Bristol Bloodhound 1

History: By the end of World War II Germany had developed a couple of pilot controlled rocket powered interceptors to defend targets of high importance from bomber attack. The Me163 was designed for repeated use and the Bachem Natter for single use. These high speed short range interceptors pointed towards the idea of a rocket interceptor that could reach high altitudes at very high speed. The limiting factor was, however, the lack of adequate means of directing these rockets to their targets so a pilot was necessary. However, post-war developments in radar and electronics promised to make unmanned rocket interceptors a feasible alternative to piloted interceptors. The development of the atomic bomb made it imperative that this new kind of interceptor could destroy bombers well before they could each their targets.

In 1947 Bristol was awarded a contract to develop a rocket defence for the Royal Air Force. In conjunction with this Ferranti was contracted to develop the radar and other electronic systems necessary for the missile to reach its target. Bristol set up Project 1220 to develop a surface to air missile to protect RAF V-Bomber bases so the United Kingdom would be able to launch its nuclear armed bomber force in the case of a nuclear attack. Development went ahead under the project name 'Red Duster'. Five test missiles were fired and flown to test the weapon system's aerodynamics, propulsion system and guidance system. A further series of tests were conducted at Wommera but the results were very disappointing, the most significant problems arose in the ramjet engines and the kind of radar used in the system. For a time the RAF turned its attention to the English Electric 'Red Shoes' project to give the British Army a rocket powered anti-aircraft system, but most problems with the Bristol missile were eventually solved.

The developed missile was named the Bloodhound and it entered service with the RAF in 1958. By 1955 planners believed that the Russians would soon have supersonic bombers armed with stand-off missiles so development of a more advanced system began. Initially Bristol planned a new missile but soon turned to development of the Bloodhound with a new ramjet offering greater speed and range and Ferranti developed a new radar system capable of directing the Bloodhound and resisting enemy jamming. This new version, the Bloodhound 2,' began entering RAF service in 1964. In all 783 Bloodhounds were manufactured.

When Britain transferred its nuclear deterrence from the Royal Air Force to Polaris armed submarines the bomber bases were decommissioned and Bloodhounds were withdrawn and either stored or transferred to RAF bases in Germany to defend airfields. In 1975 the threat of attacks by low level bombers led to the

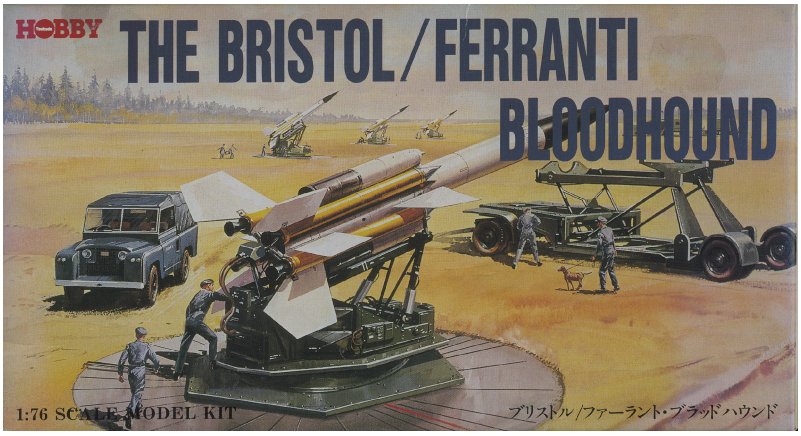
reintroduction of Bloodhounds to Britain. They remained operational until July 1991 when the last Bloodhound squadron stood down. They were replaced by the Rapier weapons system.

Bloodhounds served in three other countries; Sweden, Switzerland and Australia. In November 1959 the Australian government ordered 20 Bloodhound 1s and 16 launchers for defence of Australia's industrial centres around Sydney. They filled a gap in existing defence capabilities because the RAAF's frontline fighter, the Sabre, lacked the speed or altitude necessary to intercept likely enemy bombers. In January 1961 30 Squadron was reactivated to operate the Bloodhounds from Williamstown at Newcastle. In 1965 a permanent detachment was based in the Northern Territory for the defence of Darwin. The squadron was disbanded in 1968 and the Bloodhounds withdrawn from service; by this time the RAAF's new Mirage III interceptors had been in service for three years.

Data: surface to air missile. *Engine* two Thor ramjet engines and four Gosling booster rockets. *Wing span* 2.82m (9ft 3in). *Length (with boosters)* 7.7m (25ft 3in). *Maximum take-off weight* 2000kg (4409lbs). *Maximum speed* Mach 2.2. *Range* 80km (49.7miles).

The kit: Airfix 1/72

This kit is a wander down memory lane. The first time I saw this must have been in the early 1960s when it appeared in a bag as a Series 2 kit. The Bloodhound isn't big and doesn't require too many parts but the kit also has a launcher, a transport trailer and a Landrover to give it enough parts. Four models for the price of one, the kind of value for money a youngster couldn't resist. More recently the kit was incorporated in the Airfix Lockheed C-130 kit but I haven't seen any of the old Bloodhound kits for many years. I happened to mention this to a club member who admitted to having one and, offered a generous inducement, he handed it over. I wanted only the Bloodhound and launcher so I gave him back the trailer and Landrover. Goodness knows what he will do with them.



This is a basic and simple kit. The Bloodhound itself takes only seven parts and the rocket boosters another eight. The launcher takes even less. Putting either of them together takes only a few minutes, and there isn't much to be done in the way of improvements. The only changed I made was to change the engines that come with the fibreglass protection caps on the ground. I carved them back to convert the model so you can see the engine intakes as they would be before launch. I looked at a lot of Bloodhound photos and it seems that they were often seen without the protective caps. One of the Bloodhounds on museum display in Australia has a cap on the upper wing but doesn't have one on the lower engine.

Colours are a bit problematic. A lot of the British pictures show dark green Bloodhounds but I suspect they might be Bloodhound 2s. Others show basically white versions, some with roundels and other marks, sometimes not. When it comes to RAAF Bloodhounds the position isn't clear. They are all white but the museum ones show some variation. A recently restored one in South Australia has a lot more yellow than older ones. I decided to go for the scheme of the museum Bloodhound at Point Cook that involves making some marks for the missile. I couldn't find any RAAF roundels small enough, about 1.5mm in diameter would be about right so if you happen to have any... Apart from that little omission, the final result is a pretty little model.