



VIPs visit the 161 Squadron ASCENSION dispersal area at Tempsford, April 1943. Far left is Flt Lt Maurice Whinney, OC of the project. This is the only known photo of a SUSSEX Havoc (left) and a Hudson. VIA AUTHOR

AE RON CLARKE

EARLY IN 1941, the UK's Secret Intelligence Service (MI6) was having problems in training agents to be sent into occupied Europe. Difficulties in learning Morse code and ciphers, essential for transmitting reports, was building up a bottleneck in training courses. While MI6 was concerned solely with acquiring intelligence from agents inserted into enemy territory, the Special Operations Executive (SOE), was organised to carry out sabotage and to train resistance groups for the coming invasion: MI6 agents kept a very low profile and this conflict of interests led to acute inter-service rivalry. There was very little contact between the two units, which had their own training schools and codes.

The SOE had developed the S-Phone, a radio telephone ideal for short-range contact between drop zones and aircraft, but contact with their home station in the UK was via Morse, transmitted by radios and regularly intercepted by enemy signals intelligence. MI6 reasoned that if a longer-range radio telephone could be developed, on the lines of the S-Phone and using UHF, which was less likely to be intercepted, this would be ideal for their use.

Brigadier Gambier-Parry, head of their Special Communications Unit (or Station 8) at Whaddon Hall, near Milton Keynes, Buckinghamshire, was directed to start working on this idea. Two gifted radio engineers, A Willis and W Lisburn, produced a system which gave agents a safe duplex (two-way voice) facility, using the 30-35 MHz band: it was also unique in being the only wartime radio to use Frequency Modulation, and had a range of 100 to 150 miles (160 to 214km.) Agents' transmissions would be picked up and recorded by an aircraft flying within range of the equipment. Prototypes of the ground and airborne sets were developed and air testing was put in the hands of Flt Lt Maurice Whinney, who was to be the driving force behind the development of the system.

