



e-DEFENCE ELECTRONICS NEWSLETTER

The e-NEWSLETTER OF THE DEFENCE ELECTRONICS HISTORY SOCIETY
No 53: December 2016

HOME FOR CHRISTMAS!

To introduce our second special issue on H2S, we open with a picture of a unit last seen standing on your Editor's garden table – the rectifier and control panel from NNBVS/H2S Mk 9, kindly gifted by our members **Bawdsey Radar Trust** to our 2016 Restoration Award winner **Tatjana Joëlle van Vark** after Tatjana had made an appeal for them, and they had amazingly turned up at Bawdsey within a fortnight! Here they are, “home for Christmas”, in **Tatjana's superb reconstruction of NBS/H2S Mk 9** – and even more amazingly, the Rectifier Unit, which is sensitive to aging, tested good! Our thanks to **Arthur Bauer** and to **Peter van Kats** who facilitated transport from Bawdsey via Wakefield, Swindon and Amsterdam to Tatjana's home in Ede.

This joint working of members to help along a significant restoration forms one of the themes of this eDEN. Below, we give a report and pictures of **Arthur Bauer and the Cryptomuseum's Secret Communications** first two events at Duivendrecht, featuring in particular **Tatjana Joëlle van Vark's** demonstration of her own designed and manufactured cryptograph, an outstanding piece of work as, to name but one feature, each of the code-wheels has no fewer than 250 parts! **Mike Baker and Steve Mills** contribute more on the earliest history of the ‘drone’, on which yet more information comes from the latest book of **Dr Dave Sloggett**. This is followed by an account by **John Jacey Wise** of the events and generosity of DEHS members which has allowed the **HMS Collingwood Museum**, following an appeal here in eDEN, to put together a complete Huff-Duff (H/F D/F); we repeat also an earlier article by John showing the significance of the equipment. Both **Mike Dean and Arthur Bauer** were hugely instrumental in this endeavour, but I am sure they will not object to my giving especial mention to the generosity of the **late Karel Hagemanns**, who came to our Autumn Symposium even though in the very last weeks of his life, and there with Arthur made the decision that the FH4 installation should go to HMS Collingwood. We greatly grieve the tragic death of Karel, a DEHS member since the inception of CHiDE, a most generous friend to many amateurs and collectors throughout Europe and beyond, and in his professional life a highly-skilled and much-missed surgeon to whom many have cause to be grateful.

The bulk of this Part I is formed by our reprinting of **GEC's brochure of its WW2 record in radio and radar**, a document which is not as well-known as it deserves to be, and light-heartedly ask members how many or how few of the items illustrated therein you can identify, not least because there are many we can't! There is a serious purpose also in choosing this document – for it underlines the dispute between GEC and TRE during 1940 over who should take the lead in centimetric research here in the UK. This theme forms one of three strands of our Part II, devoted as promised to H2S, the second and third strands being the **American H2X and H2K Story** (and in particular both US 1.25

cm research, and US views of British developments), and **H2S/NBS for the Canberra**. Our book reviews complement this - **Prof Hugh Griffiths** deserves our thanks for reviewing **Don Sinnott's Radar Men: A P Rowe and John Strath**, which tells us more of the TRE/GEC rivalry, **Mike Dean** reviews **Dave Forster's Black Box Canberras**, and I review **Adrian Searle's Churchill's Last Wartime Secret**. Thales, and DEHS Publications – it's Christmas! What are you going to buy? – are followed by **Tailpiece**, in which, with thanks to **Fred Starr**, we follow the trail of some flotsam to discover the intriguing saga of Indonesia and **gutta percha**. Last but definitely not least, **congratulations** to DEHS member **Dr John Winterburn** on his "Christmas Present", his recent military history **PhD!**

Part II is our promised second H2S issue, with, as indicated above, the three themes of the **TRE/GEC rivalry on centimetric research; the USA developments of H2X and H2K; and the post-war attempt to cram H2S/NBS into a Canberra**. I provide a short introduction to give context to the first theme, and we print then the interviews of **Professor Philip Dee by the Official Historian**, together with correspondence between Dee, **Bernard Lovell**, and the Official Historian regarding TRE's and GEC's claims in centimetric research. We follow this by the closest the USA has to an Official History of US work on centimetrics, the thorough work by **Henry Guerlac**, for some reason almost never consulted in the UK and deserving to have a proper place on the historian's bookshelf. It is not light reading, and **DEHS members are advised to dip into two sections in particular – the first, relating to 1.25cm research; and the second, the US view of British developments including GEE and OBOE, and their own account of US operations using both these and US electronic devices**. Finally, we look at UK post-war developments as typified the attempts to fit **H2S Mk 9/NBS** into the English Electric Canberra, where **S/Ldr Mike Dean MBE** has done a superb job of distilling a stream of information from many sources, and on which especial thanks are due both to **Tony Wilson** and BAE Warton Archivist and DEHS member **Gordon Slater**, in addition to **Dave Forster** and **Ron Henry**.

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: H2S/NBS Rectifier and Control Panels "Home for Christmas".	1
Index	3
2016 Ops Board: Secret Communications Dec 3 rd and - last chance! – January 14th	4
Progress with GEE Mk I <i>Tony Waller and Richard Hankins of ERT</i>	8
First Drone? <i>Mike Baker, Steve Mills and Dr Dave Sloggett</i>	9
Huff Duff for Christmas! <i>John 'Jacey' Wise, with thanks to the late Karel Hagemans, Arthur Bauer and Mike Dean</i>	10
Outfit FH4 - A Short History <i>John 'Jacey' Wise</i>	13
Christmas Quiz: GEC's 'War Record' Brochure	20
Book Review: <i>Radar Men: A P Rowe and John Strath in War and Peace</i> by <i>Don Sinnott</i> reviewed by <i>Prof Hugh Griffiths</i>	67
Breaking News Book Review: <i>Black Box Canberras: British Test and Trials Canberras 1951 – 1994</i> by <i>Dave Forster</i> reviewed by <i>S/Ldr Mike Dean MBE</i>	68

Breaking News Book Review 2: <i>Churchill's Last Wartime Secret: the 1943 German raid airbrushed from history</i> by Adrian Searle reviewed by <i>Phil Judkins</i>	69
Thales announcements	72
Tailpiece: Gutta Percha <i>with thanks to Fred Starr</i>	76
Dr John Winterburn	77
Part II: Introduction: The Power and the Glory <i>Phil Judkins</i>	78
GEE, TRE and Centimetric Research: the Lovell letter	84
AI and H2S: Professor Dee's reminiscences	87
Interview with Bernard Lovell	96
The American Perspective -1: High Altitude Bombing over Land <i>Henry Guerlac</i>	101
Eagle AN/APQ-7; images from the manual	112
The American Perspective -2: K-Band 1 centimetre R&D <i>Henry Guerlac</i>	114
1,25cm H2K RT-63/APS <i>Tatjana Joëlle van Vark</i>	125
The American Perspective -3: BBRL and Operational Experience <i>Henry Guerlac</i>	130
Was H2S ever fitted in the Canberra? <i>S/Ldr Mike Dean MBE</i>	178
Tailpiece 2: BBC Home Service Programme on Radar <i>S/Ldr Mike Dean MBE</i>	201