



e-DEFENCE ELECTRONICS NEWSLETTER

The e-NEWSLETTER OF THE DEFENCE ELECTRONICS HISTORY SOCIETY
No 64 Part I: November 2017



REMEMBRANCE

It is our practice at this time of year to mark the deaths of all those of our own profession, discipline and trade, of whatever nationality, who have perished in, in preparation for, or as a result of, conflict, wherever in the world that may have taken place; and in particular to mark those whose passing has attracted little or no public attention. It was therefore especially poignant to attend, in the House of Lords, a ceremony which at last brought proper recognition to one such less well-known sacrifice, that of **Alan Dower Blumlein**, father of DEHS member **Simon Blumlein**, in the award by the USA's Recording Academy of a prestigious **technical 'Grammy'**, some 75 years after Alan's death in the tragic crash of Halifax V9977 at Welsh Bicknor, Herefordshire, a crash which, because of Alan's work, at that time on H2S, had to be kept secret, so that he has up to now never been as honoured as was his due. To a room packed with eminent members of the former EMI, of Universal, of the recording and media industries as well as of the IEEE and IET and of course the Blumlein family, Simon spoke simply and most movingly of his father and his work, as befitted the occasion.

This month, our spanning of the 20th and 21st centuries opens with two celebrations – that of our own **Autumn Symposium, 2017**, whose full report will appear in December's **Transmission Lines** (*but here in eDEN are some photos of the displays so you can see what you missed!*), and that of the triumphant completion by our members, the **Bawdsey Radar Trust**, of their major work in the restoration and redisplay of the **Bawdsey Transmitter Block** - and a truly triumphant occasion it indeed was! **Go there as soon as you are able** – what has been achieved in a very confined space is

well worth the visit, and I cannot believe how well some of the decidedly rusted original switchgear cleaned up! By chance, a series of “comparison” photos were taken by David Robertson, who was holidaying in Kent, and took that opportunity of “this is what Bawdsey was like before restoration” pictures of **Pevensey CH**, as well as of the pre-radar **sound locators at Denge**, and also of **the Maunsell Forts**, finishing with a Cold War submarine at **Gosport**, which, David says, killed any desire he ever had to be a submariner! **John ‘Jacey’ Wise** responds to **Tony Devereux’s** letter on recent **US Navy collisions**, and we then travel back a century to the WW1 Western Front and the **German offensive of Spring 1918** as seen by **RFC pilot Captain Harvey**; read, and contemplate the context of introducing **radio-telephony into the RFC in 1918**. We then move on to remember another of our own members, the late **Colin Latham**, in an article from Colin’s archive about his own training as a radar mechanic at **RAF Yatesbury**. From there we move across the Channel, to learn of German **weather forecasting for the Channel Dash** by the late **Dr Walther Stöbe**, with many thanks indeed to DEHS member **Bill Liles** who located it. Then it is onward to the seventh of the outstanding series of articles charting the history of **Radio Warfare in the Royal Navy 1900 – 1945**, which **John ‘Jacey’ Wise** most kindly agreed to serialise here in *eDEN*, and to Jacey’s second contribution, on **OTH** and the ambitions of **China** in the area of the **South China seas** – a likely flashpoint of the future. Thence to **Thales’** latest announcements, and **Tailpiece** this month, which shows how you too could **build a sound locator** just like those David photographed!

Part II this month consists of two major articles on **Cold War RAF procurement**, one on **the Anglo-French negotiations on the post-TSR2 AFVG (Anglo-French Variable Geometry aircraft)** – any resemblance to current Brexit negotiations is doubtless coincidental! – and one **a significant study of aviation procurement in the 1964-70 Labour administration** by **Dr Richard Moore**, now curator of the Museum at AWE Aldermaston and a Visiting Research Fellow at King’s College London. **Tailpiece II** foreshadows our next month’s article on the career of **J S Hey**, known for radio astronomy, but in next month’s extract from his autobiography, tracking the V-2, and other wartime pursuits.

