Volume 1 AMENDMENT No. 1 ver 3.00

Date of issue: April 2022.

After the publication of 'Wireless for the Warrior' Volume 1 'Wireless Sets of WW2', a small number of minor (typing) errors and incorrect data was spotted. Corrections, additional photos and newly found items are published in 'Volume 1 Amendments'. Double side printed on A4 paper, cut away circa 7mm from the bottom and side of the sheet. The prepared sheets will fit snugly between the inside cover and dust cover flap. It is further suggested to amend the text corrections in the book with e.g. a (red) pencil or a fine-liner.

Contents

- Ver. 3.00: **Add** 'Wireless Set No. X34' between Wireless Set No. 33 and No. 36

WIRELESS SET No. 1

- Page W.S.1 - 1: Data Summary, *Valves*: **Change** …ARS4… to …**ARS6**…

WIRELESS SET No. 4

- Page W.S.4 - 1: second column, second line: **Change** …33-ft square loop… to …**3**-ft square loop…

WIRELESS SET No. 8

- Page W.S.8 - 1: Data Summary, last line: **Change** ..AF amp. ARP12... to …AF Amp. **AR8**…
- **Replace** page W.S.8 - 4: Circuit diagram of receiver section Wireless Set No. 8
- Ver. 3.00 **Replace page** W.S.8 - 4: Better quality circuit diagram of WS No. 8 receiver.
- Ver. 3.00 **Add page** W.S.8 - 5: Rare photographs of Wireless Set No. 8 during operator training.

WIRELESS SET No. 12 HP

- Page W.S.12 - 1: Data Summary, *Modulator Unit*: **Change** …2x 6C5GT... to …**6C5G**…

WIRELESS SET No. 14

- Page W.S.14 -1: Data Summary, *Valves*:
  - **Change** …ARP7… to …**ATP7**…
  - **Change** …2x ARP12… to …ARP12…

WIRELESS SET No. 15 (E10)

- Page W.S.15 - 1: Data Summary, *Size*: **Change** …length: 11ft, width 25ft… to …length **25**ft, width **11**ft…

WIRELESS SET No. 27

- **Add** page W.S.27 - 3: W/T Set Type 67 – Operating Instructions (Royal Navy version of Wireless Set No. 27)

WIRELESS SET No. 33

- Page W.S.33 - 1: Data Summary, *Size (Inches) and Weight*:
  - **Change**…Transmitter 23 16 25 175lb… to …Transmitter 23 **25** **16** 175lb…
  - **Change**…Power Supply Unit 25 16 15 170lb… to … Power Supply Unit **15** **25** **16** 170lb…

WIRELESS SET No. 34

- **Add** page W.S.34 - 1 between page W.S.33 – 16 and page WS 36 - 1
- Ver. 3.00: **Replace page W.S.34 - 1:** New block diagram of X34D and additional info of X34B, X34C and X34D.

WIRELESS SET No. 78

- Page W.S.78 - 1: Data Summary:
  - **Change** in *Frequency Coverage*: …Frequency range 2.960-9.515MHz… to …Frequency range 2.960-9.**575**MHz…
  - **Move in** *Valves*: Mixer 1R5 …**1R5**… under *type*

Appendix 3 'Accessories'

Appendix 3 'Accessories' of WftW Volume 1 was amended along with numerous additions in Appendix 3 of Volume 2. If Volume 2 is available it is recommend to use this version of Appendix 3.

