This diagram provides an impression of Taxable in the context of the radio countermeasures effort of June 5/6. Via Andy Thomas

Grand Deception:
Operation Taxable

Robert Owen describes Taxable, a remarkable 617 Squadron operation that produced a spoof invasion fleet in the early morning hours of D-Day

One morning early in May 1944, under conditions of the greatest security, Wing Commander GL Cheshire, Officer Commanding No. 617 Sqn, and his crews were informed that they were being screened from further operations. Sworn to secrecy, they were told that they would not operate again until the Allies invaded the continent. Their task then would be to carry out an operation to deceive the Germans as to the true location of the landings.

The intention was to create the impression on enemy radar of an invasion fleet approaching the French coast well away from the real invasion beaches. It was hoped that this, along with other 'spoof' operations would cause confusion as to the true nature and extent of the operation.

But how could aircraft flying at almost 175kt (322km/h) possibly simulate shipping approaching the coast at a speed of 7kt (13km/h)?

Scientists at the Telecommunications Research Establishment had devised a theoretical plan whereby an aircraft could fly a pattern of elongated rectangular orbits, each with its long sides perpendicular to the coast. As an aircraft completed each leg flying towards the French coast it would delay its turn slightly, thus creating a pattern of overlapping orbits.

By adjusting the timing of the turn the shorter side, presenting a 'front' parallel to the coast, could be made to advance towards it at a speed approximating to the speed of an approaching convoy. If the aircraft released Window (strips of metal foil, today known as chaff) of varying lengths and densities, the pattern created on the screen of any watching radar would approximate to that of an approaching convoy of ships, moving at the appropriate speed.

Trials were carried out against a captured enemy radar, set up at Tantallon Castle on the Firth of Forth, using Vickers Wellingtons. The idea worked in practice, but it was left to the squadron to convert the basic idea into an operational reality. The first requirement was for accurate split-second navigation. This was achieved using Gee, an electronic navigation aid that enabled the navigator to use pulses displayed on a screen to determine his position with great accuracy and instruct the pilot when to turn. In case of failure, each aircraft was fitted with two Gee sets.

Monotonous Work
The crews were sent off on cross-country flights to practice. No Window was dropped, but anyone on the ground might have been puzzled, seeing a Lancaster orbiting seemingly pointlessly overhead for an hour at a time. Pilots had to be able to fly identical orbits, making perfectly timed turns for circuit after circuit. Accurate height also had to be maintained, facilitated by the use of a radio altimeter, along with constant airspeed. Any error in timing would cause the German radar image of the 'convoy' to suspiciously change position or appear to increase speed. It was tiring, monotonous work, requiring intense concentration. Each aircraft carried an additional pilot and navigator to ease the workload.

Positioning the Lancaster was only part of the problem. As it ran towards the coast on each long leg, progressively larger Window strips had to be dispensed, the strips getting lighter as the aircraft flew away. The bundles of Window could be stacked in the correct sequence in the aircraft, but those dispensing it would have no means of knowing which way the aircraft was heading. Green and red lights positioned near the dispensing chutes and operated by the navigator provided the vital indication. No lights meant

Lancaster B.Mk I DV385/KC-A, *Thumper Mk III,* flown by Flt Lt Bob Knights and B.Mk III LM482/KC-W, flown by Sqn Ldr Les Munro, were photographed around the time of Taxable. Both have the chute for dispensing Window under their rear fuselage, below the code letter 'A' on the near machine. Author's collection

that the aircraft was making its turn parallel to the coast and no Window was to be dropped.

It was hard physical work. Thirty-six bundles had to be dispensed on each of the straight legs. Additional crew were carried as dispensers, assisted by a crewmember with a stopwatch and chart to ensure that the right size Window was dispensed at precisely the right time.

The squadron carried out practices against a radar station at Flamborough Head, this time actually dropping Window. Crews not flying visited the radar station to see for themselves the effect that it was having. After weeks of intensive training they had perfected the art. A further modification was made to the plan, however. The operation was now to be carried out in two phases, each comprising two waves of four Lancasters, the second wave taking over from the first halfway through the phase, then being succeeded by the second phase, again of two waves, each of four aircraft that carried the deception on to its stop line off the French coast.

Spoof Invasion Fleet

After a final briefing on the evening of June 5, the first wave of aircraft departed shortly after 23:00. Setting course from the Sussex coast near Littlehampton, they reached their start point 30 miles (48km) off the French coast. From there they began orbiting in four rows, line abreast at 3,000ft (914m), moving gradually towards Cap d'Antifer, east of Le Havre. A small flotilla of naval vessels operated independently beneath them, some flying balloons with reflectors to amplify radar returns. Limited jamming added to the realism, allowing enemy radar sufficient vision to detect the spoof invasion fleet.

After 30 orbits, each lasting seven minutes, the second phase took over. A 90-second overlap

Flying Officer Ernest Willsher and crew gather for a photograph with a Lancaster tail turret as backdrop during the Taxable period. Two of the aircrew are wearing sidearms, the weapons being issued around the time of the operation. Author's collection

ensured that there would be no gap in the Window dropping. The operation proceeded uneventfully. By nautical twilight the last wave of aircraft was 9 miles (14km) from the French coast. Thirty minutes later they completed the last of their 21 orbits and headed for home.

It is impossible to determine the individual effectiveness of Operation Taxable with any certainty. It was actually too close to the real

invasion beaches and fighter-bomber attacks may have already significantly reduced radar cover in the area. However, along with a similar operation, Glimmer, carried out off Boulogne by eight No. 218 Sqn Stirlings, and other deception operations, Taxable caused sufficient confusion to delay the despatch of German reinforcements that might have made the Normandy landings a much harder fought battle. ◉

The Royal Air Force Battle of Britain Memorial Flight Lancaster is marked as *Thumper Mk III*. SAC Taylor/© UK MoD Crown Copyright 2014