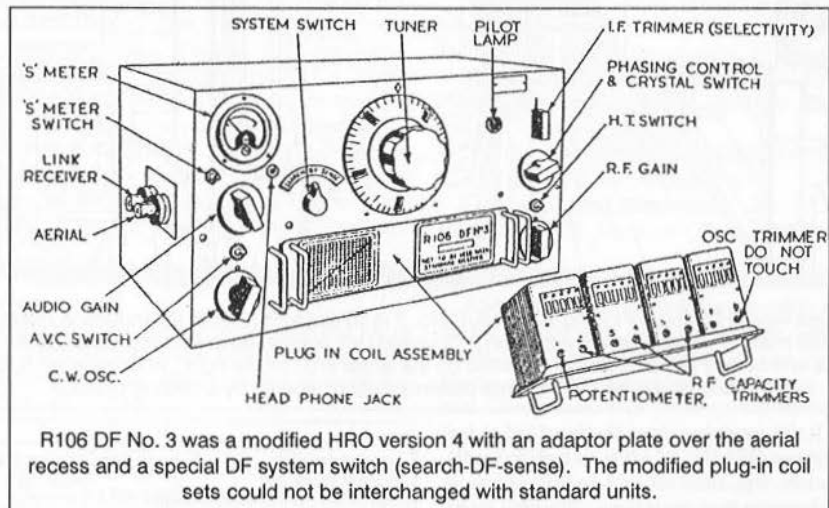


THE HRO IN THE BRITISH ARMY

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INTRODUCTION. In the Second World War a considerable number of National HRO receivers were purchased from the USA by the British War Office. They were initially used as a stop-gap measure until sufficient numbers of similar British-manufactured receivers were available. However, HROs were to be used throughout the war in applications ranging from clandestine

British-manufactured power units. When 100-240 volt AC mains power was available, "Supply Unit, Rectifier, No. 5" was used to supply power to the R106. "Supply Unit, Vibratory, No. 2" was used when the R106 was powered from a six-volt battery. It replaced the National type 686S six-volt vibrapack. Comparing the circuits, it is apparent that the British unit has better filtering. It was



communications to direction finding.

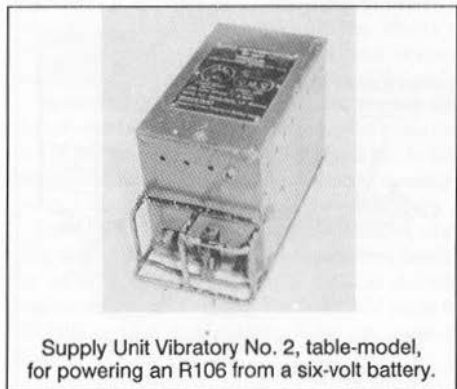
R106. The National HRO receiver was adopted in the British Army as Reception Set R106. Most of the HROs were version 4. Late in the war HRO-M and HRO-W receivers were purchased, designated respectively R106 Mk I and Mk II.

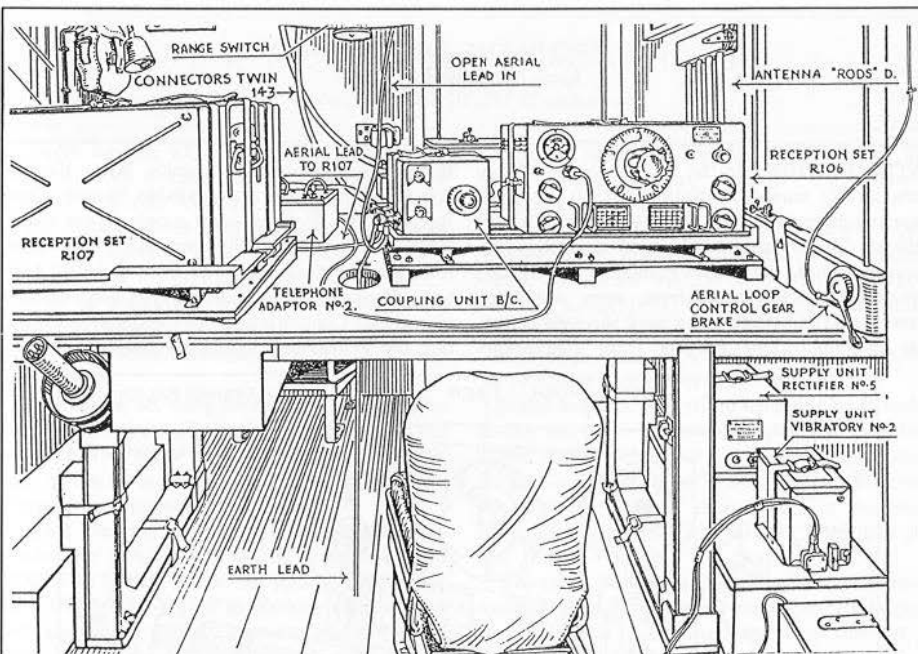
Though original National power supply units were initially used, general use was made of