CLOAK AND DAGGER

MI6 COVERT WARTIME INTELLIGENCE

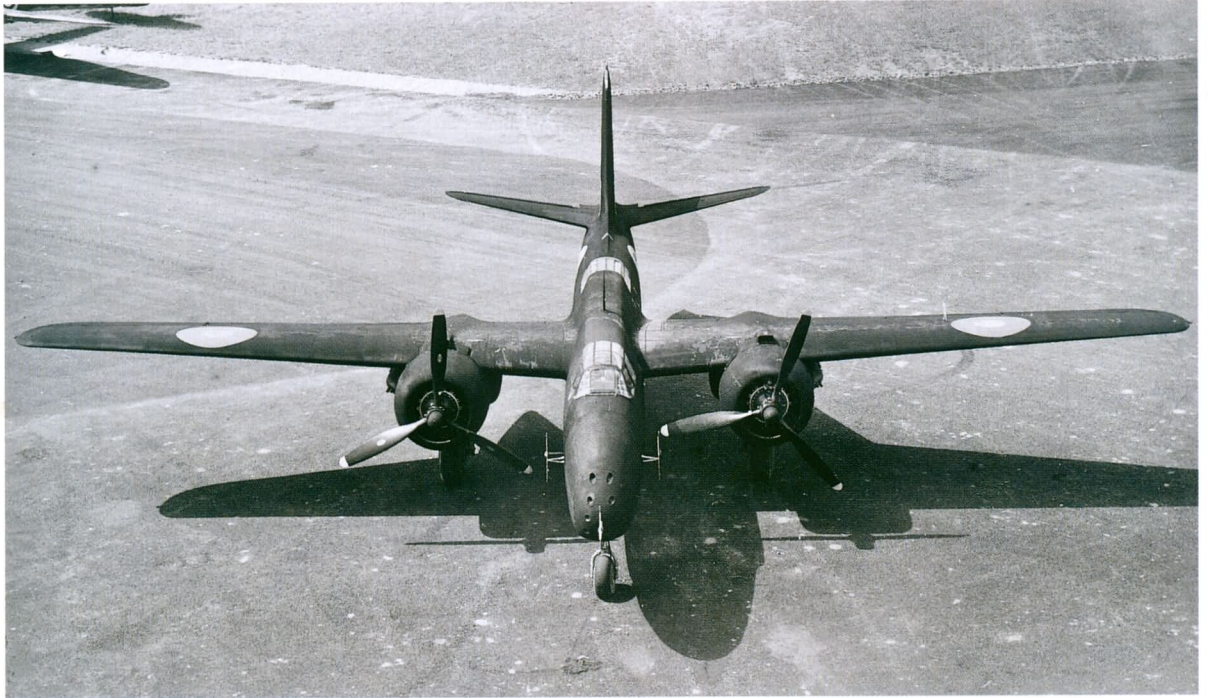
Operational testing

MI6 technicians fitted the set into Fairey Battle I L4975 at Cranfield, Bedfordshire, and Whinney, a former Hawker Hurricane pilot, arranged for ground-to-air liaison testing. In May 1941 the installation was transferred to an Avro Anson I NK720 which had space for two more radio operators. Several technical problems were sorted out, and the team pronounced the system ready for testing in an operational aircraft. Whinney picked up a Vickers Wellington from the factory at Brooklands, Surrey, and, after a short stay at Cranfield to be fitted out, flew it to Newmarket, Suffolk, where the newly-formed Special Duties Squadron, 138 Squadron, was flying from the racecourse. On September 29, 1941, the team moved to Wyton, Huntingdonshire, where aircraft/ground agent contacts were made at high altitude. The Wellington, however,



The Operation SUSSEX badge. VIA AUTHOR

The Douglas Havoc was nimble enough for the ASCENSION role, but suffered from a cramped cabin for the operators.



showed poor performance at height, and was returned to Brooklands, where both engines were changed on December 11. Whinney collected it and returned to Wyton, where Plt Off Derek Bradbury joined the team. He was a bomber pilot fresh from operations and was to stay with Whinney throughout the MI6 radio trials.

On December 16 the team moved to Stradishall, Suffolk, where it was again attached to 138 Squadron for further practice with newly-trained agents destined to be parachuted into position by the unit's aircraft. During this period Whinney visited the High Altitude Flight at Boscombe Down, Wiltshire, where the CO, Sqn Ldr Longbottom, provided him with a Douglas Boston for further high altitude experience. Whinney realised that such a high performance aircraft would be ideal for the project and suggested this during one of his visits to the SIS office in London. However, in February 1942 the team were detailed to fly their Wellington IA P2521 down to St Eval in Cornwall, in order to demonstrate the system to Commander Wilfred Dunderdale, head of the SIS' covert naval operations. (P2521 was converted early in its history to a DWI - Directional Wireless Installation - machine, with the huge coil mounted under the wingtips, rear fuselage and nose - see *Æ127 - ED.*) A converted fishing boat was fitted with the radio gear and trials took place in an area of the Brest peninsular. Although the Wellington operator made contact, the system was not thought ideal for boats landing agents on remote coasts in Western France. Cruising around in daylight, not far from the enemy coast, also convinced Whinney that using a faster and more agile aircraft, such as

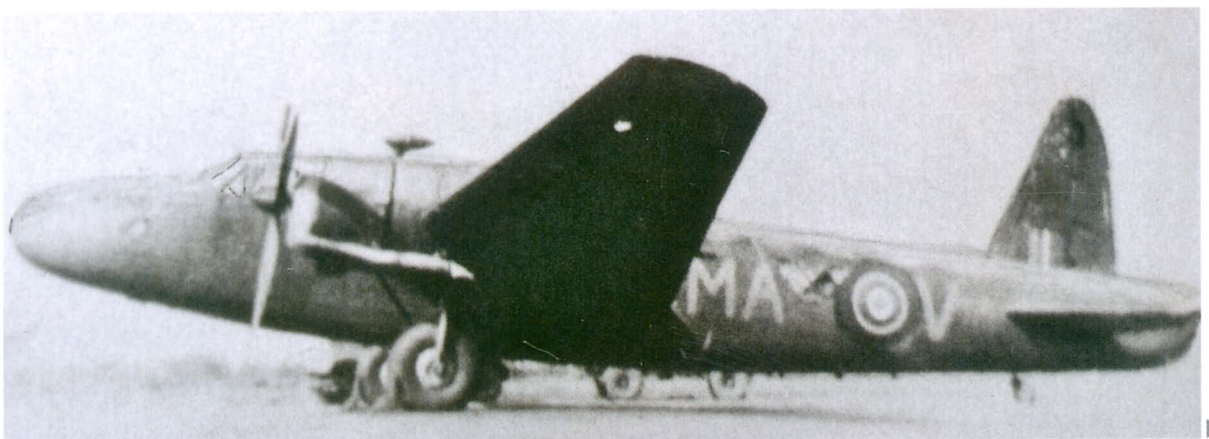
a Boston, would be a less risky proposition.

