



New Forest Aviation Group.

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2014 TALKS

11th July 'Hampshire & Isle of Wight Air Ambulance' by Ian Jeffrey

August – No meeting

12th September 'Early Testing of the F-35B – Lightning II' by Graham Tomlinson, former BAe Test Pilot

10th October 'The Ordnance Survey Flying Unit' by Paul Marshall

14th November 'Palmar – Bournemouth Airline' by Mike Phipp

December – No meeting

2015 TALKS

9th January 'Britain's Last Airliner – the BAe 146' by Steve Robson

13th February 'London's Second Airport – Blackbushe' by Dave Ruffle

John Ward, a former air defence fighter pilot, gave us our June talk on his experience with the Lightning fighter. He had completed pilot training in 1964 (with the Vampire) and was selected as the first flying training graduate to be assigned to the Lightning. Previously only experienced pilots had been moved onto the Lightning.

John gave us an appraisal of the aircraft which had been regarded as a gap filler until missiles and rockets took over the roles of air power. Consequently the minimum of money was spent improving the Lightning yet in capable hands the aircraft was able to win the NATO air defence competitions in the early '70s. The Lightning prototype P1 only survived the infamous Sandys review of 1957 because its development was too far advanced. Petter's radical design concept of 60deg sweep and a low position tailplane had been challenged by the RAE, so much effort had been expended proving the concept in Shorts SB5. This remarkable aircraft could be configured with various sweepbacks up to 60deg (but not in flight!) and a tailplane that could be trialled as a T tail or low down on the rear fuselage. The design was vindicated and the P1 came to fruition, with a first flight of 04Aug54 and first supersonic flight a week later. The P1B had provision for an external ventral fuel tank under the fuselage to counter the main problem of limited endurance. This was developed into the F1 which had an Aden gun either side of the pilot and a weapons pack that could house either two Firestreak air-to-air missiles, another two Aden guns or an unguided rocket pack. Developments through an F1A and F2 resulted in the F3 with more powerful but thirsty Avon 300 series engines, but no guns, and a squared off fin. The missile had also advanced from the tail chase Firestreak to the Red Top, with a head on capability.

The F6 was the ultimate version, with a larger ventral tank which could house a pair of Adens and overwing jettisonable ferry tanks. The radar was the Ferranti AI23 which was housed in a bullet-shaped pod in the single air intake. The shape of this was designed to create the necessary aerodynamics for feeding air to the Avons in subsonic and supersonic flight. Flying and fighting the aircraft produced a high work load. The radar was operated by a control stick with 17 different functions, and the radar screen was not a simple plan and position indicator – all it gave was an indication of the target as a 'paint' in azimuth and elevation which then had to be interpreted as to the heading and speed by continuous fast thinking mental arithmetic to ensure a successful attack profile. The target then had to be acquired by the missile before firing. Later aircraft such as the Phantom had a weapons operator along with a far less manpower-intensive radar.

John's first tour was on 56 Squadron at Wattisham, following which he attended the Interceptor Weapons Instructor course in 1967 and then served a second tour on 56 Squadron, this time in Cyprus, as squadron weapons instructor. It was during a subsequent evaluation visit to 56 in 1974 that he experienced a jammed tailplane which justified an ejection, but by diligent use of differential engine power he was able to achieve some very limited pitch control and managed a safe albeit high speed landing – a better alternative to a soaking in the Mediterranean. A third Lightning tour with 5 Squadron at Binbrook followed, during which he was responsible for devising the tactics and training the squadron pilots that swept the board in two successive NATO Air Defence Competitions - which were designed to favour the Starfighter and Phantom. A key part in this success was developing close co-operation with the GCI weapons controllers.

His last Lightning tour in 1972 was to head the Interceptor Weapons school at Coltishall, during which time work with the radar boffins produced a major weapon improvement whereby the pilot now had manual control of the missile seeker heads.

He is still actively involved with the Lightning - through the Lightning Preservation Group at Bruntingthorpe in Leicestershire, where he 'drives' a Mk6 in high speed taxi runs, much to the delight of many assembled aviation enthusiasts.