



# ***e-DEFENCE ELECTRONICS NEWSLETTER***

The e-NEWSLETTER OF THE DEFENCE ELECTRONICS HISTORY SOCIETY  
No 87: October 2019 Part I



## **MARITIME MATTERS (continued)...**

Last month, **eDEN's** Editorial observed that relatively little attention is paid to developing events in Asia, and more particularly in the disputed areas of the South China Sea. Our header picture shows **HMS Prince of Wales** setting out on sea trials – but perhaps as relevant, we note that the race to design and build a new generation of Royal Navy frigates has been won by engineering firm Babcock, now named preferred bidder for the £1.25bn contract for five **Type 31** warships.



The Type 31 is a smaller, cheaper frigate than the Type 26 warships currently being built at the Upper Clyde shipyards. With a price ceiling of £250m per ship – the Type 31 is often referred to as the “**LIDL Frigate**”! - the aim is to maintain the size of the Navy's surface fleet. Work is to begin at Rosyth in Fife by the end of 2019, with the first ships delivered in 2023. For more, see **Tailpiece 1!**

As we always seek to do, **eDEN 87** yet again casts its net wide, with articles on Army, Navy, Air Force, and clandestine electronics. One main focus in both Part I and Part II is again the history of that under-recorded activity of **TRE Malvern**, its ‘**Post Design Services**’, which we featured last month in the context of keeping maritime electronics running – this month, we set the background to its work in Part I, and look at PDS activities in **Fighter Command** in Part II. Expect next month's **eDEN** to cover PDS's key role in **Electronic Warfare!**

A delight of editing **eDEN** is the ability to present to DEHS its members' individual projects, whether created by pen, computer or soldering iron. First in time this month – 1916 – and triggered by **Henry Brown's** recollections in **eDEN 86**, **Michael Ellis** provides thoughts and new evidence on the use of **Wireless at Jutland**, and then **Brian Austin and Vincent Harrison** write on international espionage in the story of **Felix's Transmitter: A Nazi Spy in South Africa**, with thanks to the South African IEE Journal **WATTNOW** where their article first appeared. We record with sadness the death of one of the last ‘**Jedburghs**’, **John Sharp MM**, in **Tailpiece 2**.

**Chris Cooper** then takes up computer [and emery paper] to relate his researches into ‘**the CV 52: an Unusual and Mysterious Valve**’. Chris promises there will be more to tell as his researches proceed, but meantime, anyone with relevant information, please write to him via **eDEN**. An external query regarding the USA's **Lt Vollum** – better known post-war as the leading light of **Tektronix!** - and his role on the **British Army's centimetric Coast Artillery Radar No 1 Mk IV, or ‘Charlie’**, triggered our interest, and to give a full context we print the relevant sections of **Brigadier Sayer's** excellent but little-read Official History ‘**Army Radar**’.

Next, your Editor was then advised by **John Gallehawk** of a release to the National Archives of a with-held file on the British cryptographic machine **Typex**, and contributes his findings from the original papers. Cryptography involves intercepts, and **Mike Dean** uncovers his own latest researches on the intercept receiver **R1334** and its manufacturers **CEL**. Then, on to intercept again, and to practical work – US colleague **Bill Liles** and **Professor Cathryn Mitchell of Bath University**, with support and practical guidance from **Neil Deacon**, are engaged on the restoration of a **Hallcrafters S27**; and the good work of the **Radar Room** team, **Mandy Malcolm** and **Chris Bearman**, rebuilding an **RAF Monitor 28** from ‘scrap hedgerow’ to ‘working’ status. More next month ....

Next month too, we feature the culmination of a very busy and fraught year with **Sqn Ldr Mike Dean MBE's** opening of the **Radar Display building** at **South Yorkshire Air Museum**, with major contributions from the **Communications and Electronics Museum Trust's Mike Diprose** and **Tony Waller**, **Malvern Radar and Technological History Society** co-ordinated by **Mike Burstow**, the **South Yorkshire Air Museum** chaired by **Alan Beattie** whose ‘works and bricks’ team under **Bill Fearn** worked miracles. The opening was triumphantly capped by **Jonathan Ayles's** superb lecture on the development of the Bloodhound missile, ‘**Bloodhound on my Tail**’.

My thanks, as ever, to **Mike Dean** for his invaluable help, and suggestions for improvements, offers of articles and all general comments to me at [philjudkins@btinternet.com](mailto:philjudkins@btinternet.com) or [info@dehs.org.uk](mailto:info@dehs.org.uk).

Warmest regards all  
Phil

Phil Judkins, DEHS Chairman.

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## NEXT MONTH: EXCLUSIVE!

## THE OPENING OF THE NEW RADAR DISPLAY AT SOUTH YORKSHIRE AIR MUSEUM, DONCASTER

Sunday 22 September was the culmination of months of work by Communications and Electronics Museum Trust (CEMT) Trustees Dr. Mike Diprose and Tony Waller, by the South Yorkshire Air Museum, chaired by Alan Beattie, and its stalwart Bill Fearn's works team, and by the Malvern Radar and Technology Society team co-ordinated by Mike Burstow, in creating a new radar display in its new dedicated building. Phase I of the display was opened by Sqn Ldr Mike Dean MBE, followed by a superb lecture on the Bloodhound missile by Newcomen Society President Dr. Jonathan Aylen.

**November's eDEN will carry a full illustrated account.**

# OPS BOARD

DEHS members are shown in RED – and we may note how many events involve DEHS members!

Currently open: Science Museum, London: Exhibition, 'Top Secret: from ciphers to cybersecurity', Tickets are free but can be booked at <https://www.sciencemuseum.org.uk/see-and-do/top-secret>  
The exhibition is curated by **Dr Elizabeth (Liz) Bruton**, Curator of Technology and Engineering, Science Museum, committee member, DEHS, and also IET History of Technology Network

Saturday 19 October 2 pm Cologne: IEEE ceremonial unveiling of the Hülsmeyer Milestone Plaque.  
Both **Prof Hugh Griffiths** and **Arthur Bauer** have been 'prime movers' in this event, which at long last places Hülsmeyer's radar researches, experiments and patents at the forefront of this technology. For more information, see [www.cdvandt.org/Huelsmeyer/](http://www.cdvandt.org/Huelsmeyer/)

Thursday 24 October, 7 for 7.30, **Prof Simon Watts ASV Radars for RAF Coastal Command 1940 – 1945** University of Reading – see Part II page 101 for full details

Wednesday 13<sup>th</sup> November **Radar Wars** Damien Lewis **Malvern Radar and Technology History Society**, details as 11 September.

Saturdays 16 & 23 November, 'Secret Communications' events **Duivendrecht, Amsterdam.** Arthur Bauer and Paul and Marc of the **CryptoMuseum** present their ever-changing and ever-popular displays of crypto and secret communications devices of all vintages, up to very recently indeed!

Wednesday 27 November Dana Centre, Queens Gate, London. **DEHS CONFERENCE: 'SECURITY & INTELLIGENCE'**; co-sponsors The Newcomen Society and the IET History of Technology Network.  
NOW FULLY BOOKED.

Saturdays 7 and 21 December 2019, and Sunday 12 January 2020; Kloosterstraat, Duivendrecht, Amsterdam. **SECRET COMMUNICATIONS** – see below.

Wednesday 15<sup>th</sup> January 2020 **ASV radar** **Professor Simon Watts** **Malvern Radar and Technology History Society**, details as 11 September.

