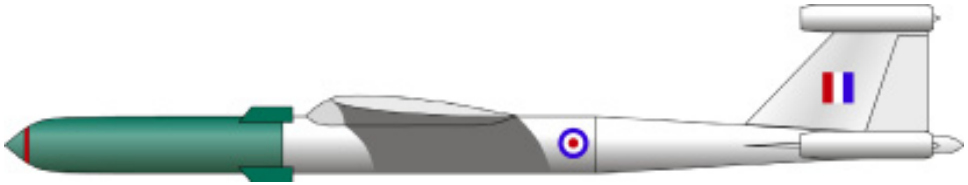
Belcher Bits No. BL8:
Vickers 725 Red Rapier 1/72

Belcher Bits
33 Norway Spruce Street,
Stittsville, ON, Canada K2S 1P3
Phone: (613) 836-6575, email:info@belcherbits.com

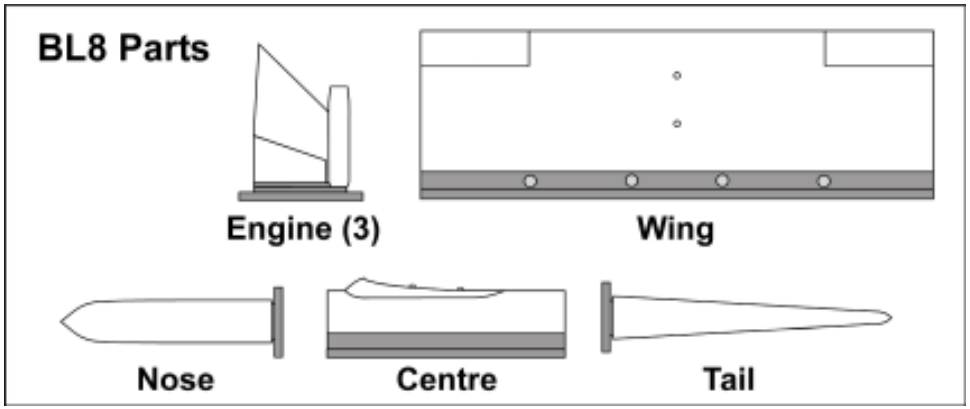


Background

In 1951, Britain believed that the Soviet Union was planning on launching a massive attack against the West in 1953. The principal British deterrent was the planned V Force but the bombers (Vulcan and Victor) would not be ready in time. As a quick stop-gap, specification UB.109T (UB for unmanned bomber) was prepared and both Vickers and Bristol responded. Under the project name Red Rapier, a remotely controlled jet-powered flying bomb capable of flying at high altitude as far as East Germany was to be developed. The specification called for a 5000 lb warhead, delivered at 450 kt cruising speed at 45,000 ft with a range of 400 miles. The emphasis was to be on inexpensive construction so that large numbers could be launched in waves, overwhelming air de-fences; a sort of updated V-1 buzz bomb. During WWII, Britain suffered over 24,000 casualties from V-1 attacks which only abated when launch sites were overrun by troops in France.

The Bristol proposal (Type 182) made innovative use of moulded structural plastic components. These had the advantage of high production and low cost. Bristol estimated the basic structure would cost only £600 in quantity. The wing was based on the design of the Folland Gnat, and it was powered by a single turbojet mounted below the tail. A prototype was nearly ready for flight when the project was cancelled in 1953. Sometimes referred to as Blue Rapier, both the Bristol 182 and Vickers 725 were Red Rapiers; Blue Rapier was the Bristol design later proposed as a drone.

The subject of this set, the Vickers Type 725 would have used sheet steel construc-tion, a 32 ft straight wing and three small Rolls Royce RB.93 Soar axial turbines mounted on the tail. At the end of its flight, under remote guidance, the flying bomb would kick over into a vertical dive. At about 20,000 ft, the warhead (the entire nose) would detach and fall onto the target. There was an alternate proposal to have the warhead consist of five 1000 lb bombs clustered around a central tube.



Launching of the Vickers Red Rapier was to be from a towed ramp. The ramp itself was similar in concept to V-1 launch ramps, with a piston propelled up the ramp tube (in this case by compressed air), dragging the flying bomb along with its launch trolley. The portable ramp system would have remedied one of the key vulnerabilities of the V-1. During WWII, the long fixed ramps were visible to photo-reconnaissance and were targeted for attacks.

A full scale prototype was never flown, but 1/3 scale gliding prototypes were tested. There were many technical questions never fully answered in this program, specifically what form of guidance would have been used, but it remains an interesting footnote in weapons development.

The Model

This kit represents what a Vickers Type 725 Red Rapier would have looked like if built. It includes the unitary (5000 lb) warhead. Although photos exist of test fixtures for bomb dispersal, no information exists on what an operational 'cluster' warhead would have looked like; there may have been some form of fairing in front of the bombs. Remove the shaded areas of the resin parts. Make sure you leave a little ring at the base of the nose and tail. This will fit in the recess in the front and back of the centre section. The tailplanes can be glued in place 180° apart, and then the third engine glued at 90° to those. It is probably a good idea to use a small pin to reinforce these butt joints. Clean up the leading edge of the wing, then glue in place on the centre section. Fit the tail section on, making sure the tailplanes and wing are in line. The nose section can then be glued on. Done!

