



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

The e-NEWSLETTER OF THE DEFENCE ELECTRONICS HISTORY SOCIETY  
No 68 Part I: March 2018



## **PUZZLES**

A couple of weeks ago, **Keith Thrower**, our President, forwarded to me an image of the painting above; a relative of the painter was puzzling over what this field of wire might be. DEHS members will probably recognise it, and to find its full story, go to this month's **Tailpiece!** The point I'd like to make here is that few of us have the width of knowledge we'd like, and, while the Internet can be relied upon for a response on anything and everything, the accuracy of its response often leaves something to be desired.

Our articles this month follow this theme. **Greg Howard** has most helpfully delved into the history of a mystery **Tuner No 9** spotted during our recent Science Museum back-store visit, and Clive Kidd,

who has nobly helped many of us in our researches, asks for help in identifying a mystery **WW2 undulator and amplifier**. The mystery of how the Air Ministry makes decisions forms a sub-text to our remembering the **Bruneval Raid** some 76 years ago, in the memoir of 'Bill' Cox, MM, and is more overt in the less exciting career recalled by **Radio/ RDF Mech Gallimore!** We looked last month at German airborne communications kit; this month, three articles, by **Walter Farrar G3ESP, D Gifford Hull, and Pat Hawker G3VA**, consider the sibling **German Army equipment** in terms of design, construction and components.

There was great pleasure here to receive the news that **John 'Jacey' White has a publisher for his major work on Royal Navy equipment**, and so the instalment contained in this issue of *eDEN* will be something of a taster for his book; we will keep you all informed of its progress through the printing mill - and of course send you all order forms when it nears completion!!

**Yves Blanchard** contributes another excellent article on developments in France, this time on the **Pierre David 'electromagnetic barrier'**, and also from France **Thales** keeps us up to date on its activities.

This month's **Operations Board** has events not to miss – I call attention particularly to the **Association of Old Crows AGM on 22 March at the RAF Club, 6pm**; always excellent for the Awards Ceremony and the accompanying unclassified talk by an award-winner – this year, by Aerosystems Course Best-Paper Awardee 2018 **Sgt Kris C Moody**. Non-members are very welcome at AOC meetings and who knows, you may well want to join this worthy organisation (I did!). Do not forget also that you have a further chance to hear **Jonathan Ayles's** outstanding talk on **Blue Danube, the first British nuclear weapon**, on the 15th at BAWA, Bristol, and that of **Norman Bonner on Satellite Navigation** at Sheffield's Royal Victoria Holiday Inn on the 13<sup>th</sup>.

Don't forget our own events – Part II of *eDEN* reminds us that on **30 May, Professor Simon Watt's Burns Lecture** will take as its subject **Postwar Maritime Reconnaissance**, and remember, in addition to Simon, both **Keith** and **Peter Butcher** will also provide lectures; we look to your full support – the **booking form is attached, fill it in NOW before 2018 gets in the way!** Looking ahead to 2019, bear in mind also that **Dr Mike Diprose** is arranging a Conference devoted to very long-term conservation both of our artefacts and of our records of them.

In support of Simon's Burns Lecture theme, we publish this month papers by **Hans Jucker** on the Early **German and American ASV radar transmitters, specifically US ASB and German Hohentweil**, used as ASV radar in addition to surface search and other applications; and we look across the entire field of **Japanese radar**, a nation - let us bear in mind – who also used magnetrons in its radars during World War 2. **Tony Waller** provides a photo update of his great work on GEE Mk I.

**In Tailpiece II** we move into a climate more chilling than Britain's current cold snap today – the Aleutian Island of Kiska, where **Mike Dean** poses the question of whether remains there are those of a Japanese Type A Doppler radar.

Much of this month's information has also been provided and/or processed by **Mike Dean**, to whom as always my most grateful thanks.

As always, 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).

Dr. Phil Judkins, DEHS Chairman.

# INDEX

Editorial: Puzzles	1
Index	3
2018 Ops Board: <b>AOC AGM 22 March; Newcomen and Royal Aero Society meetings</b>	4
2019 Long-term Preservation Conference <i>Mike Diprose</i>	5
Mystery Radio at the Science Museum <i>Gregory N Howard</i>	6
Can you help please? WW2 undulator and amplifier <i>Clive Kidd</i>	16
WW1 Tuner Circuits	17
Bruneval Raid 1942 <i>Charles Cox MM RAF with thanks to Mike Dean</i>	21
Charles 'Bill' Cox: Obituary	27
Some Memories of a Radio / RDF Mech in WW2 <i>LAC Gallimore</i>	29
German Army Wireless Equipment <i>Walter Farrar B Sc</i>	35
The Mechanical Design of German Army Wireless Components <i>D Gifford Hull</i>	38
Variometers and German Military Equipment <i>Pat Hawker G3VA</i>	44
Royal Navy Electronic Warfare 1940 – 1990 <i>John 'Jacey' Wise</i>	47
Pierre David's 'Electromagnetic Barrier' <i>Yves Blanchard</i>	61
Thales: Bushmaster vehicle; Rockets for Spain and Germany: Sonar for France's future SSBN	85
DEHS Publications	88
DEHS 2017 Accounts	89
Tailpiece: 1941 Painting of the Army AA Radar Earth Mat <i>Paul Martin</i>	90
<b>Part II: ASV: DEHS BURNS LECTURE, 30 May 2018 Prof Simon Watts</b>	93
Early German and American ASV radar transmitter technology Hohentwiel and ASB <i>Hans H Jucker</i>	95
Survey of Japanese Radar <i>Roger I Wilkinson</i>	117
Early GEE airborne equipment: Indicator 60 progress <i>Tony Waller</i>	141
Tailpiece II: A Japanese Type A Doppler on Kiska, Aleutian Islands? <i>Mike Dean</i>	144