Agents had now been put in position and the first operation with the new system over enemy territory was given the code name Operational ASCENSION. The Wellington was flown to Tangmere, Sussex, to be prepared and on the night of May 8/9, Whinney took off at 21.00 hours. His report reads:

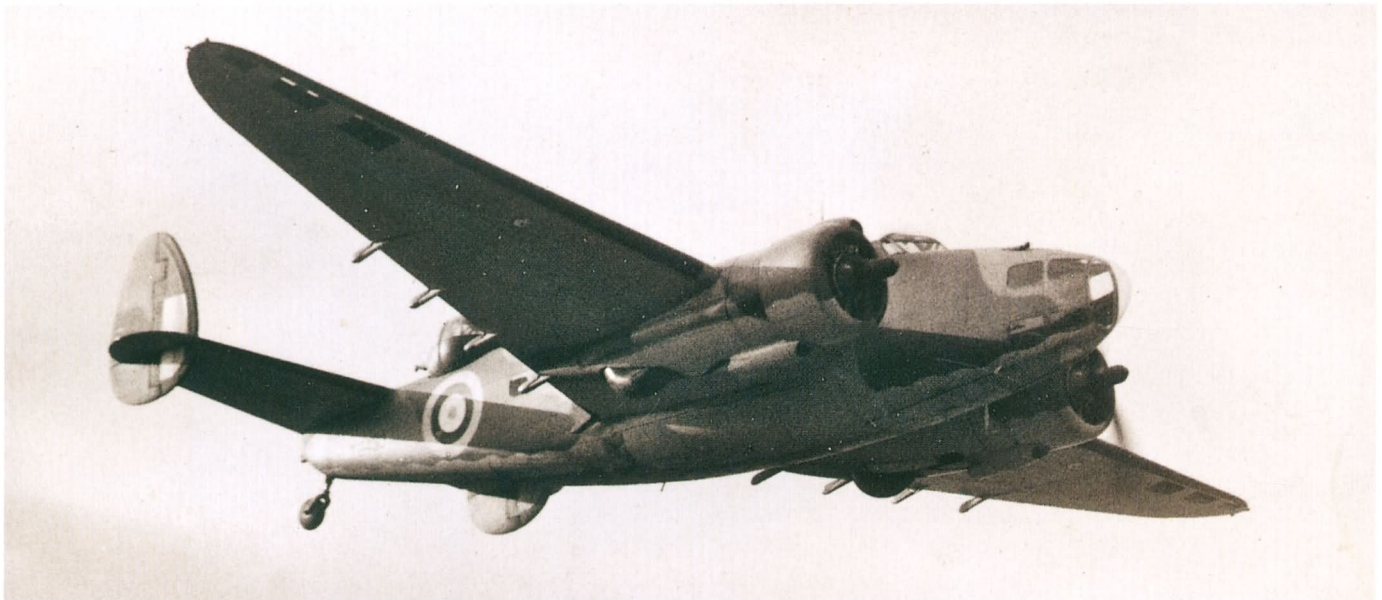
"The first ASCENSION flight was from Tangmere, lasting 4 1/2 hours. I was told that my greatest danger was from a night-fighter station at Exeter. I happened to know the Flight Commander there, so I rang him up and he promised to ground the lot for the evening, so armed with a scratch crew - my usual navigator couldn't come - plus a French-speaking radio man, we took off at dusk in the Wellington. The replacement navigator, a Canadian sergeant who had only just arrived in Britain, declared himself lost by the time we reached start point, where we turned to port and started to climb towards mid channel, and our west-east patrol line. We made contact immediately with our agent in Brittany and a long conversation ensued.

