

Restoration of Bloodhound MKII Launch Control Post and Type 86 Radar

A project undertaken by the Bloodhound Missile Preservation Group

Bloodhound MKII was a medium to long range Surface to Air Missile System (SAM) and an important component of the layered air defence system in the UK at the end of the Cold War. In service from 1964 Bloodhound MKII was deployed by the RAF to defend UK assets at home and abroad. Bloodhound MKII was also purchased by several countries, a significant defence product for the UK. Developed by BAC and Ferranti, BAC designed and manufactured the missile and launcher while Ferranti developed and manufactured all the electronic systems in the missile, Launch Control Post (LCP) and Type 86 radar.



Operational Bloodhound MKII Missiles
RAF Wildenrath (1981)

Bloodhound MKII was withdrawn in 1991 with operational squadrons being disbanded as the Cold War came to an end. As with other military equipment of significance Bloodhound MKII equipment found its way into museums and with private collectors. In 1991 the RAF donated a complete Bloodhound section to the RAF Museum at Cosford and the Imperial War Museum at Duxford, each with one missile, rather than the usual eight deployed in a missile section. Individual Bloodhound MKII missiles can now be found on public display at various museums, these missiles being a mix of operational and dummy handling missiles.

Over many years the LCP and Type 86 radar donated to the RAF Museum and IWM Duxford as part of the Bloodhound MKII sections became derelict. Museums generally consider the Bloodhound MKII missile to be more appealing to the public and tend to be looked after. It is against this background that a private initiative was taken to preserve a Bloodhound MKII Launch Control Post (LCP) and Type 86 radar following their disposal by the RAF Museum. Why? Firstly, they were an important part of the RAF's Cold War heritage and secondly, they contained the latest developments in military electronics and computers from the 1960's onwards.

Restoration of the LCP commenced in 2011 and was undertaken by ex RAF technicians and Ferranti engineers, all having experience of the Bloodhound MKII system. A restoration that would not have

been possible without committed individuals and several commercial organisations. The restoration of the Type 86 radar commenced in 2012.

The following photographs show before and after restoration:



Launch Control Post (LCP)



Type 86 Radar



Engagement Display Console (LCP)

Why carry out such a restoration? The LCP lay abandoned for twenty years with no power, exposed to the elements and vandalised. The before photograph of the display console shows that the top switch panel and engagement controllers' keyboard and tracker ball are missing, was this restoration a 'mission impossible'? Fortunately, optimism prevailed, and the skills of the restoration team made it happen.

The focus of the restoration was to fully restore the Bloodhound MKII engagement controller's simulator. Originally the simulator was self-contained but in 1985 the simulator was incorporated into operational LCPs, the mode of operation being a key switch on the display console. Restoring the LCP's computer and display systems restored the engagement simulator, a major undertaking

with many challenges. All electronic assemblies and power supplies had to be repaired and tested before any attempt at switching on the simulator could be made.

The motivation is to preserve one good example of a Bloodhound MKII section for future generations. The technical significance was also important as the Bloodhound MKII LCP was designed using leading electronic technology in the early 1960's, a digital computer (Ferranti's Argus 200) and germanium transistors. The technology used did evolve over the years that Bloodhound MKII was in service. The four digitally created displays in the console were installed as part of a major upgrade to the system carried out from 1985, the Argus 200 being replaced by the more powerful Argus 700.

Recently the LCP and Type 86 radar were moved to the RAF Air Defence Radar Museum at Neatishead in Norfolk. Here they are on public display along with the museum's Bloodhound MKII missile. The engagement simulator remains operational and will demonstrate to visitors how Bloodhound MKII would have engaged targets towards the end of the Cold War.



RAF Air Defence Museum, Neatishead
Bloodhound MKII missile and LCP in the background

Web Site:

<http://www.bmpg.org.uk/>

YouTube:

https://www.youtube.com/watch?v=P_G00gyq95Q (Mk2A LCP Walk Through)

<https://www.youtube.com/watch?v=5Xl1By8vh3k> (LCP Control Console)

<https://www.youtube.com/watch?v=p0Z9TBa9Pzl> (Simulated Bloodhound Engagement)

<https://www.youtube.com/watch?v=uOBEa5QyZ4I> (Introduction to Counter Measures)

Restoration Blog

<https://bmpg.wordpress.com/>

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