



Rochester Avionic Archives Newsletter

From the Curator

This year we are celebrating 100 years from the formation of the Royal Air Force, and way back then, Elliotts were providing flight instruments and have continued to do so to the present day.

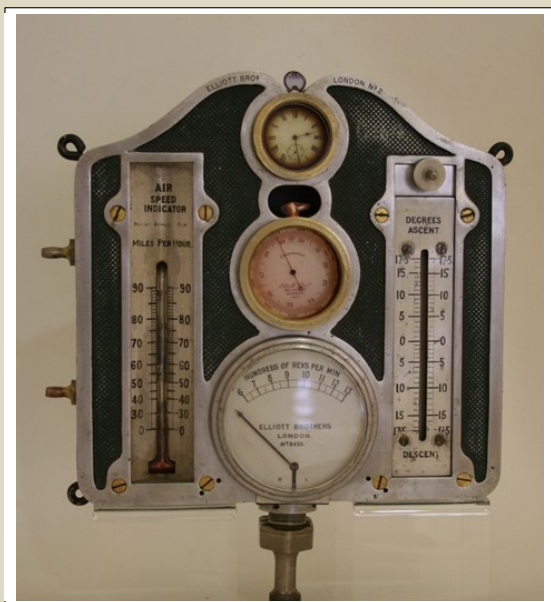
Recently I visited the Farnborough Air Sciences Trust and I would strongly recommend a visit. The RAA has been asked to help with recording the story of the RAE Hunter trials, but there were many more useful connections established. I was lucky to be able to renew my acquaintance with Hunter Mk T7 WV383 'Hecate' although we had both worn a bit over the years!

Meanwhile our acquisitions continue and we have acquired some Control Sticks and Throttles for the RAA Collection, which has been a weak area for a long time, and we also were given some equipment from a project called HACLCS. Finally we had a London Film Producer asking us if we could find an F-4 Phantom for a film!

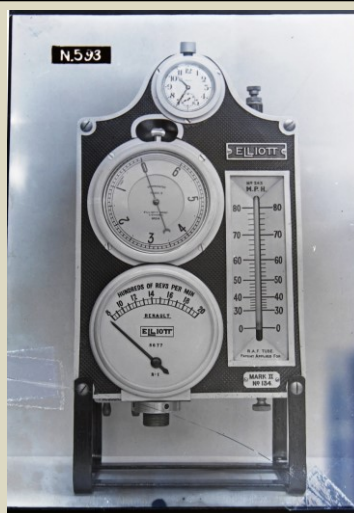
Chris Bartlett
Curator



In 1909 H.E. Wimperis, a scientist, then working for the RNAS at Imperial College, sought a manufacturer for an accelerometer he had invented. He was directed to Elliotts at Lewisham. Many of these accelerometers were made by Elliott for engineering and aviation use, particularly for trials and evaluation purposes. This date was a milestone for the company leading to the claim that it has been in the business of making aircraft instruments for well over 100 years. As early as 1910, a panel of Elliott instruments was being offered as an 'optional extra' by Short Brothers, and Elliott's advertised in early issues of the new magazine 'Flight'. In 1912 they were publicising their "Instrument Board", a standard aircraft instrument panel containing altimeter, airspeed indicator, ascent/descent indicator and space for a clock.



Elliott Flight Boards of WWI vintage.



An early Elliott Air Speed Indicator



The centrepiece of RAF100 will take place on 10 July, with a centenary service in Westminster Abbey, followed by a parade in The Mall and a spectacular flypast over Buckingham Palace.

Sadly I have to announce the death of Paul Judson recently. Paul was a member of our RAA Team for many years bringing his expertise from the Facilities side of the Company. He was one of the nicest people and will be very much missed.

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Over 60 Elliott Instruments were supplied to the "Titanic," and the same number to the "Olympic."

In June 1912 Fifteen Guineas were sent to the Lord Mayor's Fund for the "Titanic" sufferers, this being the outcome of a suggestion from an employee.

The photograph on the left is a unique view of the RMS 'Olympic' and RMS 'Titanic' together.



This is an extract from a brochure of Gledhill-Brook who made the old time recording clocks used on the Rochester site. We have now been able to establish that our rather poor example was made in January 1930 so was used by Short Brothers employees. The racks are for the 'Clock Cards' which an employee took from the rack, placed in the Clock machine and stamped the time of arrival and departure. The stamped cards would have gone to the Payroll Department each week. The clock shown above hardly changed over the years and an almost identical one can be found in 'The Aeroplane Speaks', a book in the RAA archive which dates from 1917!

THE LONDON GAZETTE.

December 23, 1859 To Frederick Henry Elliott and Charles Alfred Elliott, of the Strand, in the city of Westminster, Mathematical Instrument Makers, for the invention of "an improved method of preventing drawing boards and other flat wooden surfaces from warping or twisting, and of adding to the strength thereof."

November 9, 1860. To Frederick Henry Elliott and Charles Alfred Elliott, of the Strand, in the county of Middlesex, Opticians, for the invention of "an instrument for indicating the approach of vessels to shoals, rocks, and land."

The London Gazette is one of the official journals of the British Government in which public announcements are made. It has been published since 1665



This old executive Intercomm was recently found in its leather case and it is far too nice to throw away!