"I noticed at one time lots of lights below, and said something to Bradbury about fishing boats: he said 'They're not boats - it's flak!' After 1 1/2 hours of contact I told the chap to close down (and now my bacon was saved). I pressed the Fighter Command VHF button and heard the Tangmere controller say: 'Thank God, now steer a course you will never believe', and [he] gave me a course for Worthing, because night-fighters were landing at our airfield.

"We flew rather quickly downhill to Worthing from 21,000ft and after endless orbits, we managed to land. We were then



Wellington P2521 'MA-V' of 161 Squadron was used for the first ASCENSION 'op' on April 8, 1941.
VIA AUTHOR



rather surprised to be told that when I pressed the VHF button I was being tracked as being just north of Paris, with an enemy fighter on my tail climbing to greet me. The last thing my boss told me was that on no account was I to cross into enemy territory. We flew again on the 10th, 11th and 12th, making contact each time, all at 22,000ft.

This was followed by a period of training tests and demonstrations, including one to an American officer, Lt Cdr Steve Simpson, who later used a similar system for agent relay operations – the JOAN ELEANOR which was used by the Office of Strategic Services [OSS] ‘Carpetbaggers’ unit. After another visit to the Naval Intelligence people

“...WE NEVER KNEW THE CONTENTS OF THE HUNDREDS OF MESSAGES WE RECEIVED, AND COULD ONLY GUESS HOW USEFUL OUR SERVICES HAD BEEN. WE WERE, LITERALLY, A FLYING TELEPHONE EXCHANGE.”

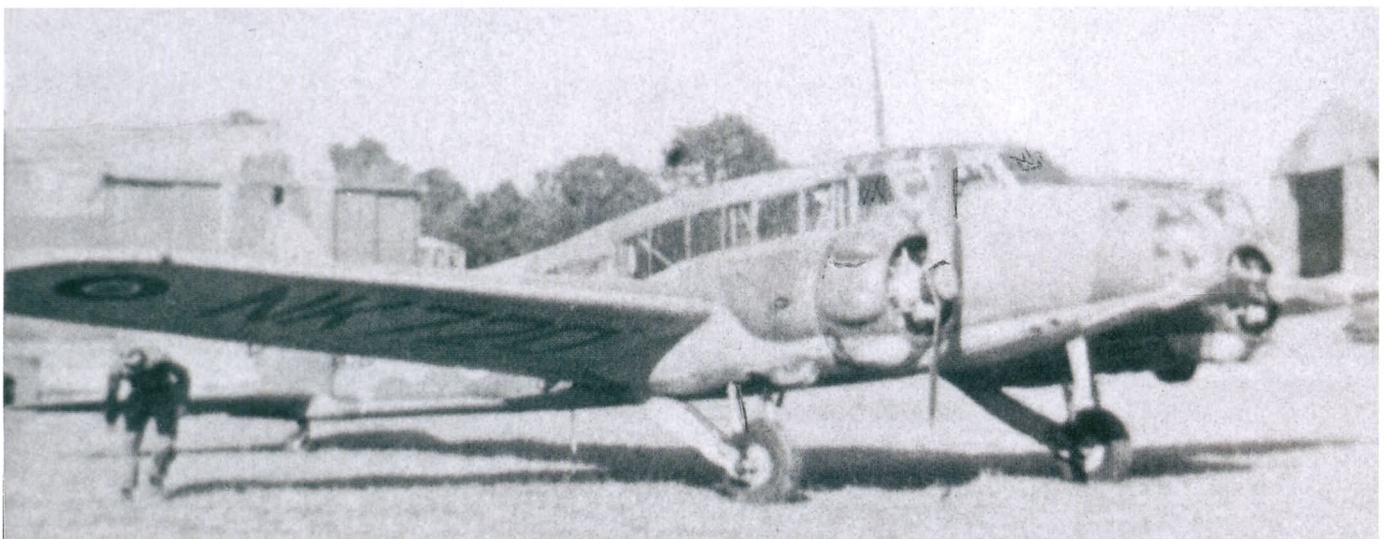
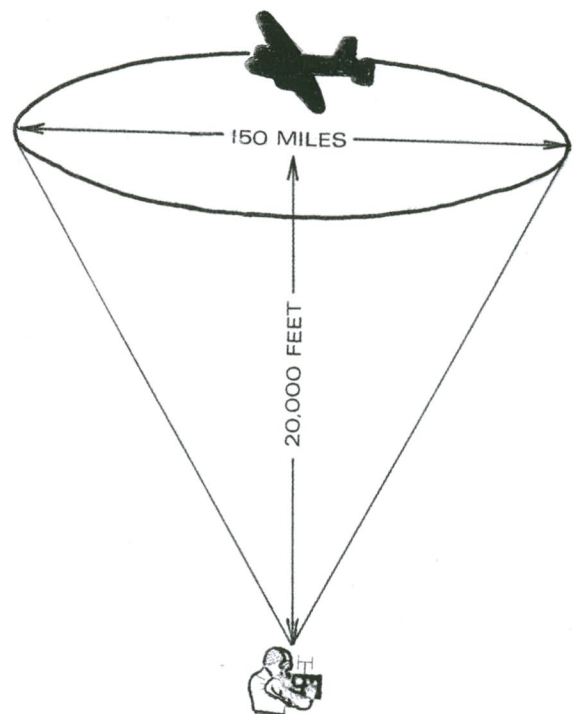
at Portreath on the 24th, I was sent to Burtonwood, where I took delivery of Douglas Havoc AW319 (a solid-nosed version of the Boston) which I then flew to Farnborough to be fitted with the necessary aerials on the 31st. In July I delivered a second Havoc BJ477 into Farnborough: things were now beginning to move.

