



e-DEFENCE ELECTRONICS NEWSLETTER

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GUIDING LIGHT

Your Editor had not realised that, among the astonishing variety of vessels in the D-Day invasion fleet, there were two Trinity House **lightships** - and one of these, **LV72 Juno**, survives today. The 257-tonne LV72 was launched in 1903 and is listed on the National Historic Ships UK register. In addition to being a D-Day survivor, she is of extra significance as the sole remaining lightvessel fitted with oil and electric systems to power its light. She was sold for scrap by the lighthouse authority Trinity House in 1973 to the Neath-based Steel Supply Company, who instead retained the vessel due to its D-Day connection.

The route of the D-Day seaborne invasion, '**Operation Neptune**', included a rendezvous area off the Isle of Wight - 'Piccadilly Circus' - from where the task groups would sail the channels cleared of minefields. These needed accurate marking, with the entrances to Juno Beach being lit by LV72 and another vessel. A project to assess the feasibility of salvaging LV72 and managing her restoration suggests she is a strong candidate for preservation, with the current owner agreeing to donate the ship for display should she be restored. The man behind the plan is former Royal Navy engineer, keen sailor and amateur historian **David Austin**, who has handled several charitable efforts. It is estimated it will take five years and £5m to complete the restoration should the relevant expertise and assistance, a secure display site and funds, be found. Mr Austin urges interested parties to contact him at daustin158@btinternet.com for more information.

In Part I, **eDEN #101**, as always, spans Army, Navy, Air Force and clandestine applications of military electronics of all vintages, and we begin with the answers to our December's **Where in the World?** A more difficult quiz this time, as you all commented; the winner was **Prof Hugh Griffiths**, with his UCL colleague **Prof Simon Watts** very close behind. Congratulations both!

Feedback then opens with **Mike Dean** having discovered a new **Daisy Mae**, this time a motor launch for a mobile AMES unit out East; plaudits for **Robert Soek's F-111** in *'Flypast'* magazine; and an excellent *'Aeroplane'* article on the **Douglas P-70 as night-fighter** with the US variant of **AI IV, SCR-540**. **Stop Press**; **Arthur Bauer** has just posted on his website a great lecture on the **German Pathfinder operations system *Nachtfel***!

We then have Part 2 of our **eDEN #100** article on **Generators for Airborne Power**, beginning with the early 80volt high-cycle generator **Type R**, its **Voltage Control Panel 3**, and the critical element **Regulator Type E**, all to provide the necessary AC power for early WW2 RAF radar. Via his own 'in process' 80volt generator project, we move to **Tony Waller's** popular series **To Restore or Not Restore: That is the Question**, this month being a short preamble to his next subject – transformers; the 'meat' in this subject follows next month. We then examine **how RAF communications went to war electronically in 1939**, with the **T1087/R1084 ground transmitter and receiver, T1083/R1082 transmitter/ receiver for bombers and the TR9 transceiver for fighters**; next month we will recount the results!

The end-war story of the service radar life of future FRS **Hugh Huxley** is then told by his colleague **Kenneth Holmes FRS**, aided by **Alan Weeks**, and **Mike Dean** provides from his archive a WW2 article, *"Klein Heidelberg" is New German Radar System* from a WW2 USSAFE Intelligence Summary. After the Second World War, radar was developed for many uses, and **TRE's F E Jones** recounts early progress in *'Radar aids the Study of the Atmosphere'*, with discussion contributions by **Watson-Watt** and others – watch out for **Arthur C Clarke**! Unearthing one of his own papers from the 1960s, **Alan Hartley-Smith** describes the data displays of those days in *'Data Display System works in Microseconds'*. We then move on to the present, where **Mike Dean** provides an account from AFP of the recent calamitous end of the **Arecibo radio telescope**, which during its life featured in the James Bond film *'Goldeneye'*, **R. Scott** describes the **RAF and Leonardo's** recent **'Swarming Drone' Electronic Attack Demonstration**, and Thales unveil a string of press releases covering their role in the latest **German 180 Frigate; High Frequency Sonars**, with **Mitsubishi**; their **Griffon Command Post**; and their provision to the **Royal Navy** of an **Integrated Unmanned Navy Mine Countermeasures System**. **Tailpiece** presents us with an **Enigma**, in this case one fished up by **German divers from the Baltic** and still perfectly recognisable after some 75 years immersed!

In Part II we continue our examination of **Light-Weight Air Warning in WW2**, in particular the need for portability on beach landings and in jungles – the especial needs of the Pacific campaign. **Mike Dean** provides us with three articles, on radar in the invasions of **Leyte** and **Okinawa** from a 1945 US *'Radar'* magazine; on the **Australian Railways'** part in radar construction; and on radar in the landings at **Guadalcanal**. We then take a long look at how the staff of the **New Zealand Department of Scientific and Industrial Research** not only produced long-range early warning radar for US forces at the request of **US Admiral 'Bull' Halsey**, but also accompanied it into battle, one scientist, wounded while rescuing a colleague under fire, earning a **DSO** in the process. **Tailpiece 2** alerts DEHS members wishing to buy relevant **ex-RAF aircraft**, and we mean serious aircraft – take a look!

Particular thanks this month to **Mike Dean** and to **Mike Blom** for many images from his collection. More next month, and meanwhile, suggestions for improvements, offers of articles and all general comments to me please at philjudkins@btinternet.com or info@dehs.org.uk.

Warmest regards all, and keep safe,

Phil

Phil Judkins, DEHS Chairman.

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