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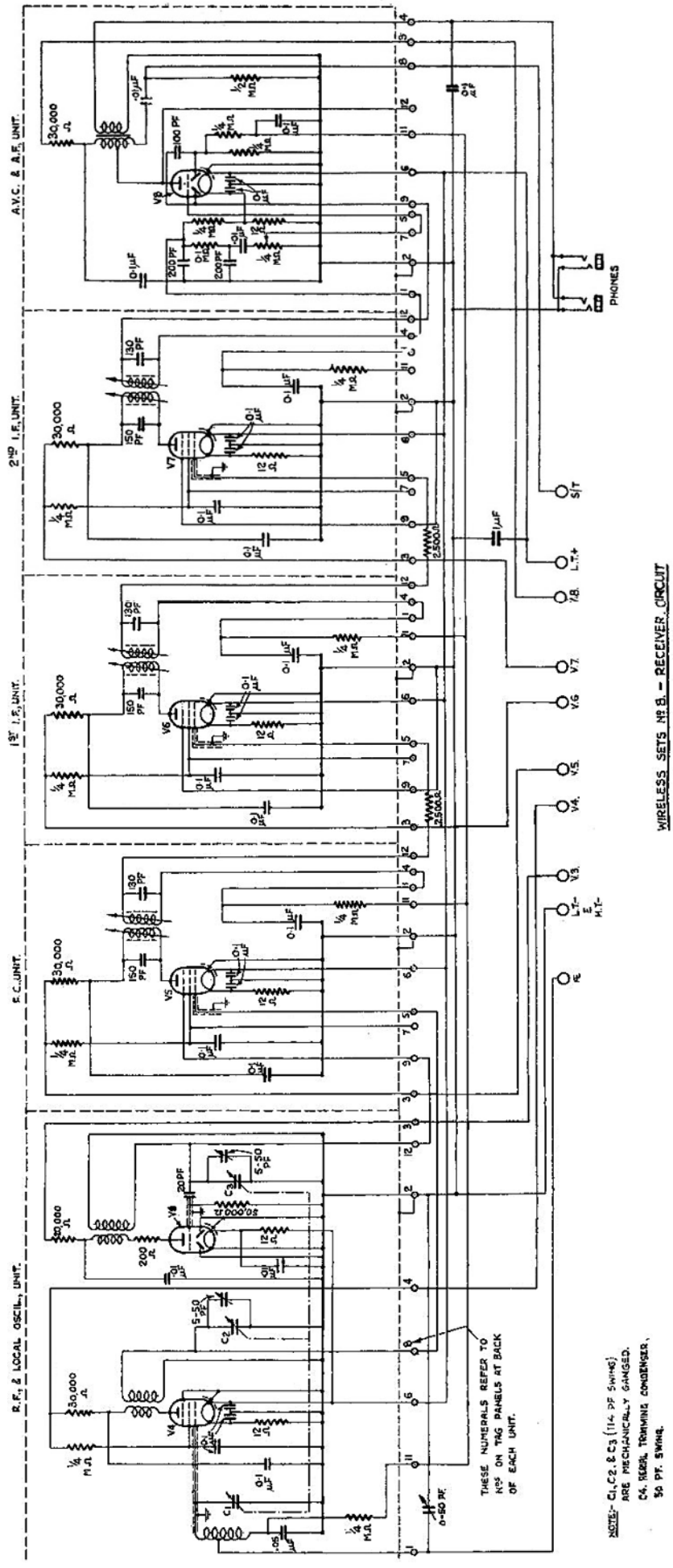


Circuit diagram WS No. 8 receiver

Note the unit construction of the various stages. The frequency changer unit and two IF stage units are identical.

Two rare photographs of Wireless Set No. 8 being used during training of Czechs in exile in the early part of World War 2.

W/T Set Type 67 Operating Instructions and circuit diagram

W/T Set Type 67 was the Royal Navy version of the Army Wireless Set No. 27. Although the circuit diagram printed in this Operating Instructions differ slightly from the diagram on page W.S.27 - 2, it is believed that issues to both Arms were nearly identical.

W/T. SET. TYPE 67 - OPERATING INSTRUCTIONS.

PRELIMINARY.

Before the set can be used the 1½ volt L.T. Battery must be filled with water. This should be done eight hours or more before the set is required for use.

The transmitter operates on three spot frequencies :—(A) 22.5 Mc/s (B) 23.5 Mc/s (C) 24.5 Mc/s.

The receiver tunes continuously from 22—25 Mc/s with three calibrated frequencies :—22.5 Mc/s, 23.5 Mc/s, and 24.5 Mc/s.

OPERATION.

Normally the set should be slung from the body for operation in such a manner that the flap of the haversack opens away from the operator.

Aerial. The aerial is stowed in a pocket which also contains the handset, and should be connected to the aerial terminal. For all-round maximum range and signal strength the aerial should be vertical, the free end being thrown over or secured to some suitable object. If this is not possible the aerial can be laid out in a straight line on the ground, pointing in the direction to be worked.

Tuning. Set the transmit-receive switch to the correct position and the transmitter tuning control to the desired frequency. Switch on the set, and a loud hiss will be audible in the telephone until the signal is tuned in. A strong signal will reduce the noise to a very low level. Correct tuning point will be at a minimum background noise from receiver.

Communication. Talk well into the microphone in a fairly loud voice.

SPARES AND BATTERIES.

