run.

As it swiftly receded with a shattering roar, my ears and senses were further assailed by the jet of the chase aircraft above, like legs thrust urgently outwards and its narrow tapering head. The bogie wheels of the main undercarriage squelched onto the tarmac and a puff of blue and white vapourised rubber belched from the points of contact. The nose wheel arced down as the fuselage rotated to the normal ground attitude and as speed gradually decreased the braking parachute streamed out, further retarding the 50 odd tons from its landing speed of nearly 200mph.

Immediately following the flight, debriefing took place under strict security, where the preliminary flight information was examined. Apart from some minor malfunctions and snags, all seemed to be well and a quiet feeling of excitement and sense of achievement was generated, overwhelming the tension and strain of the project. This was further enhanced at the party that night when the pilot and navigator were toasted and a few congratulatory speeches were made by the project chiefs.

In the following period, the flight test programme progressed, all seemed to be well on the technical front. However, in the corridors of power and the echoing halls of bureaucracy destructive factions were at work. All the political and financial controversies that ranged are beyond the scope of this account, and bear no part of it.

It is sufficient to say that in the following Spring the axe fell and the project cancelled and in the proceeding weeks that followed all physical evidence of it erased.

WAC Lofting