



Rochester Avionic Archives Newsletter

From the Curator

I moved house a few years ago to a place near Gravesend in North Kent and have discovered what a rich area this is for aviation heritage. Although it is not directly relevant to the work of the RAA I thought I would share some of this information in this Newsletter so that you can explore further.

Next time I shall start a series of brief notes on the people who made the Company great. We have had a display in the Company Restaurant on this subject for some weeks.

Chris Bartlett **Curator**

Aviation links in North Kent

Percy Pilcher

In 1896-97, seven years before the Wright Brothers' first manned flight in a powered aircraft at Kitty Hawk, North Carolina in 1903. British aviation pioneer Percy Sinclair Pilcher was experimenting with his Gull and Hawk gliders at Upper Austin Lodge near Eynsford.

Hiram Maxim

Hiram Maxim first sketched out plans for a helicopter in 1872, but when he built his first "flying machine" he chose to use wings. Construction started in 1889 of a 40-foot-long craft with a 110-foot wingspan that weighed 3.5 tons, powered by two 360-horsepower steam engines driving two 17-foot-diameter laminated pine propellers. The machine ran on an 1,800-foot length of rail track which Maxim laid down for the purpose at his home, Baldwyn's Park Mansion, Baldwyn's Park in Bexley. In trials in 1894, the machine lifted but Maxim subsequently abandoned work on it and put his experience to work on fairground rides. He subsequently noted that a feasible flying machine would need better power-to-weight engines, such as a petrol combustion engine. He constructed a giant hanger for his aircraft at Lower Austin Lodge at Eynsford where it was stored never to fly again. Originally the site was used as a range for testing automatic and quick firing guns by the Maxim Nordenfeld Guns and Ammunition Co. Ltd.

Sheppey

The Isle of Sheppey was one of the first places in England to become connected with aviation and Elliott Bros (now BAE Systems) have played a part in the story over the same period. In 1909 the Short brothers set up a flying ground at Leysdown on Sheppey and manufactured Wright machines. A more suitable flying site was purchased at Eastchurch and the Shorts Factory and the Aero Club moved there in late 1909.

Many 'Firsts' took place on Sheppey and many famous names are associated with Eastchurch. Some of the early Marconi equipment was tested here. The site became a centre for experimentation in radio communications until 1916 when it was moved to Cranwell.

Whittle and Jet Engine testing

The powerful compressor used in digging the Dartford Crossing tunnels was supplied by the Ministry of Aircraft Production (MAP) to Whittle's company Power Jets and some testing took place where the new bridge foundations are. The tunnel had been in the planning since the 1920s, and just as work was finally under way, the diggers had to down tools when war broke out.

Vickers aerodrome at Joyce Green

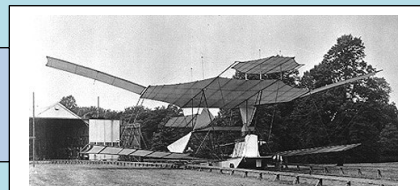
Joyce Green airfield, near Dartford was opened 100 years ago. It was used as a Royal Flying Corps airfield throughout WW1, and closed in 1919. Hiram Maxim's second aircraft was tested here in 1910.

Vickers built aircraft at nearby Crayford and erected and flew them from Joyce Green including the Vimy.



← Percy Pilcher's 'Bat' Glider

Sir Hiram Maxim's giant aeroplane →



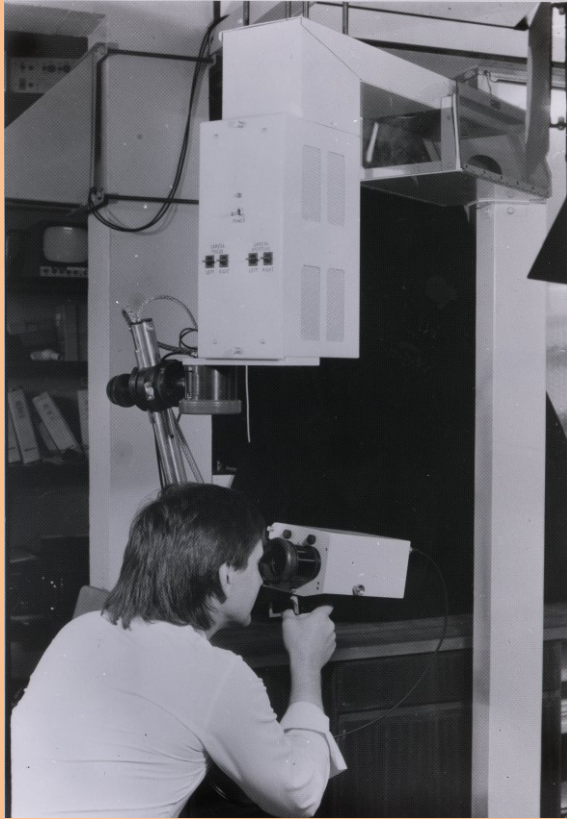
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Underwater Stereoscopic Viewing System