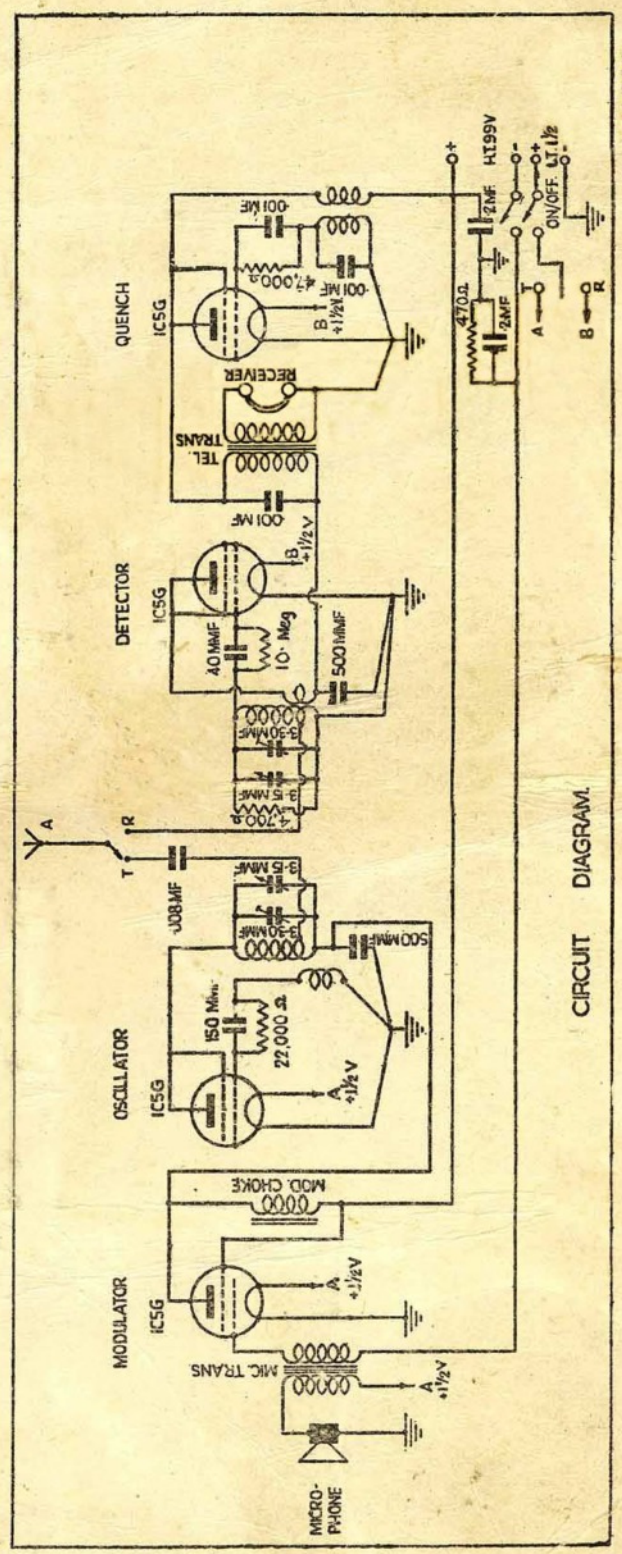
Two spare valves are stowed in the battery holder.

To change the L.T. Battery unscrew the four terminal nuts which secure the connector bars, these can then be turned aside and the battery removed.

To change the H.T. Battery or Valves withdraw the set from the haversack.

To change a valve remove the H.T. Battery carrying cover from the chassis by unscrewing the two milled nuts.

NOTE :—ALWAYS SWITCH OFF SET WHEN NOT IN USE IN ORDER TO CONSERVE BATTERY LIFE.



CIRCUIT DIAGRAM.