“A few days later Derek Bradbury and I flew the aircraft to Cranfield where the SIS ‘black boxes’ were installed. We then took them back to Tempsford and carried on testing until September, when I took BJ477 to Leuchars in

Lockheed's Hudson (Mk.III illustrated) was the optimum aircraft for ASCENSION sorties.

RIGHT: The radio system used by ASCENSION and SUSSEX agents was developed by the SIS at Whaddon Hall. It was a line of sight system - the higher the altitude of the liaison aircraft, the longer the range of reception. AUTHOR

Anson I NK720 was used by Whinney throughout Operation ASCENSION. VIA AUTHOR





Scotland for a demonstration to the Free Norwegian Air Force at Woodhaven, for possible use in their [Consolidated] Catalinas, which they were using for covert missions to Norway.

"We then heard that the navy people at Portreath had decided after all to use the system. They had installed the ground transceiver in some of their boats and were ready to start trials. I proceeded down to Cornwall in our trusty Wellington and during October and November I flew several times, escorting and communicating with these vessels. During one of these flights on October 14, both engines cut out at 18,000ft off Ushant. After some anxiety, they picked up again at a lower level, but it taught me to have pumps fitted to the fuel tanks. On October 1, I flew the 'Wimpy' for the last time, the two Havocs now being ready to go.

"There were now several agents in place, and two bilingual French Sergeant radio operators were posted to us on a permanent basis. Known as Arthur and McDonald ('Les deux types'), we got observer half wings for them, and they flew consistently and continually in the Havocs. They also took part in agent training, so there could be recognition of voices when contact was made. The only unsatisfactory aspect of the whole operation was that we never knew the contents of the hundreds of messages we received, and could only guess how useful our services had been. We were, literally, a flying telephone exchange."

'Ascension' in action

The flight personnel had now settled in with 161 Squadron in an area on the western side of the Tempsford airfield in Bedfordshire. The SIS radio people had moved into the S-Phone hut which, owing to the top secret rating of the equipment, was out of bounds to everyone one but the base the technicians. One of the corporals there, Jimmy

Blackburn, recalls: "We were given strict orders by the CO that, owing to the secret nature of the system, no one was to be allowed inside the huts. We quite enjoyed ejecting officers who came for a look round".

