



Dan Air Ambassador, slush trials 1963 (neg B878)

BAC 1-11 XX105 in 1979 (neg B5050A)

Munich Air Crash Anniversary and Slush Trials

In October 2017, a TV company, commissioned to make a programme about the Munich air accident in 1958 which killed 7 members of the Manchester United football team, and others, approached FAST and BAHG for photographic material. We found, in the Bedford archive, a suitable film of the trials and some still images, which have been supplied. The programme is to be broadcast, we believe, on the History Channel, presumably in February. The background and the Bedford trials were summarised in BAHG Newsletter Issue 22.

Area Navigation (by Reg Harlow)

Area Navigation (RNAV) has been defined (<http://www.allstar.fiu.edu/aero/RNAV.htm>) as “a method of navigation that permits aircraft operation on any desired course within the coverage of station-referenced navigation signals or within the limits of a self-contained system capability, or a combination of these”. RNAV thus provides airlines with the ability to fly the shortest route to a destination, reducing fuel usage and improving airspace utilisation.

40 years ago saw the installation of an experimental Area Navigation (RNAV) system in the BAC 1-11 XX105 aircraft operated by the Civil Avionics section of Operational Systems Division. The first flight of the system took place on 17th June 1977, piloted by Sqn Ldr Dan Gurney and Flt Lt Tim Miller. Comprehensive tests were carried out in UK airspace, followed by a three day overseas trial in Europe during September, routing from Bedford to Amsterdam, Oslo, Copenhagen, Frankfurt, Rome, Zurich and back to Bedford. This was the first of a great many European detachments carried out in the BAC 1-11 for research and demonstration purposes. The RNAV software was developed by the Civil Avionics team to provide highly accurate position fixing using Distance Measuring Equipment (DME) combined with Inertial Platform data and later with satellite navigation receivers using the Global Positioning System (GPS). The positional accuracy was determined using tracking radars at RAE Aberporth, with the results being used by the International Civil Aviation Organisation (ICAO) to define the Minimum Navigation Performance required for aircraft operation in controlled airspace. The RNAV system, further developed at Bedford into a full Flight Management System (FMS), was at the heart of the highly successful Air Traffic Management research programmes conducted by the Civil Avionics team until the final flight of XX105 in 2003. The picture, left (neg B4498B) shows the RNAV control and display unit in the 1-11.



Appeal for Organisation Charts

BAHG already has a modest collection of Departmental and Divisional organisation charts, issued periodically to show where people fitted in. They can be very helpful in answering queries and we would like to add more. If anyone has any from the past – particularly early ones for NAD, BLEU or Aero Flight – please contact us. We can add them to our collection, or scan and return them.

Group Pictures

Our large collection of negatives includes many group pictures. We were sent one recently of an FS1 Group from 1987 (see below) and asked if we could add to the names of the people. This we have done to the best of our ability, but it is still not complete. Can anyone help? If you want to know names of people in group pictures, get in touch. Or, if you have a group picture already with names, please contact us to help our records.

Bedford Aeronautical Heritage Group

Don't forget, to contact us with any news or comments, please email (bahg-bt@hotmail.co.uk).



B7710A FS1 Group 1987

Back row: Mark Cadman (Student), Jeremy Howitt, Martin Kellett, Tim Broad, Dave Bull, ?, Vince Wainwright, Steve Horn, Andy Briggs, Chris Wills, Barry Moulang, Colin Handley, Stewart Houston
Middle Row: P. Rawlings?, Scott Bradley, Peter Wells, George Melville, John Dunkley, Bob Poulter, Colin Welbourn, Fred Robinson, Lt Simon Baldwin, Trevor Hartwell
Front Row: John Page, (Student), Lady (Student)?, Lt Bob Horton (RW TP), Gerry Shanks, Gareth Padfield, Graham Foster, Clem Barnes, John Riley, John Cannell, Sqn Ldr Andy Bodiam, Margaret Burchett, Ruth Bolton

FASTA AGM The Farnborough Air Sciences Trust Association (FASTA) held its AGM on 21 November 2017. Gerry Shanks and Barry Tomlinson attended as usual on behalf of BAHG, and gave a short briefing about BAHG activities. This was well received. Indeed, some people (biased?) even said it was the highlight of the evening. We learned from FAST that there will be a celebration in 2018 to commemorate the 100th anniversary of the creation of the Royal Aircraft Establishment in April 1918. When the Royal Air Force was formed, the existing Royal Aircraft Factory had to change its name, for obvious reasons. We hope to contribute to the celebration.

Stocking Fillers At this time of year, you may be looking for a stocking filler or two. Don't forget the two books we publish, available at £15 each plus postage. They can be collected by arrangement. *Wings Over Thurleigh* covers the research work undertaken on the airfield. *Wind Beneath the Wings* deals mainly with the wind tunnels, their characteristics and research programmes, but also includes some additional material relating to the airfield.



Talks In 2017, some 11 talks were given to local organisations, of a very varied nature, including Bedfordshire Local History Association annual conference, Shefford & District Amateur Radio Society, Friends of Bedford Cemetery, Thrapston Vintage Tractor Group and Rushden 41 Club. Several requests for 2018 have been received.

Our next talk will be on Wednesday 10th January 2018 at 7.30pm at the Bedford Architectural Archaeological & Local History Society (BAALHS). Barry Tomlinson from BAHG will give a talk on "Flight Research at the Royal Aircraft Establishment (Bedford)", with some historic videos. BAALHS welcomes visitors (£3 donation requested). Meetings are held at Putnoe Heights Church & Community Centre, Putnoe Heights, Bedford MK41 8EB.

Contributions We are always happy to receive brief contributions for inclusion in the newsletter. Please send us your recollections, or indeed your questions.