

Wireless Set #19

The first single-tune HF Transceiver



Wireless Set #19 - History

- Designed for use in Tanks in WW2 by (initially) the British Army. No in-tank radios previously existed.
- Developed in 1940 by the British War Office's Signals Experimental Establishment and by UK company Pye Radio.
- UK model replaced with the Canadian MK II model in 1941, and the MK III model in 1942. The sets proved valuable for armored fighting in the Western Desert.
- By 1942, the No. 19 Mk II was produced in Canada and the USA by Northern Electric, National, RCA, Canadian Marconi and RCA Victor.
- The majority of Canadian and US-made sets used English and Cyrillic front panel lettering, the result of a Lend-Lease contract to the Soviet Red Army. Over 2,000 were shipped to Russia during WW2.

Wireless Set #19 - History



Estimated that 25,000+ 19 Sets were manufactured in the UK, USA and Canada from 1940 -1952

Wireless Set #19 – Tech. Spec.

- Frequency ranges:
 - 'A' Set 2–8 MHz
 - 'B' Set 229–241 MHz.
- Modes: AM voice, MCW, CW.
- VHF Inter-tank communications
- Tank crew intercom
- Single dial receive and transmit tuning
- RF output:
 - 'A' Set: 2.5–9 watts
 - 'B' Set: 300 milliwatts
- Range:
 - 'A' set: ~10 miles
 - 'B' set: <1,000 yards (between moving vehicles).

Wireless Set #19 – Wartime Roles



The role of the 19 Set in WW II was essential to the co-ordination of many famous battles and the dedication of the Wireless Operators most assuredly affected the outcome of the war.

The 19 Set was called upon again in the Korean campaign and was retained for training purposes until its retirement in 1963.

Wireless Set #19 - Deployment



First major use was in the North African Campaign 1940-1943
First time inter-tank radio comms used in battle – highly successful

Wireless Set #19 Africa Campaign



19 Sets were fitted to British and American Tanks and AFVs

Wireless Set #19

D-Day & Market Garden



Fitted to British Scout Cars and US Army Jeeps



Dropped by parachute from C47s to Landing Sites in Holland & Belgium

Wireless Set #19 D-Day & Market Garden



Wooded and hilly terrain in Normandy and Belgium very different from the North African desert – TX/RX performance often dramatically reduced

Wireless Set #19

Post-WW2

Over 3,000 British Army surplus 19 Sets sold by weight (\$40/Ton) in 1963


Another ~2,000 unsold 19 Sets buried in a field
'Somewhere in England' and still undiscovered

Remainder 19 Sets allocated to Combined Cadet Forces
(aka ROTC) at high schools/colleges across the UK for
use on assigned CCF frequencies – mainly 4.030MHz
("Whiskey Lima") & 5.330MHz ("Delta Oscar")



Wireless Set #19 UK CCF Network

24 **George Watson's College,**
Colinton Road,
Edinburgh, 10.



To _____ Call Sign _____
 Confirming RT/CW contact on _____ Kc/s, N.I.S. _____
 At _____ GMT/BST, Date _____ Your Signals were _____
 R.S.T. _____ Our Station: W.S. 12; R 107.
 Aerial in use: _____
 Remarks: _____
 Operator: _____
 QSL Psc/Tks _____ O.C., G.W.C. C.C.F., Sigs. Sec.

LOUGHBOROUGH GRAMMAR SCHOOL C.C.F. Burton Walks,
Loughborough,
Leicestershire.

To 24 **0111**

Confirming Voice/~~RT~~ contact on Inter-Command Net
 on 15 Nov 1961 at 1330 hours GMT/~~BST~~ on 5.205 Mc/s
 Signal Report Readable
 Equipment used: TX. ~~RS 19 Mk 2~~ / RS 19 Mk 3 / ~~T 1154~~
 RX. ~~RS 19 Mk 2~~ / RS 19 Mk 3 / ~~R 1155~~ / R 109
 AE. ~~100 ft NS~~ / 100 ft EW / ~~140 ft NS~~ / ~~90 ft dipole~~

Remarks. Thanks for QSL card.

Thanks for the contact
14C

G. Hawes
For O.C. Signals Platoon



Approx. 72 ROTC stations across the UK operated by schoolboy cadets – 2 & 3 character call signs, QSL cards used, together with Authentication Codes - changed monthly to ward off piracy.

Wireless Set #19

1963-2022

Many 19 Sets bought by Hams in the UK, Europe and Canada
for use on 80m & 40m Bands



Wireless Set #19 1963-2022

Many 19 Sets still in use worldwide for Field Days, Contesting and by Military
Radio Clubs