built stronger to withstand use in the field. The use of a 0Z4 rectifier is uncommon.

Note: in a 1946 CQ advertisement, "The Radio Shack" offered HRO-W receivers, actually with an identification plate marking "Reception sets R106 Mk II."

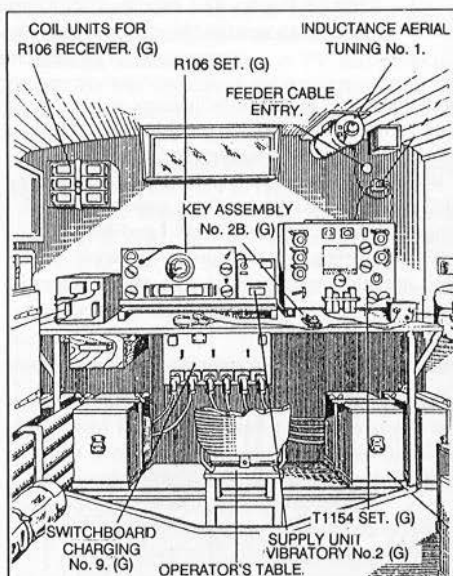
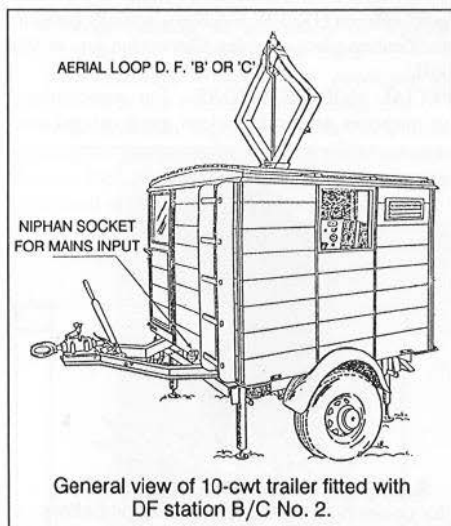
SPECIAL MODIFICATIONS. For communication purposes no modifications were carried out





Inside view of Direction Finding station B/C No. 2 in 10-cwt trailer. Note the mounting of the R106 main DF receiver in a cradle, with a Coupling Unit connected to the loop aerial. Both mains and battery power units are mounted on the wheel arch on the right. Reception set R107 (seen in rear view) was used for intercommunication, worked by a second operator.

on the R106 receivers. Due to its extended frequency range (50 kHz - 30 MHz with all coil sets), the receiver was adapted as a basic receiver in mobile direction-finding stations. Principal modifications of the HRO/R106 DF No. 2 receivers were the fitting of a special adaptor plate over the



R106 receiver and T1154 transmitter in a 15-cwt truck: a low-power mobile station which could easily be removed from the vehicle for use on the ground.

aerial recess. It replaced the original aerial terminals, providing shielding of the input leads from the goniometer or DF loop coupling unit. R106 DF No. 3 receivers were fitted with a special DF function switch and had modified coil units not interchangeable with standard units.

OTHER OPERATIONAL USES. It is interesting to note that the HRO receivers were used in a series of "special stations," developed from early 1940 until 1942. The stations were intended to provide communication over long ranges during combined operations and for isolated parties such as special forces and clandestine operations.