The main aim of the advanced underwater stereoscopic viewing system was to provide the operator of a remotely controlled underwater vehicle with a high quality stereoscopic view of the underwater work site. In addition, a high speed pan and tilt gimbal allows the underwater cameras to be slaved to the position of the hand steered display unit which is situated inside the control cabin on board ship. This arrangement provides the user with a strong impression of actually being at the worksite by allowing him to 'look around' and also greatly facilitates the performance of manipulative tasks by presenting him with a three dimensional view of the task.

This development was started by FARL in 1982 and followed the earlier development and trials of a monocular helmet display system controlling an RCV225 'Flying Eyeball' submersible. The programme was supported by the Department of Energy, as part of a long term programme to advance underwater viewing technology. The first contract was awarded in 1980 and Laboratory commissioning of the system was completed in November 1985.

After preliminary pressure tests on each separate item of the underwater system at the GEC Avionics' Offshore Projects facility at Nailsea, the system was taken to Slingsby Engineering Limited, North Yorkshire, for a fully operational pressure test during December 1985. Successful undersea trials of the Stereo Viewing System were carried out in March 1986 as part of the trials of the GEC Avionics/OSEL 'DRAGON FLY' sub-sea vehicle. The advantages of high quality stereo vision in carrying out remote manipulative tasks were convincingly demonstrated.



ELLIOTT
at Rochester...

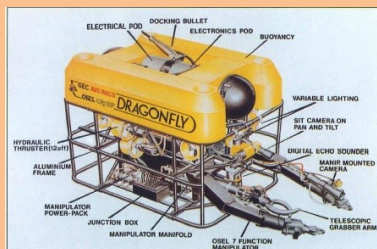
ELLIOTT are designing and producing digital systems for the aircraft of the 70's now — both civil and military — see examples on our stand no. 2205, at the Hanover Air Show...

Elliott Flight Automation Limited

Airport Works, Rochester, Kent. Telephone: 0634 44400, Telex: 96333

A member of G.E.C. MARCONI ELECTRONICS LTD.

The advertisement above is from 'Flight' in 1970



'Dragonfly' was developed jointly with OSEL, Gt. Yarmouth

There was a brief burst of sales to the Swedish Airforce with a single Head Up Display unit for the long forgotten Saab 32 Lansen and in 1965 a good number (125) for the better known Saab 37 Viggen.

The Saab 32 Lansen was a two-seat, transonic military aircraft designed and manufactured by Saab from 1955 to 1960 for the Swedish Air Force. Three principal variants of the Lansen were built for attack, fighter, and reconnaissance.



HUD sales to Sweden for the Lansen

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MINIMUM SPECIAL INSTRUMENTS • ERGONOMIC COMMONALITY
MINIMUM SPARES • MAINTAINABLE • RELIABLE • COST EFFECTIVE
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Restoring the South African Air Force Buccaneer

Some weeks ago we were asked by a Museum at Ysterplaat Airbase in South Africa if we could help them with the supply of various items to restore a Buccaneer S50 tail number 416

The Head Up Display optics was stolen whilst the aircraft was parked outside for years at Cape Town International airport.

The only item we could help with is a spare Buccaneer optical module (our Catalogue No is C0641) Ref. No. 8B/5021, Serial No. 0011. We are trying to send this out but the paperwork is quite daunting- End User Certificates, Export Licence and so on.

The Blackburn Buccaneer was a British attack aircraft serving with the Royal Navy and the Royal Air Force. It was widely regarded as one of the finest low-level strike aircraft of its day. The Buccaneer entered service in 1962. It left Fleet Air Arm service with the decommissioning of HMS Ark Royal in 1978, with the remaining examples being transferred to the RAF. The last Buccaneers were withdrawn in March 1994.