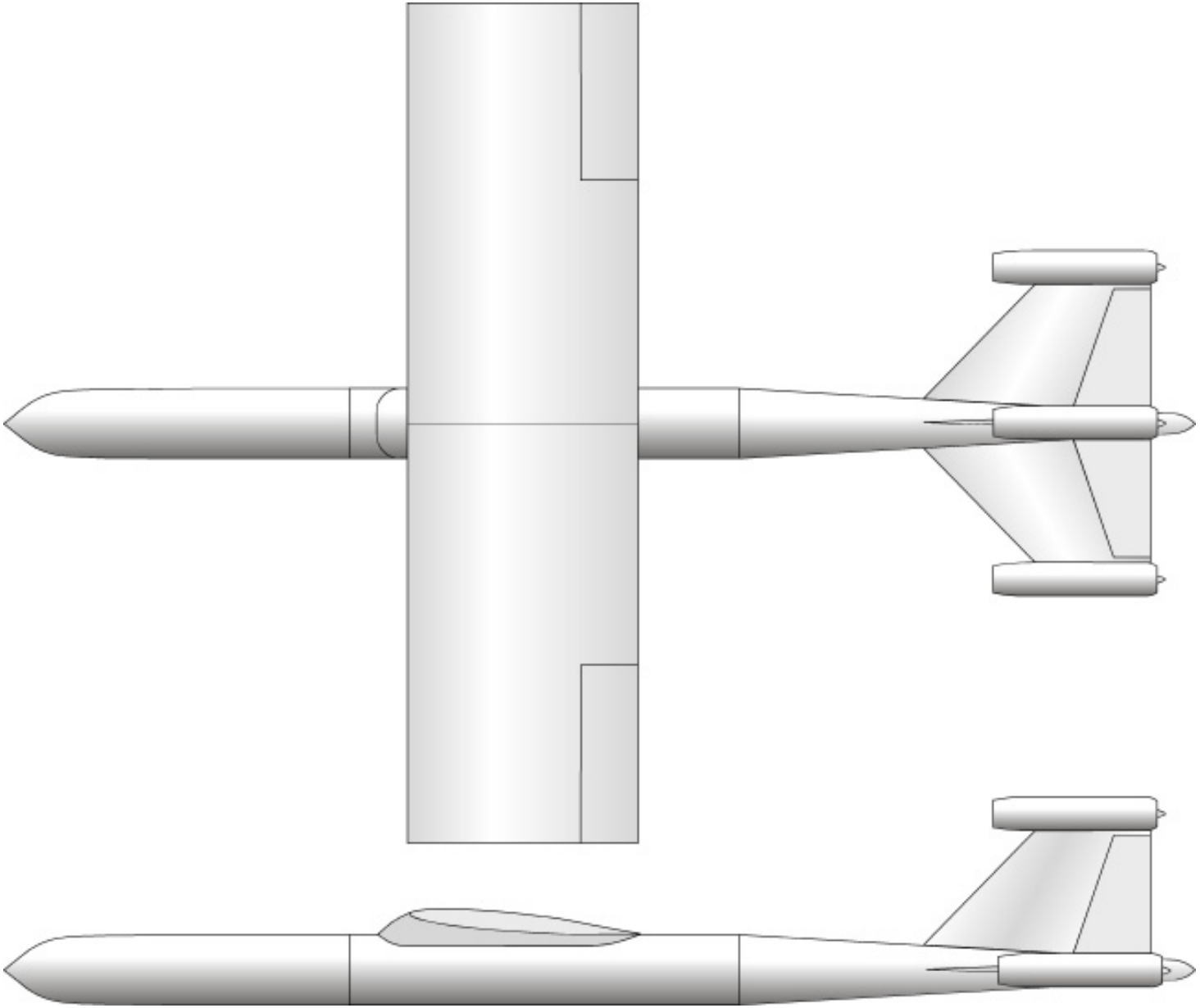
Some of the references showed small fins on the nose section. If desired, construct from pieces of 0.015" (0.35mm) plastic card as per sketch.

Painting

Wide open! This is a 'what-if' model, after all. As steel construction, it would have been painted, but probably overall light grey or aluminum lacquer. A camouflage scheme may have been used. The nose section may have been painted like the bomb it was (black or dark green) with a red band to indicate high explosive. It would have had simple markings at best.

At the time, nuclear weapons were still too large to be considered as a payload, and politically, the thought of launching a wave of unmanned missiles with nukes on board across friendly allies towards Germany would not have popular. Therefore I wouldn't recommend V force white; besides, the white was to protect the airframe from the nuclear flash. These flying bombs were expendable.

References

1. **British Secret Projects: Hypersonics, Ramjets and Missiles, C. Gibson and T. Buttler, Ian Allan Publishing, 2007**
2. **Project Cancelled, D. Wood, Janes Publishing, 1986**
3. **Red Rapier, E. Morgan, Air Enthusiast Numbers 70 and 71, 1997**
4. **Cruise Missiles, G. Goebel on www.vectorsite.net/twcruz.html**

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