

Rochester Avionic Archives Newsletter

From the Curator,

I never thought I would see the day when the flow of artefacts into the RAA would almost cease. We are actually up to date with our collection now (but as I wrote this we had a message about some model gyro parts that had been found). The emphasis has moved to be on the huge stack of Company Brochures, to get these scanned and on the website. With these in place we can extract text to fill in the notes about some of the collection items.

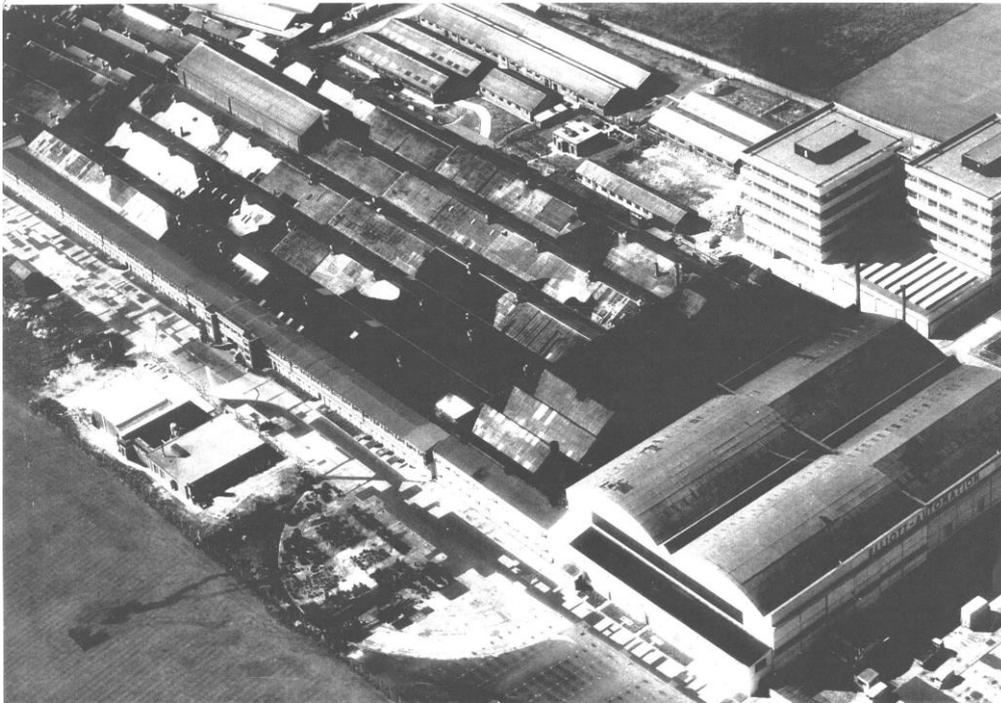
We get a number of enquiries each week some are asking to buy items but the majority are from researchers. Our Concorde box has been shipped and will soon be in place on Concorde 02 F-WTSA.

We have a new logo designed by Martin Redfern, made of the RAA letters in the shape of an aircraft, shown above, and this will soon be seen on some smart new fleeces we have acquired ; just in time as the weather is getting colder!

The big news is that the RAA is now part of the BAE Systems Heritage organisation so we have access to a whole new world of support. The Collection and Archive at Rochester are now safe for the foreseeable future.

Some of you may be aware of plans to develop part of Rochester Airport and we in the RAA have been involved with our archive of plans; the developers, not surprisingly, have a keen interest in where the WWII bombs fell and if the pipe mines have been cleared!

Chris Bartlett



The site in about 1963. The Fuel Flow Lab had been opened that year and the area around it still looks like a building site. Construction of Tower 3 had not started; it was finished by 1966. Note the camouflage on the old factory. The Main Hangers are marked 'Elliott Automation' and many will recognise the Huts behind the Towers.



Two Badges recently acquired for £0.90 on eBay!

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Recent acquisitions

The Gyros

Amongst BAE Systems' many innovations are high-accuracy spinning wheel gyros, vibrating structure solid state gyros and silicon MEMS (Micro Electro-Mechanical Systems) solid state gyros. These are utilised in a multitude of different applications, including high performance navigation systems and Electronic Stability Control (ESC) systems in cars. The invention derives from work back in 1994 with Professor Colin Fox at the University of Nottingham. These Gyros were found hiding in the Company Despatch Office. They were made at BAE Systems at Plymouth (which received a Queen's Award for the work.