Part III continues our printing of the original research into interwar communications funded between **Leeds University**, our President **Keith Thrower**, ourselves as **DEHS** and the **Communications and Electronics Museum Trust**. This month, we print the second of Keith’s theme papers for this project, covering **radio progress in the 1930s**. **Tailpiece III** illustrates a comparison between the 1940 bomber aircraft equipment of both the RAF and the Luftwaffe, as displayed at the DEHS Autumn Symposium – the quite remarkable **RAF 1082/3 transmitter receiver** combination (as one member commented, “If you had labelled it as a WW1 set, I would have believed you!”) and the **Luftwaffe’s FuG 10**. The FuG 10 was designed as a single waveband set; unintentionally, the RAF 1082/3 was one – though designed with a pack of plug-in coils (how these were changed in flight by a heavily-gloved wireless operator is beyond your Editor), the designer apparently was unaware that as one’s aircraft climbs, the temperature falls, water vapour condenses on shiny metal coil-pack plugs and sockets and then freezes solid, so that it is impossible to change the coil-pack and the installation is effectively single-waveband. If it works at all, of course.

Thanks this month as always to S/Ldr Mike Dean MBE for invaluable help and OCR work, and again as always, suggestions for improvements, offers of articles and all general comments to me at philjudkins@btinternet.com or info@dehs.org.uk.

Dr. Phil Judkins, DEHS Chairman.

INDEX

Editorial:	1
Index	3
2017 Ops Board: November 13th RAF Maritime Surveillance Radars 1940 – 2010; November 25th <i>Nachtfée</i> Event at Duivendrecht	4
DEHS Autumn Symposium 2017	5
Bawdsey – the new displays	10
Defending the Garden of England <i>David Robertson</i>	13
Letter to the Editor: Recent US Navy Collisions <i>John ‘Jacey’ Wise</i>	19
‘A Voice and Nothing More’: <i>WFJ Harvey</i>	20
RAF Radio Mechanic Training <i>Colin Latham</i>	30
German Weather Forecasting for the Channel Dash <i>Dr Walther Stöbe</i>	37
Royal Naval Radio Warfare 1900 – 1945 Part VII: Designated D/F Systems <i>John Wise</i>	53
OTH, China and the South China Seas <i>John ‘Jacey’ Wise</i>	74
Thales: SMART-L radar; QE Carriers; Telson Missile	78
DEHS Publications	80
Tailpiece: Building your own Sound Locator!	81
Part II: Military procurement in Challenging Times	83
Crashed before Take-off: the Anglo-French AFVG <i>Andrew James and Phil Judkins</i>	84
Aircraft Procurement under Labour 1964-70: Some Myths <i>Richard Moore</i>	103
Tailpiece II: Coming next month – J. S. Hey	115
Part III: The Interwar Project.	116
Radio Progress in the 1930s <i>Keith Thrower</i>	117
Tailpiece III: British and German airborne radio, 1940	155

2017 OPS BOARD

We are always delighted to feature Affiliate Societies and DEHS members' lectures, exhibitions and events in Ops Board.

Details, in good time please, to philjudkins@btinternet.com or 07971449451

FEATURED EVENTS – MEMBERS' TALKS

Monday 13 November 2017 17:30 – 20:00 GMT

UK MARITIME SURVEILLANCE RADARS FOR THE RAF 1940–2010

Roberts Building, University College London, Torrington Place, WC1E 7JE, London.

DEHS member Professor Simon Watts will be giving a talk titled: “UK Maritime Surveillance Radars for the RAF 1940–2010” for the inaugural presentation for the IEEE AES Society, as part of that society's being re-established in the UK & Ireland.

As part of the 1st organised meeting of the IEEE AES Society, they are arranging a small drinks reception along with a meet and greet component so those attending can meet the newly established committee members.

The history of airborne radars developed in the UK for long range maritime surveillance by the RAF spans from 1940, when ASV Mk. I entered service on Sunderland and Hudson aircraft, through to the 1980s, when the Searchwater radar entered service on the Nimrod MR2. This history came to an end in 2010 when the Nimrod MRA4 programme was cancelled and the Nimrod MR2 taken out of service.

During WWII the first UK centimetric ASV radars were developed (ASV Mks III & VI and latterly ASV Mk. VII), fitted to aircraft such as the Sunderland, Halifax and Wellington, used by Coastal Command. In 1950, the Shackleton MR aircraft entered service, with the ASV Mk. 13 radar, upgraded to ASV 21 in 1959. The Nimrod MR1 replaced to Shackletons in 1970, fitted with the ASV 21D radar, and in 1980 the Nimrod MR2 with the Searchwater radar was introduced.