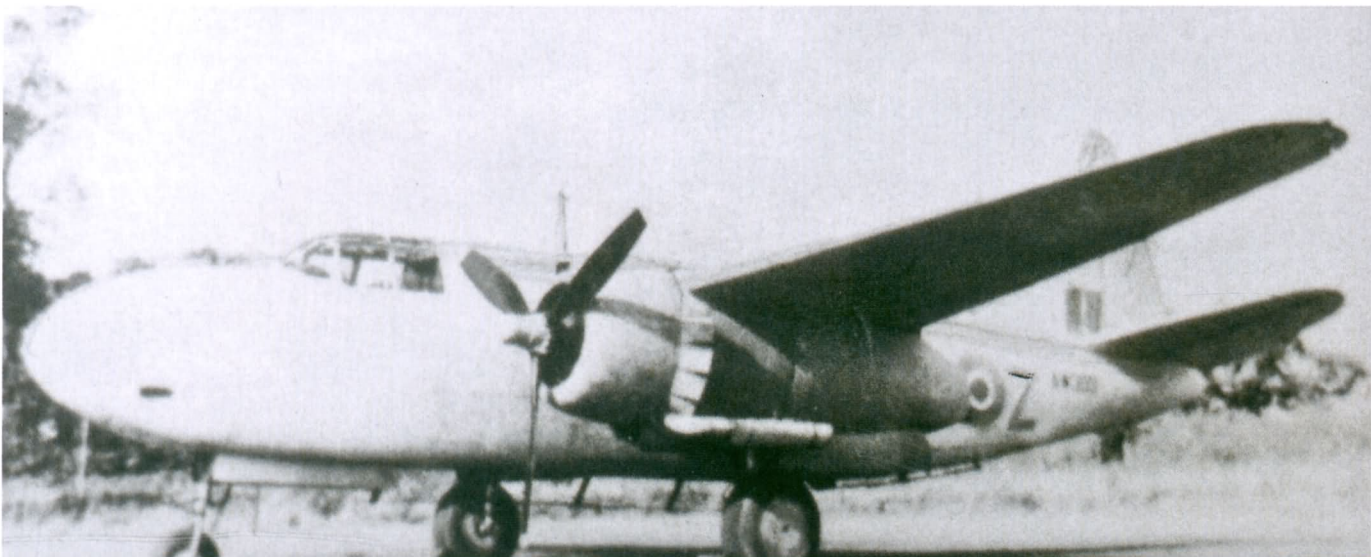
They were now ready to fly regular ASCENSION operations. SIS agents had been established from France to Belgium, flown in by HP Halifaxes of 138 Squadron who were based on the other side of the airfield. The drill was that the Havoc navigator would be given the map reference of the agent's area, together with his transmission schedule (say 23:00 every third night). The aircraft would climb to 20 to 25,000ft (6,000 to 7,620m) over the Channel to a position within the range of the agent's transmission. The ground transceiver transmitted a cone-shaped signal which spread out to 100 to 150 miles (160 to 240km) at 25,000ft.

"The sets used a high-frequency wavelength almost immune from enemy signals intelligence, so quite lengthy reports could be made. However, as the airborne sets could be intercepted by enemy listening stations, the radio operator had to be very careful what he said. A wire recorder was built into the airborne equipment so that no part of the report could be missed. The flights usually lasted for three to four hours. Soon after the Havoc landed the recorded wire spool was taken out and handed to a waiting dispatch rider, who took it to MI6 headquarters to be analysed and recorded.