Caversham Park

A 17th century English Stately Home 35 miles west of London - built 1784



Caversham Park

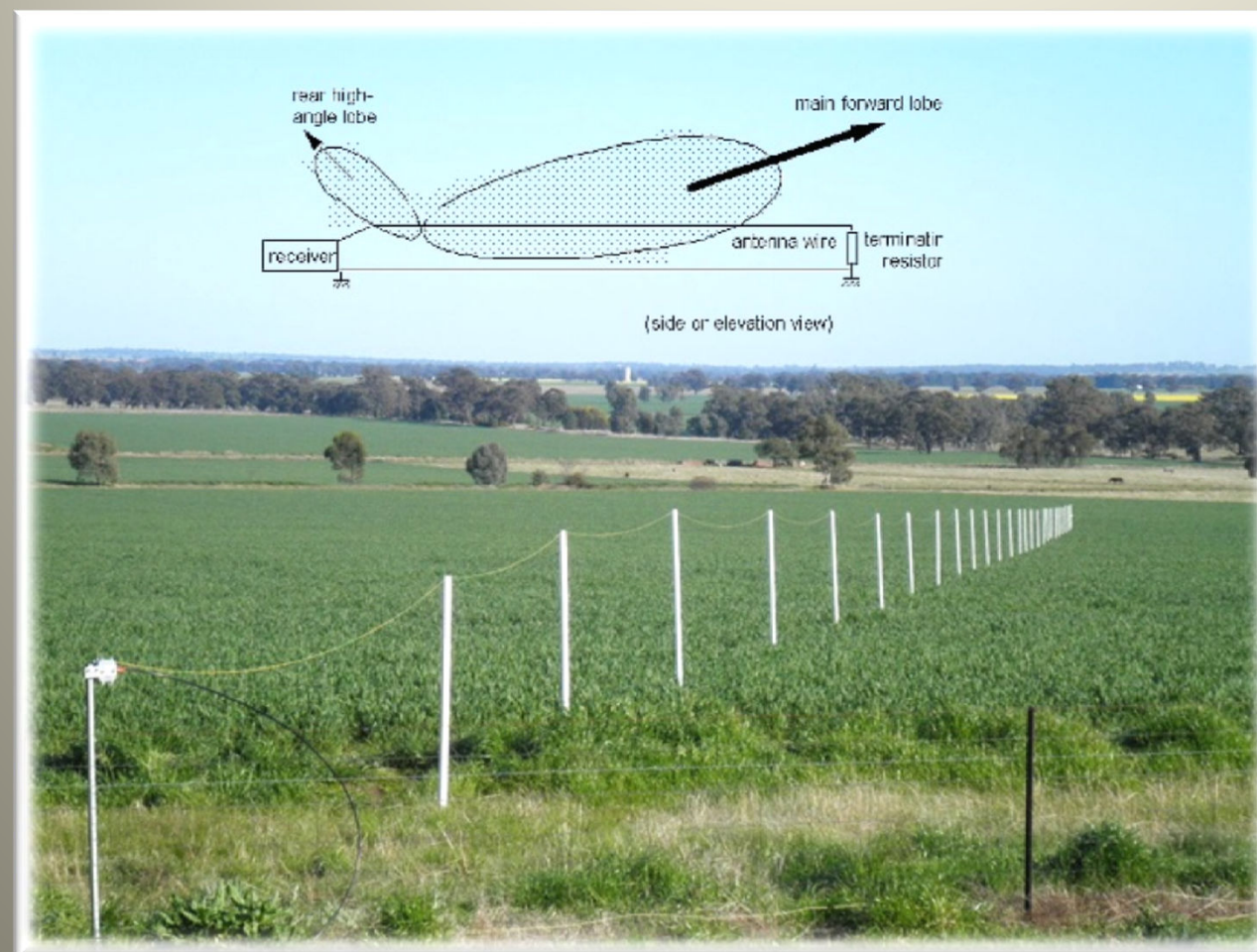


Curtain array; 21 MHz fixed bearing Yagi

Bought by the BBC in 1939 as a monitoring station for radio news on the BBC World Service.

Sited at one of the best reception sites in the UK – 430ft ASL – level with the Russian Steppes

Caversham Park



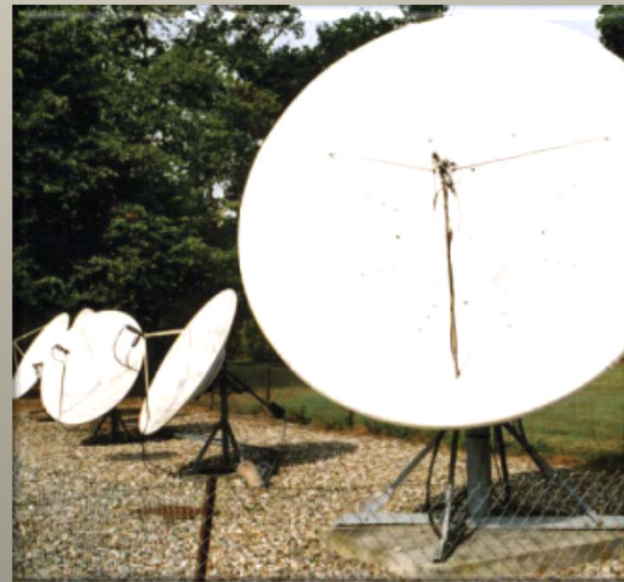
One of the finest Beverage Antenna arrays ever built – enabling MW AM stations to be monitored intercontinentally

Antenna is normally 6-10 feet above ground, and at least a wavelength long. For the AM MF broadcast band, this means at least 600 feet or 200 meters long.

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All wavebands
from VLF to HF
were monitored
24/7. Many rare
specialist
receivers in use



Also home to the
US Federal
Broadcast
Intelligence
Service - to
monitor Soviet
military
communications

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So what has this got to do with my
19 Set???????

British TV in the 1960's

Two Channels:

- BBC – Funded by annual License Fee
- ITV – Funded by Commercials
- No Cable
- VHF transmission on 50 – 55MHz
- 405 Lines resolution in Black & White

Very few households in the UK owned a TV.
Most were rented – including the Royal Family – due
to import and foreign currency restrictions.

TVI/RFI and the Dreaded 'Detector Vans'



Caversham Park



Caversham Park



My Parent's House!

My 19 Set

- Manufactured in Philadelphia 1943
 - Exported to the UK 1944
 - Sold as UK Gov't surplus 1964
 - Bought for me as an Xmas gift 1966
- Jammed Radio Moscow @ the BBC 1967
 - Confiscated by the GPO 1967
- Returned (without my knowledge) 1974
- Rediscovered in my parent's garage 2006
 - Shipped to Houston 2010
 - Refurbished in Houston 2013-2020

Thank You!