



BANG VS BUCK

THE RAF'S V-FORCE & THE QUESTION OF REAR-CREW EJECTION-SEATS

The introduction of the UK's post-war V-Force saw the Valiant, Vulcan and Victor jet bombers become the spearhead of Britain's vital nuclear deterrent. In all three, ejection-seats were provided for the pilots, but not the rest of the crew.

Prof KEITH HAYWARD FRAeS explores the political aspect to determine why — a practical issue or economic expediency?



Avro Vulcan B.1 XA892 makes a big splash during the unseasonably cold and wet SBAC show at Farnborough in September 1956. The two pilots were accommodated beneath the teardrop-shaped canopy, the main cockpit being fitted with a pair of Martin-Baker Mk 3 ejection-seats (OPPOSITE PAGE, BOTTOM). The rear crew of three occupied their stations in a cabin aft of and below the main cockpit, without ejection-seats.

IN 1939 MANY RAF pilots and crews were sent into action flying obsolescent aircraft. Indeed, political pressure to deliver quantity over quality dominated supply well into 1941. Similar pragmatic considerations may have influenced the decision not to retrofit Avro Lancasters with the larger escape hatch of the Handley Page Halifax — a few extra inches made all the difference when baling out of the latter.

In the Cold War that followed Allied victory, the UK's overriding political and strategic requirement was to deliver the British independent nuclear deterrent. Until the late 1960s the primary delivery system for this would be RAF Bomber Command's V-Force, made up of the Vickers Valiant, Avro Vulcan and Handley Page Victor jet bombers. Fine designs all — but with a critical weakness: of the crew of five, only the two pilots were provided with ejection-seats.

In the 1960s, when the V-Force mission profile shifted to low-level, the vulnerability of the three technical crewmen became even more evident. Fortunately, the total number of V-bomber accidents proved to be relatively low, with even fewer fatalities resulting from the disparity in escape systems. Nevertheless, the internal debate over possible modifications to provide ejection-seats for all V-bomber crews illustrates a ruthless determination to deploy the deterrent regardless of crew safety. There was also the nagging truth that cost as well as delay may have entered into the equation.

In *Eject! Eject!*, his superb history of the ejection-seat, John Nichol describes the loss of Vulcan XA897 on approach to Heathrow Airport in bad weather on October 1, 1956, following a "flag-waving" tour of Australia and New Zealand.¹ The pilot, Sqn Ldr D.R. "Podge" Howard, and his copilot, AOC-in-C Bomber Command Air Marshal Sir Harry Broadhurst, ejected using their Martin-Baker Mk 3 ejection-seats, but their four colleagues in the rear compartment, without ejection-seats, perished. Describing the tragedy, Nigel Birch, the Secretary of State for Air, blithely told the House of Commons:

"The RAF Court of Inquiry, which assembled the following day, found nothing to suggest any technical failure in the aircraft which could have contributed to the accident . . . It was the duty of the captain to give the order to abandon the aircraft, and of all those who were on board to obey it if they were able to do so. Both the pilot and copilot realised when they gave their orders that, owing to the low altitude, the other occupants had no chance of escape, and they considered that their own chances were negligible."²

There was no reference to the absence of ejection-seats for the rear crewmen, and the main concern expressed by the Labour Opposition was whether it had been wise for a military aircraft to fly into Heathrow. Valiant B.1 WP202 was lost in May 1956 after electrical failure during trials for the Royal Aircraft Establishment (RAE). This time the captain, Sqn Ldr Kenneth Orman, stayed with

OPPOSITE PAGE, TOP V for V-Force (and volume!). All in standard anti-nuclear-flash white, a trio of V-bombers, led by an Avro Vulcan of No 83 Sqn, with a Vickers Valiant of No 90 Sqn on its port side and flanked to starboard by a Handley Page Victor of No 10 Sqn, perform a formation flypast at the SBAC show at Farnborough in 1958. TAH ARCHIVE