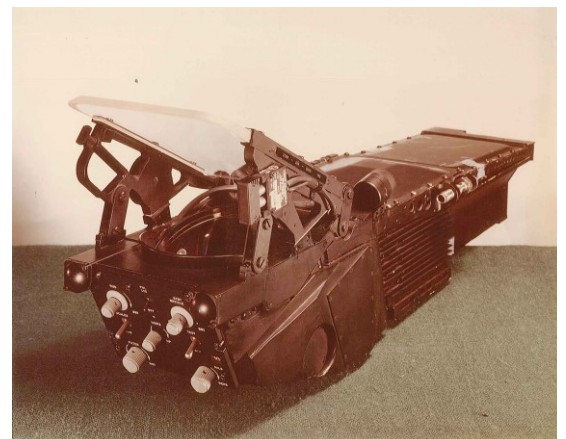
In October 1962, 16 aircraft were ordered by the South African Air Force (SAAF), as the Buccaneer S.50. SAAF Buccaneers saw active service in the 1970s and 1980s. Only five aircraft remained operational by the time the Buccaneer was retired from service in 1991.

The Head Up Display was a world first and was originally designed by Cintel, but in 1964 Elliotts took over the company and continued to manufacture and support the HUD.



www.rochesteravionicarchives.co.uk

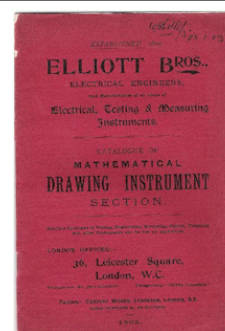
The SAAF Buccaneer minus the HUD Optics and to the left the replacement optics



Below-Machine Tools in the Elliott Factory at Lewisham probably in the early part of the 20th Century



Below- An early Catalogue of Elliott Drawing Instruments



And an Import!

After many years the A-7 PDU from the Fort Worth Office is heading back across the Atlantic. The A-7 project was one of the most important the Company and the UK have had. This will fill a gap in the Museum's Collection. More about it when it arrives!

A bit of Test Equipment



This Variable Load Resistor 100 ohm, 2.8 amp is typical of test and calibration equipment found in a company like Elliotts and could date anytime from the 1950's to the present day. However our research shows that Berco was incorporated into Claude Lyons Controls in 1976 so it must be later than this date.

In 2016 Claude Lyons Controls Ltd. ceased trading after nearly 100 years in the industry. They were founded in 1918 and were still in private ownership

Claude Lyons were well known, and respected, for their Variac Variable Transformers along with being the first company to produce variacs in this country.

Products under the name of Regavolt (Berco), Regulac and Varatran have made their mark over the years that the company was in business.

Error in Newsletter 23 'F-16 Head Up Display'

The website link should have read; http://www.f-16.net/f-16_armament_article2.html

Another Champion Fish

AEID fishermen have done it again. Roy Henson of the fuel flow rig caught a 17½lb, three feet long cod from Gillingham pier in December. It's the season for cod, and larger ones are not uncommon out at sea, but this was a record for Gillingham pier, well into the Medway river. The catch was duly verified and announced to the Sunday Express, who awarded Roy Henson the week's prize, a leather wallet. The catch was also reported in the Chatham and Gillingham News.

The presence of so large a cod so far up the Medway shows that the river is becoming cleaner.

Roy has been sea-fishing around the Kent coast for some years and goes out regularly.



EFA News 1968

Salesman's Lament

A while back, my job was quite simple.

All our business was in the UK.
So I wandered along to see MIN TECH,
Just to hear what they had to say.
Occasionally I flew up to Warton,
And sometimes I saw MoD.
Once in a while I was daring And
went down to see RAE.

But now we have gone international
Life is not simple for me.

I've a meeting in Munich at
breakfast,
And another in Rome before tea.
I then have to go to Seattle,
Taking Tokyo of course on the way.
Spend the morning talking to
Boeing
And then beetle down to L.A.

From there I go over to Dallas:
And then I find to my cost,
That because I changed flights
rather quickly,
All of my luggage is lost.
At last my business is over,
And I take a flight to Heathrow,
But the aircraft's directed to
Prestwick,
Because of an airport go-slow.

My expenses are all in a tiz woz.
They will cost me long hours of toil.
I need an accountant's assistance
To help satisfy Tony Knoyle.
When I'm finally back in my office
My boss calls me in to explain,
That I should have flown straight
onto Munich,
To start the whole circuit again.

From 1971 but I expect not much
has changed! (Ed)

Contract

A Contract signing at
the Ministry of
Defence in 1980 with
Jack Pateman for the
Company.

Does anyone know
what the Contract
was?