On April 14, 1943 Whinney took off from Tempsford in Havoc BJ477 at 23:00 bound for the Ijmuiden area of Holland, where a successful contact was made with an agent, giving a 50-minute report. Plt Off Boothby in the other Havoc was also successful that night, much to the delight of the SIS 'top brass' who were waiting back at Tempsford. From then on regular sorties were flown, though not all were successful as some agents under stress missed their schedules, and the close presence of Germans led to missed transmissions. Once

A 138 Squadron 'special duties' Halifax II in Egypt.
KEY-GORDON
SWANBOROUGH
COLLECTION

Havoc I AW399 'MA-Z'; the first of two UHF aerials can be seen pointing downward amidships on the starboard side. As the Allies gained air superiority, SUSSEX flights were made in daylight and the Havocs flew in PRU blue. VIA AUTHOR





Tempsford as it is today. The famous 'barn' is located in the left foreground, to the left of the black hangar base.

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this happened it was difficult to re-establish contact – this proved to be the weakness of the system.

Sometimes an agent had an urgent message to report, it before his or her 'set' transmission time. For these reasons a regular patrol was flown parallel to the Continental coast from a line from Selsey Bill to the North Foreland, with the operator on constant listening watch.

Roomier Hudsons for D-Day

On May 3, 1943, Fg Off Bradbury took over the flight and as crews gained in experience, many of the smaller 'teething troubles' were overcome, though the cramped crew positions in the Havocs sometimes affected the use of the radio equipment. Bradbury mentioned this to his superiors, and it was decided to acquire Lockheed Hudson, which had a much more roomy fuselage. The agents themselves were mostly established in towns and cities, and were trained to pick up all aspects of enemy activity, with the sole purpose of providing intelligence to Allied Planning Staff.

The flights continued throughout the summer of 1943, and that September two Hudsons were allocated to the ASCENSION operations, though the necessary modifications took several weeks. Long-range tanks were fitted into the bomb bay, radio units complete with aerials were installed, and the systems were air-tested. The first Hudson, *N-Nan*, arrived from Cranfield on October 20, and flying it on the 29th, Plt Off Bradbury made contact with an agent in Northern France. When the second Hudson arrived, the Havocs were withdrawn from the flight, and flown to 8 School of Technical Training at Weeton, Lancashire.

Bad weather in December and early in the New Year curtailed successful contacts, but as the Allied invasion drew closer agents were asked for details of enemy formations in northern France. Resistance groups were also preparing for Operation OVERLORD, getting ready to sabotage road and rail links throughout the area, and just before D-Day, another covert agency involving MI6 commenced operations - see

later. The Hudsons proved to be ideal for ASCENSION agent liaison, and although no contact was made on some sorties, most were successful. After the invasion bridgehead had been established, the Allied Forces were assisted by a number of Special Forces flown in to support the resistance groups in France.

Meanwhile, MI6 agents kept a low profile and continued to transmit their reports to the Hudsons. As the German forces fell back, the agents were overtaken by the Allied advance and brought back to England. The winter of 1944 brought some extreme conditions, and many flights were cancelled, but in the critical months following D-Day, ASCENSION provided the Army planning staffs with valuable

"...I WAS BEING TRACKED AS BEING JUST NORTH OF PARIS, WITH AN ENEMY FIGHTER ON MY TAIL CLIMBING TO GREET ME."

intelligence. In January 1945, the operation was suspended, and Hudsons and personnel transferred to 161 (Special Duties) Squadron at Tempsford. Hudson *N-Nan* carried out 120 successful radio flights and was later used to fly agents into occupied Europe. On the night of March 21/22, 1945 whilst returning from an unsuccessful attempt to drop three Belgian officers into occupied territory, it was shot down with the loss of all on board.

'Sussex' and Mitchells

While ASCENSION supplied military intelligence from occupied Europe, but there was another similar covert group involving MI6 which played a more specific role. Code-named SUSSEX, it was originally planned in 1943 with the aim of assisting allied Army units with intelligence from immediately behind the German front line. MI6, together with the American OSS, was tasked with planning the operation and carrying it out. Training schools were set up, and there was to be involvement with the SOE, the Special Air Service and other

Mitchell III, of the type used by 226 Squadron for the SUSSEX flights.



groups. The Special Forces HQ would be in overall control but not involved with details or application.