A second example of the multitude of applications of R106 receivers in the British Army is the 15 cwt (3/4 ton) wireless truck. This medium-range mobile station, fitted in a 15-cwt truck, comprised an R106 receiver and T1154 transmitter. The use of an RAF T1154 transmitter, actually designed for airborne work, is noteworthy.

ACKNOWLEDGEMENTS. Thanks are due to the Deputy Director and staff of the Royal Signals Museum, Blandford Forum, Dorset, UK, for their help and permission using the pictures in this article.

(Continued from p. 10)

are constantly running out. We update the list of what's available with each new OTB, so please check the current list when ordering to avoid disappointment. - LAS

NOTICE - PLUS 5 kHz!

Effective immediately the 75-meter SSB nets will operate 5 kHz higher when QRM is on the primary frequency: 3837 to 3842 and 3867 to 3872 kHz. - BK

BULLETIN DEADLINES

As with any publication, producing and printing the OTB take some lead time. In submitting material for publication, please adhere to the following dates for the May issue: want ads, March 11; news items and meeting notices, March 18. - LAS

AWA MEMBERS HONORED BY RCofA

The Radio Club of America has presented Ralph Williams, N3VT, with its Batcher Award for historic documentation and preservation. Jack Davis has been elected to the grade of Fellow, joining last year's honorees Alan Douglas and Gilbert Houck. Congratulations!

AWA BUSINESS MEETING - NOVEMBER

The annual AWA business/board meeting took place on November 3 in Rochester. Since six Board slots were up for election, Lauren Peckham presented a slate of incumbents, who were reelected. Likewise, the position of president was open, and Bruce Roloson was reelected for a two-year term.

REFERENCES

Note: SRDE stands for the British Signals Research and Development Establishment, which was responsible for development of signal equipment in the British Army.

"Special Set Type 1, General Description," SRDE Pamphlet No. 236a, May, 1940.

"Wireless Set, Special, Type 6X1, General Description," SRDE Pamphlet No. 331a, July 1942.

"DF Station, Mobile BC No. 2 in 10-cwt Trailer, Working Instructions," SRDE Pamphlet No. 543, 1945.

"DF Station Transportable, Adcock, No. 1, Working Instructions," War Office, March 1945.

"Reception Set R106 (National HRO Receiver), General Data and Working Instructions," British Army Staff North America, 1944.

"Truck 15-cwt Wireless Stations, T1154/R106, Working Instructions," SRDE Pamphlet No. 399a, Dec. 1943.

"The R1155 Receiver and T1154 Transmitter," OTB, Vol. 31, No. 4 (February 1991).

Communications Receivers. The Vacuum Tube Era: 50 Glorious Years. Raymond S. Moore, 1987.

Joyce Peckham reported membership as 3695, up 131 for the year. Richard Ransley covered the meets, AWA and jointly-held, for the year. Bill Fizette and Lauren Peckham reported on the Annual Conference, with plans to repeat the Book Fair in 1992 and add flea-market space.

Bruce Kelley discussed 1991 activities of the Museum and 1992 plans: the coverage in the April issue of QST, support for other museums' exhibits, special tours, production of video shows by John Ward and others, and general improvements. There was general discussion of upcoming requirements of the Financial Accounting Standards Board for museums to inventory their physical assets with an appraised value, a requirement likely to take effect in 1993-96.

Dexter Deeley presented a budget for the coming year. It appears that continuing increases in Association activity, coupled with the effects of past postal-rate increases, require a raise in membership dues. (These were last raised at the end of 1986, when the OTB was normally 44 pages.) The Board voted with reluctance to raise the basic rate to \$12 per year (\$15 foreign), but this is not to take effect until July 1, 1992, with a discount for multiple years: a two-year membership will be \$22.

Ludwell Sibley described the publications situation, in particular requesting and receiving funding for an OTB commemoration of 1992 as the 40th anniversary year of AWA. He described plans for availability of a publications index on magnetic disc.

(Continued on p. 39)