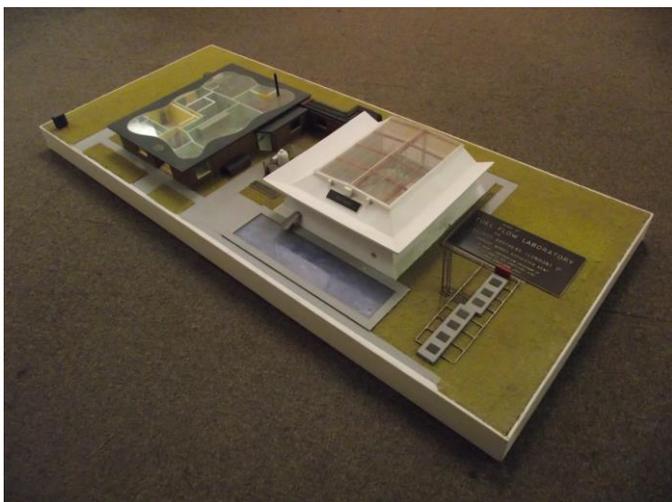
Phoenix Gate Guardian

If you had missed the Phoenix near the Main Entrance it has been refurbished by the Medway Aircraft Preservation Society and should be back in place soon.

The Train HUD

Many years ago Paul Wisely had the idea that there might be a market for a Head Up Display in the cab of a train. In 2007 Under a nine-month study funded by Britain's Rail Safety & Standards Board, 13 drivers from Virgin Trains, GNER and freight operator EWS undertook exercises on a simulator at the Sowerby Research Centre at Bristol. The Driver's workloads were measured using human factors techniques developed for air traffic control design. Workload reductions of up to 10% were seen with 10 of the 13 drivers, and almost all were enthusiastic, though there was no noticeable improvement in performance.

Various HUD's were supplied including the Civil Transport HUD but this version shown here is a strange marriage of an ultra-modern digital projector with an Optical Module from the Buccaneer PDU of the 1960's.



The Fuel Flow Lab model

On November 20, 1963, Mr Neil Marten, M.P., Parliamentary Secretary to the Ministry of Aviation, officially declared open the new high-temperature fuel flow laboratory of Elliott-Automation Ltd. at Rochester in Kent. This new facility was built entirely as a private venture and was used primarily for the testing of aircraft fuel flow meters and fuel system components under the range of environmental conditions likely to be encountered in supersonic flight.

The actual test room was designed such that the walls would direct any explosion out towards the airfield, hence the lack of a solid roof. The Test Building and the Laboratory are now both empty and although the Test Building has been landscaped in it is in a sorry state.

[Our Heritage - BAE Systems](#)

On the 16 October 2012 BAE Systems celebrated 100 years of the 'Black Shed' at Farnborough

Farnborough Airfield received some very special visitors today to celebrate 100 years of the Black Shed – a listed aircraft hangar where some of the UK's first aircraft were assembled. In celebration, an Avro Nineteen Anson aircraft which is owned by the Company, was flown to Farnborough by John Hurrell, a former test pilot with the Company. A Moth and a Hunter aircraft also flew in to give visitors a chance to see some truly iconic aircraft up close.

Today the Black Sheds house BAE Systems' heritage archive - one of the largest of its kind in the UK. The archive contains more than 16 million items from original designs of aircraft, glass plates, film and negatives as well as some personal items of aviators such as Geoffrey de Havilland's telegrams from Harold MacMillan and his flying goggles.

The archive is regarded as the ultimate source of information for aviation enthusiasts, film-makers, researchers and authors and the buildings have been recently renovated to provide optimal storage conditions for the precious artefacts that they house.

BAE Systems' heritage can be traced back to 1560 when the Royal Powder Factory was established at Waltham Abbey in Essex. The Company is a direct descendant of some of the most famous company names in aviation including Hawker, Avro, De Havilland, Supermarine, Vickers and English Electric. These companies produced some of the most influential planes of the 20th century, such as the Hurricane, Concorde, Lancaster, Moth and Mosquito, in an unbroken line of innovation from the dawn of flight to the present day.

Speaking to guests at the event today, Heritage Manager Howard Mason said: "The heritage of BAE Systems is truly unique, with few other companies being able to lay claim to such diverse roots. It is our job to protect and promote the technical achievements of BAE Systems predecessor companies to future generations, as their pioneering spirit has put the company where it is today."