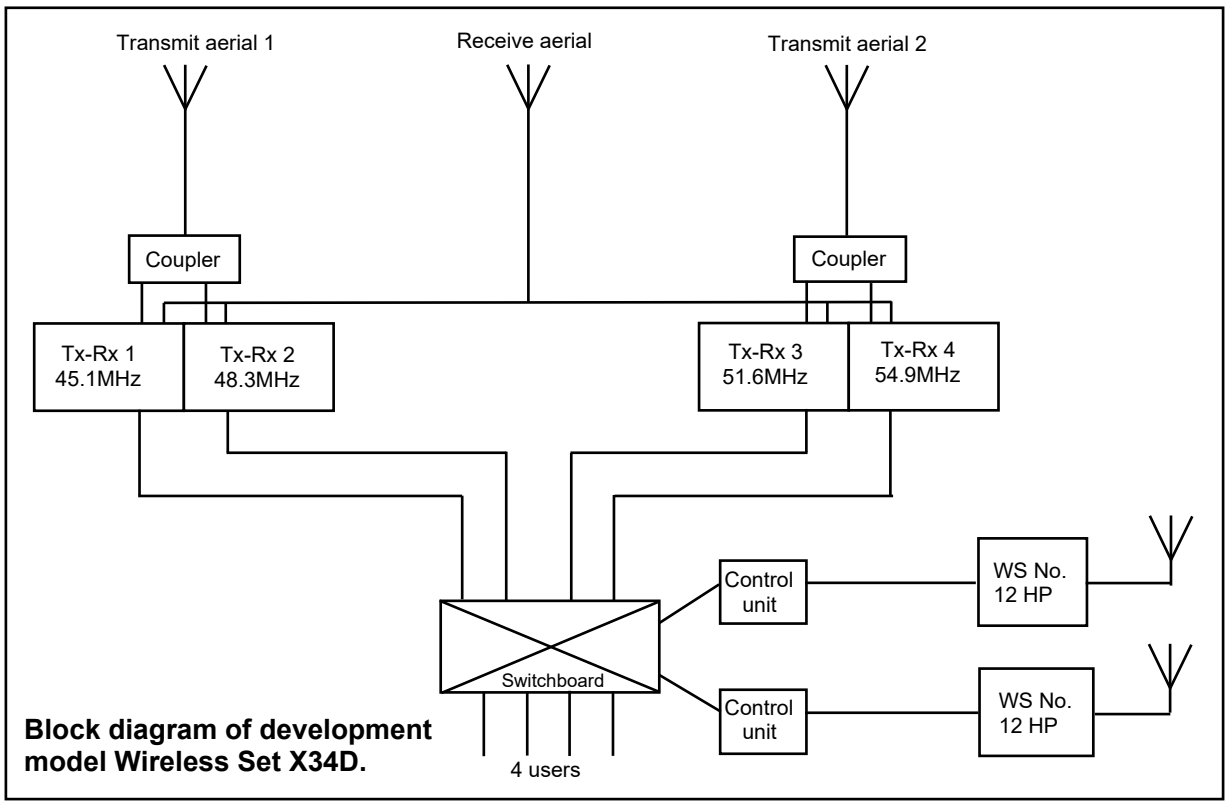
Wireless Set X34 (Development model).

In the early and mid World War 2 period a requirement was raised for improved short range radio intercommunication facilities between Armoured Command Vehicles (ACV) in large HQs when either stationary or on the move. Wireless Set No. 14, initially developed for this purpose and issued in the early days of the war, was not considered suitable as being too complicated and bulky. This need was only partially filled by the "B" set of Wireless Set No. 19, due to the limited range of this set. Development work was therefore started on Wireless Set No. 34 which was expected to give adequate facilities up to a range of 3 miles or more on the move. As the four different designs were eventually abandoned not much information was found apart from a few SRDE reports and in a memo which gave prospects for new equipment.

- *Wireless Set X34A*: No information was hitherto found.
- *Wireless Set X34B* comprised four separate transceivers together with a cordless switchboard which could be switched to any of 8 users connected to various positions in an ACV. The transceivers operated on 253, 243, 233 and 156MHz, each comprising a free running oscillator (CV78) in the transmitter, anode modulated by a 6V6G with EF36 as microphone amplifier. The last two valves were also used on receive. The receiver comprised a grounded grid RF amplifier (RL37), followed by a super-regenerative detector (CV78) circuit with a common quench to the four receivers. A RL18 valve acted as detection for operating the carrier ('squelch') relay.
- *Wireless Set X34C* operated on medium wave (around 1MHz). No further details were found.
-*Wireless Set X34D* consisted of four complete VHF FM R/T transceivers built into a single box similar to that of the No. 19 Set. Its weight was about 60lbs excluding supply unit. Power was derived from 12V DC or AC mains. There were four channels: 45.1MHz, 48.3MHz, 51.6MHz and 54.9MHz. The frequency deviation was ± 40kHz and the range 3 miles when working on the move. Wireless Set 34D was intended to be used in conjunction with a cordless switchboard allowing the connection of the four channels (and via a control unit other sets, for example No. 12 HP) to a maximum of four users. However, during its design severe design difficulties were encountered due to interference from high power sets such as Wireless Senders Nos. 12 HP, 33, SCR-299-A, etc. These difficulties appeared to be insurmountable and no further work was done on the development of this set of which only a few prototype test models were made.

- SRDE Report No. 849, May 1943, Experimental low impedance aerial systems for wireless sets X34B and 19B, M.P Quinlivan.
- SRDE Report No. 855, June 1943, Interim report on Wireless Set X34B, R.H. Barker.
- SRDE Report No. 876, Sep. 1943, Matching into a vertical 8-ft aerial at 1.2MHz and its application to the X34C set, T. C. Charles.

In the Middle East a local modification of Wireless Set No. 18 was produced which enabled it to operate a small loud-speaker at adequate volume. An amplifier was fitted in the battery compartment of the set, the whole operating off the normal vehicle battery and providing a suitable improvised solution to the inter ACV communication problem.



Block diagram of development model Wireless Set X34D.