Link to register for event:

<https://www.eventbrite.co.uk/e/ieee-uki-aes-society-uk-maritime-surveillance-radars-for-the-raf-19402010-tickets-37848789749>

Saturday November 25th

NACHTFEE DAY SYMPOSIUM

Arthur Bauer's Museum, Duivendrecht, Amsterdam.

Arthur won the DEHS Restoration Award for his work on this almost unknown but highly sophisticated Luftwaffe air defence system, restored to working order without the benefit of any detailed information, drawings or schematics! Come and hear the details of this fascinating system and see it in operating order.

DEHS 2017 AUTUMN SYMPOSIUM

Transmission Lines is DEHS' document of record, and a full account of the Autumn Symposium will appear in the December issue, with photos of the presentations. In the meantime, to whet your appetites, some photos of the displays, with many thanks to DEHS' "Official Photographer", **Dick Green!**



Above, a general view of the Symposium, with many thanks to **Tony Jones** for booking this excellent hall;
below, **Tony Waller** with the superb 'new build' early airborne GEE



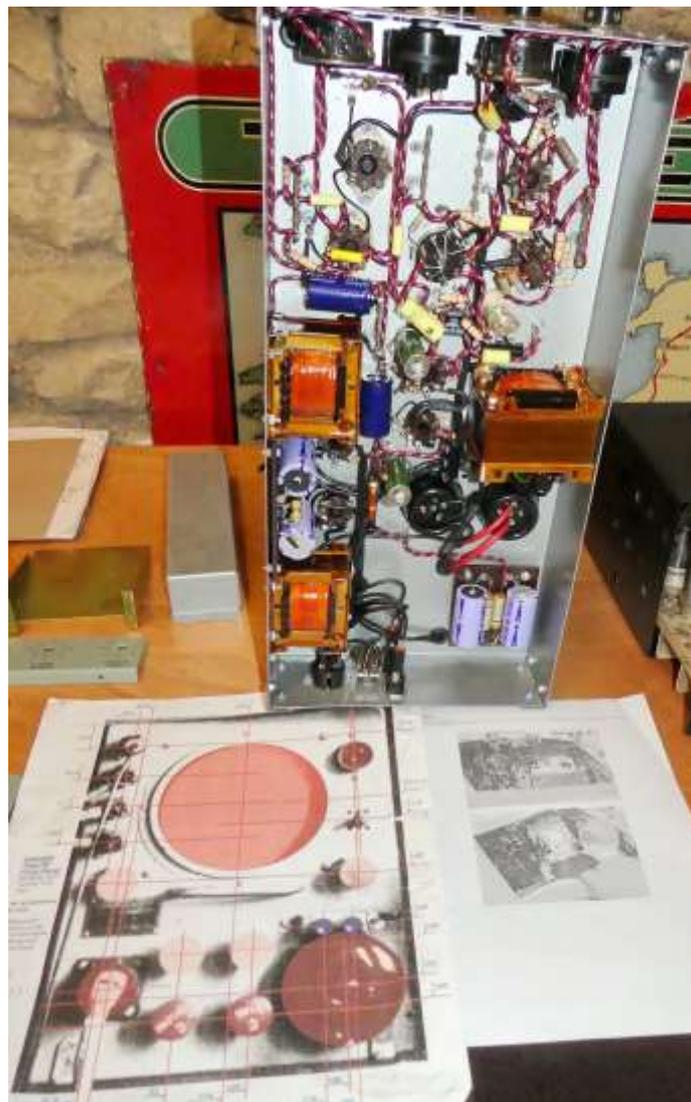


Above, **Arthur Bauer** with a comparison of German and British communication equipment; below, Mike Diprose displayed a Duddell oscillograph, with the comment "They don't make them like this anymore!"





Above, close-up of Tony Waller's early airborne GEE; **below**, detail of the underside wiring





Illustrating the span of DEHS interests, **above**, early computer ferrite ring memory; **below**, wet cells.





Above, thermos food container for those important but oft-forgotten Met Flights (don't miss the article on German 'Channel Dash' met later in eDEN!); **below**, a mystery item and a plea from **Mike Diprose**!