Today's event also remembered Samuel Cody's first flight at in the Cody Flyer at Farnborough on 16 October 1908. Cody's flight was the first in the UK and made a height of 16-20 feet above the ground.

www.baesystems.com

From the Newspapers and Brochures

Some of the more unusual Newspapers we hold are:

- *'Aviation Service and Repair Division Divisional News Letter'* Nos.1,2,3,5 These were issued quarterly from September 1961. AS&R was formed in January 1960 and was affectionately known in later years as *'Aviation Service and Despair'*
- *'MASD Newsletter'* April 1987 with gaps to August 1992 Alan Gallagher was Divisional Manager and the 1992 edition has Sue Wood as DM. An edition of April 1993 has MASG (Maritime Aircraft Systems Group) now when the Division was part of the Displays Division under Peter Kenyon. By 1993 it was Mission Systems Group
- *'Earshot'* a monthly Journal of Marconi Elliott Avionics Borehamwood Feb 1973 edition.
- *'ADD Computer Services Newsletter'* Sept 1991 which records the demise of ADD01VVAX system.
- *'ATE (Automatic Test Equipment)Divisional Newsletter'* August 1989 under the wing of Arthur Colwell as DM records the introduction of CALS Computer Aided Acquisition and Logistic
- *'M.A.D Times'* Mission Avionics Division under Mike Sweeney September 1996 Issue 1, Jan 1997 Issue 2
- The Short Story No.1/2/3. 1946 Magazine of Short Bothers

Brain Teaser

Opposing fighter planes (A and B) were speeding towards each other, each travelling at 800mph in windless conditions. When they were exactly 500 miles apart, plane A launched a target-seeking missile at plane B at 2000mph. When the missile reached the target area the sophisticated electronics on plane B turned the missile round and directed it back at plane A. Plane A had the same technology and returned the missile towards plane B.

The projectile's flight continued backwards and forwards in this way until the two planes collided head-on at the same time as the missile exploded, causing a rain of fine metal fragments.

Ignoring the turning time, how many miles did the missile travel before that disastrous conclusion?

(I hope someone can work this out because I have not yet done so Ed)

Y'all

A Texan term referring to a group or individual when the speaker can't remember your name or is in a hurry to finish a sentence. Also crops up in the local village name of Y'allding

Strangers in the Camp?

What is the cause of the 'phantom' sightings which have been reported of late?

Unseemly conduct seems to have permeated the corridors and gangways of CMS in the form of a 'ghost', bemused and bewildered, but not headless, minus the nether garments, revealing hairy legs and knobby knees.

The apparition appeared about 9 July at a time when presentations had been made to mark the transition of one male from the single to the married state.

The ribaldry caused the quarry to flee, seeking refuge among the machinery, but finding no hiding place, it was last seen disappearing into the maze of the Stores, where no doubt it could don outer garments and merge with the exodus of people onto the car park.

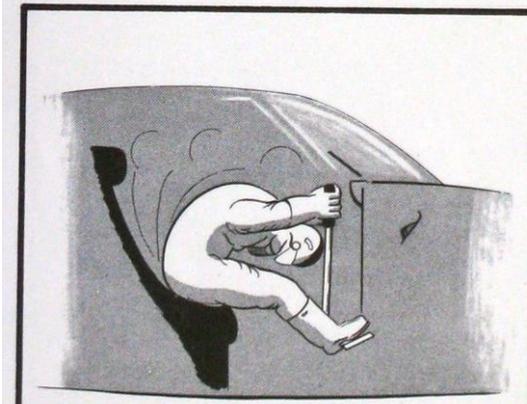
Does anyone know what this was about?
Marconi Avionics News No. 9 August 1978

CORSAIR TROPHY



THE Vought Aeronautics Corporation's resident team in ADD have donated a magnificent silver cup, to be known as the Corsair Trophy, in recognition of the division's achievements in designing, developing and manufacturing the A-7 head-up display. The trophy will be presented annually to the divisional department which, in ADD management's opinion, has contributed most to divisional objectives. The trophy was formally presented to Arthur Colwell, divisional manager (above), in the production area on March 16 by Richard Kimball, VAC team leader.

EFA News April 1971. *I wonder where the Cup is now?Ed*



Anyway, where is this Head Down Display?

EFA News February 1971

ELLIOTT AUTOMATION

PROVIDES AUTOPILOTS FOR SUPERSONIC AIRCRAFT

Much of Elliott's pre-eminence in supplying completely integrated flight control systems for supersonic aircraft, stems from the fact that only Elliott are in production with proved and tested airborne digital computer. As speeds increase to figures almost undreamed of a few years ago, it becomes apparent that human reaction time no longer reach the necessary values of control correction—and "automation in the sky" assumes even greater importance. The renowned grouped resources of Elliott-Automation ensure continued leadership in all aspects of flight control in the years ahead.

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Farnborough 1962