ON TARGET WITH MARCONI-ELLIOTT

Congratulations to the Jaguar Force for eclipsing "the rest" and taking the first four places in the RAF (Germany) Salmond Trophy for Bombing and Navigation and to No. 14 Squadron for winning the trophy for the third year running.

"Once again Jaguar has proved, in a demanding competition, its technical reliability and the superb accuracy of its navigation and weapon aiming system."

Air Chief Marshal Sir Michael Beetham
C-in-C RAF Germany



1975 1st 14 Squadron Jaguar

1976 1st 14 Squadron Jaguar
2nd 17 Squadron Jaguar

1977 1st 14 SQUADRON JAGUAR
2nd 17 SQUADRON JAGUAR
3rd 2 SQUADRON JAGUAR
4th 31 SQUADRON JAGUAR

The Digital Inertial Navigation Attack System designed and manufactured by Marconi-Elliott Avionics Systems Limited for all 'S' and 'W' type Jaguars is an integral part of the success of the Jaguar's long range strike capability. Marconi-Elliott's extensive experience in navigation attack systems is now combined with their advanced systems, developed for new air superiority aircraft, in the new CINCH (Compact Inertial Navigator Combined with HUD) offered for retrofit and update of a wide range of existing combat aircraft.

For more information, please contact Geoff Rands, Inertial Navigation Division.

**MARCONI
ELLIOTT
AVIONICS**

Marconi-Elliott Avionic
Systems Ltd.,
Airport Works, Rochester,
Kent, England, NE1 2XX

A GEC-Marconi Electronics Company

INERTIAL NAVIGATION DIVISION



1975

The Altimeter

One instrument that did not come into extensive use during the first five years of the flying machine was the altimeter. It so happened that the early machines were rarely flown much above a few hundred feet. If a height record was attempted then the pilot took up an aneroid barometer and climbed from 'Set Fair' to 'Stormy', the needle moving anti clockwise as air pressure decreased with increasing height. The first British altimeters designed for aviation use continued to show increasing height by the anti-clockwise rotation of the needle. Those that followed also had the same movement, and this type of indication was still in use as late as 1930. The 'Pocket Altimeter' from 1915 in the RAA Collection shows this reverse operation.



THE RAE Hunter

In 1971 RAE Farnborough's Avionics Department "acquired" Hunter Mk T7 WV383 for the evaluation of a series of electro-optical (EO) and integrated avionic systems research programmes in support of MoD Air Staff Requirement 519 to explore extending Jaguar GR1 ground-attack operations into the night time and during poor weather. The aircraft was retired in 1998 after 1368 sorties.

The team at the FAST Museum at Farnborough are producing a record of the work done by this aircraft and would like to hear of any memorable moments of particular equipment installations, flight clearances, aircraft servicing, flying experiences and flight trials planning/analysis would be gratefully received. Many of the items trialled on this aircraft were supplied by our Company



The team photograph above was taken on 30th September 1975 outside Southern Squadron. Known folk are given below (left to right):

??, ??, Graham White (Section Hd), Tony Karavis (Scientist, A/C Manager and FTO), Flt Lt Rod Brown, Flt Lt John Bishop, Sqn Ldr Harry McLean, Sqn Ldr Bryant Holland, Fred Baggs (Scientist and FTO), Richard Hammett (Scientist), Stan Grimes [trade?], ??, ??, ??

It would be really useful if anyone knows who the unnamed people were and their trade.

Please contact Phil Catlin at Farnborough Air Sciences Trust, Trenchard House, 85 Farnborough Road, Farnborough, Hampshire GU14 6TF

Tel: 01252 375050. email: manager@airsciences.org.uk



Checking out the RAE Hunter and proving that getting into the cockpit was still easy, but getting out onto a wobbly ladder was much more challenging!
(Curator)

The Paternoster Lift at Borehamwood



In 'The Prisoner' this location features in the episode "*Do Not Forsake Me Oh My Darling*" and represents the interior of the offices of Number Six's bosses. After Number Six (Nigel Stock) convinces his former colleagues that he might be who he says he is, he and Villiers (James Bree) take a ride in the Paternoster Lift and, upon disembarking, are allowed through a set of double doors by Potter (Frederic Abbot). After a meeting with his boss, Sir Charles Portland (John Wentworth), Number Six travels in the lift a second time before returning home. The exterior of the building is not seen in the series.

A paternoster lift is a passenger elevator which consists of a chain of open compartments (each usually designed for two persons) that move slowly in a loop up and down inside a building without stopping. Passengers can step on or off at any floor they like.

The name paternoster ("Our Father", the first two words of the Lord's Prayer in Latin), was originally applied to the device because the elevator is in the form of a loop and is thus similar to rosary beads used as an aid in reciting prayers.

See

<https://www.youtube.com/watch?v=KoCQ6tq5wJE>

The construction of new paternosters was stopped in the mid-1970s due to safety concerns, but public sentiment has kept many of the remaining examples open. By far most remaining Paternosters are in Europe, with 230 examples in Germany, and 68 in the Czech Republic. Only two have been identified outside Europe: one in Malaysia, another in Peru. The Paternoster Lift at Borehamwood figured in an episode of *The Prisoner*.



The Paternoster Lift at Borehamwood

The Borehamwood building, and lift, was demolished completely in 2012
<https://www.theunmutual.co.uk/gec.htm>