Two man teams were to be inserted into German-occupied towns just behind the lines, from where they would transmit reports on enemy movements and strengths via aircraft orbiting the area. These would be recorded and sent to Allied army units via a report and analysing centre in England. Following the success of the ASCENSION radio equipment, a similar UHF system was used, along with high-frequency wireless transmission sets such as the Paraset which, though liable to enemy interception, enabled the agents to contact their home station if the planned schedules broke down.

The aircraft chosen for the SUSSEX agent liaison flights were North American Mitchell medium bombers. Six from 226 Squadron were formed into a 'Special Duties Signals Flight'. They were based at Hartfordbridge, Hampshire, under 2 Group of the Tactical Air Force, and the flying programme was organised by the OC, Wg Cdr D 'Ginger' Mitchell, (later of the Queen's Flight).

Whinney was involved in organising the fitting of the radios and aerials, and used his trusty Anson DJ358 to train the airborne radio operators. As in the ASCENSION sorties, the higher the aircraft orbited the agent's area, the greater was the range spread of the transmission, and as there was little likelihood of enemy monitoring there was no great urgency or a limit to contact times. By March 1944, the training of operators and agents was well advanced, and by the end of the month many teams had been dropped into position by Halifaxes from 138 Squadron at Tempsford.

The first operational flight was made on the night of June 3/4 when successful contact was made with a team in the Chartres/Orleans area: the same team was successful on the night of D-Day, and on the following night. The next night the coverage was extended to Le Mans, and gradually reports of enemy dispositions and movements were being supplied to Allied commanders. Sixteen contacts had been made by the end of the month, and the project was seen to be a great success.

When one of the Mitchells returned to Hartfordbridge, the wire spool from the recorder was given to a dispatch rider, who would take it to the central MI6/OSS intelligence HQ in the early hours of the morning. Details of the next report were then sent to the Army's HQ by secure line, and sometimes by next morning – using information from the reports – targets behind the enemy lines would have been attacked by Allied fighter bombers and rocket Hawker Typhoons of the Tactical Air Force.

Throughout the initial stages of the invasion, SUSSEX teams provided the ground forces with invaluable tactical intelligence, aided in many instances by local resistance groups. They were also fortunate that German forces were fully engaged in defensive action and consequently enemy counter intelligence was not as efficient as usual. None of the Mitchells were intercepted by enemy night-fighters, but on the night of June 14/15 one of the flight's aircraft was attacked by a DH Mosquito of 100 Group, which mistook it for a Dornier, and made four successful firing passes. When

one of the gunners warned he was coming in again, the pilot ordered his own gunners to open fire. The fighter was hit and caught fire, but the crew managed to bale out and subsequently claimed a Dornier badly damaged. All night-fighters flying over France had been warned to watch out for lone Mitchells, and 100 Group was told to re-iterate the warning. The Mitchell crew duly claimed one Mosquito shot down.

By now the unit was known as the 'Ginger Flight' after the CO, who was fully occupied in co-ordinating flight times with agents' transmission schedules. As the front line moved to the east, fresh agents were dropped, some of the first batch being overtaken and sent back to England. Some teams were dropped in the vicinity of the V-1 and V-2 launching sites to pin-point targets for Allied attacks.

In September 1944, it was decided to move 226 Squadron overseas, and a tentative decision was made to transfer the flight to a Bomber Command airfield. However at a meeting at the Air Ministry on September 15, it was decided that as the SUSSEX operations performed a similar function to the Hudsons of the ASCENSION Flight, and as the area of operations was diminishing, the agents served by the Mitchells could be handled by the Hudsons at Tempsford. The changeover was organised by Flt Lt Maurice Whinney and the 'Ginger Flight' finally disbanded on October 23. Whinney said the number of successful Wellington/Havoc/Anson contacts had amounted to 365: the Mitchells had often made more than 20 contacts a night, and in the autumn and winter of 1944 daylight sorties had often been flown. Somewhat surprisingly, having guided both ASCENSION and SUSSEX operations from start to finish, he remained a Flight Lieutenant. AE

The author would like to thank G E T Nichols, Pat Hawker and K A Merrick for their help in compiling this article.

Flt Lt M J Whinney at the controls of Anson NK720.
VIA AUTHOR

