# Lieutenant Baron Collingwoode Seymour Underhill RGA

Baron Collingwoode Seymour Underhill was born on 29th October 1892. The 1891 census records the family living at 51 Gillott Road in Edgbaston but by 1901 they had moved to 22 Park Road, Moseley before moving next door to No. 20 by 1911. Coll, as he was known in the family, was educated privately at a local school until, at the age of 16 in 1909, he left to be articled to Lloyd F. Ward, ARIBA, of 55 Newhall Street 'to learn the profession or business of an architect and surveyor' for the term of three years. During this period he attended lectures at the Birmingham School of Architecture. Having served his articles, Coll entered the employment of George A Cox of 33 Newhall Street.

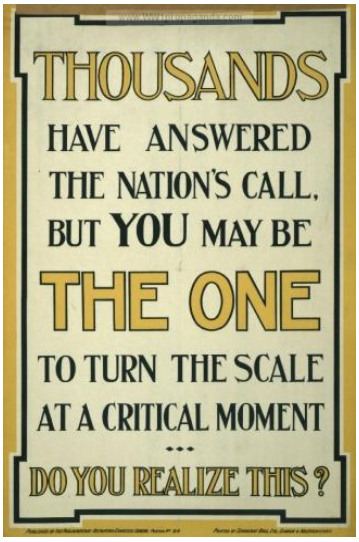



**Figure 1**
**1915 recruitment poster**

**Figure 2**
**Second Lieutenant B C S Underhill, Winchester**

Coll answered the nation's call in February 1915, when he left Mr Cox in order to take up a commission as a Second Lieutenant in the South Midland (Warwick) Royal Garrison Artillery (RGA), qualifying as an instructor of signalling.[i]

**Figure 3**
**Collingwoode's father in his VTC uniform, with his wife, Clara on his far right and daughter Dorothy on his left.**

Coll's father was over the maximum age of 41 to enlist, so he joined the new Volunteer Training Corps (VTC). He had previously served in the Natal Mounted Police in 1883.[ii] The VTC units had to be financially self-supporting and members were required to provide their own uniforms with a red arm band bearing the initials 'GR' for *Georgius Rex*. Rifles were not provided until 1917. Volunteers undertook a range of tasks including: guarding vulnerable points, munitions handling and transport for wounded soldiers.[iii]

The newspaper transcript below, from July 1914, gives an insight into a fifteen day training programme for the South Midland (Warwick) RGA, just before war was declared.[iv]

*Royal Garrison Artillery. Orders by Major J. H. Grieg South Midland (Warwick) RGA*

*The battery will assemble at headquarters, Saltley at 7.30 am for fifteen days training in camp to be held at Exmouth, Devon. .Dress: marching order haversack, water bottle, bandolier. Great coats to be carried on person; water bottles filled with water. NCO's and men will bring the following articles to camp with them: uniform, change of underclothing, knife, fork and spoon, strong pair of boots, shaving materials, towels and soap. Baggage is to be plainly marked with owner's name and number. Luggage labels may be obtained from the Drill Hall up to 6pm Saturday. Kit may be stacked in Drill Hall up to that time. Kits not brought to the Drill Hall on Saturday evening must be there by no later than 7am Sunday.*

Many diverse skills were taught at the training camps including fitness training, marching drill, knotting and lashing, harness fitting, basic map reading and general field craft.[v]

On a happier note in 1915, Coll was best man at his sister's wedding at St Anne's Church, Moseley on Saturday 16th October. Dorothy who lived at Charlecote Lodge, 20 Park Road, Moseley, married the 'boy next door', Andrew Barclay at number 22.[vi] There were a number of officers present including Colonel Halse. On leaving the church the bride and bridegroom passed under an archway of swords of sixteen brother officers. The reception was held at Moseley and Balsall Heath Institute, and later the newlyweds left for a short honeymoon in London.[vii]

**Figure 4**
**Officers of the 2/1 South Midland (Warwick) RGA, Sheringham. 2nd Lt Underhill is seated in the first row second along on the left. Next to him on the right is Holland Hobbiss. Back row, first left is Philip Hughes. Photograph dated 14th April 1916**

The photograph above places Coll in Sheringham on 14th April 1916, where the 2/1 Highland RGA, an Independent Heavy Battery, was based.[viii] Various photographs and inscribed books belonging to Coll, place him in Winchester in April, September and October 1916. He is also known to have been sitting on a board of enquiry at Flowerdown Camp, Winchester on the 2nd September 1916 by order of Lt Col H W M Parker RGA commander of the Heavy Artillery Training Centre. This was the location of the No 1 Technical Wireless School during WW1 before it moved to Fenny Stratford in August 1917.[ix] On 26th August, Coll was promoted Lieutenant and sent, on secondment, for duty with the regular RGA for the duration of the war.[x]

As a signalling instructor, Coll would have taught the RGA trainees how to relay back, from their forward positions, the coordinates of enemy targets to the heavy artillery battalions. In the early days of the war, this involved the sending and receiving of messages using semaphore or Morse code. For semaphore messages, a white flag was used against a dark background and a blue flag for lighter conditions. Morse code was used for transmitting messages in the following instruments, the: Begbie lamp for flashing messages; electric lamp for use at night; flap or disc instruments with open or shut flaps; heliograph with its mirrors needing sunshine to function; whistles, and telegraph (using cables, attached to poles away from the front but with lines laid on the ground or buried near the firing line).

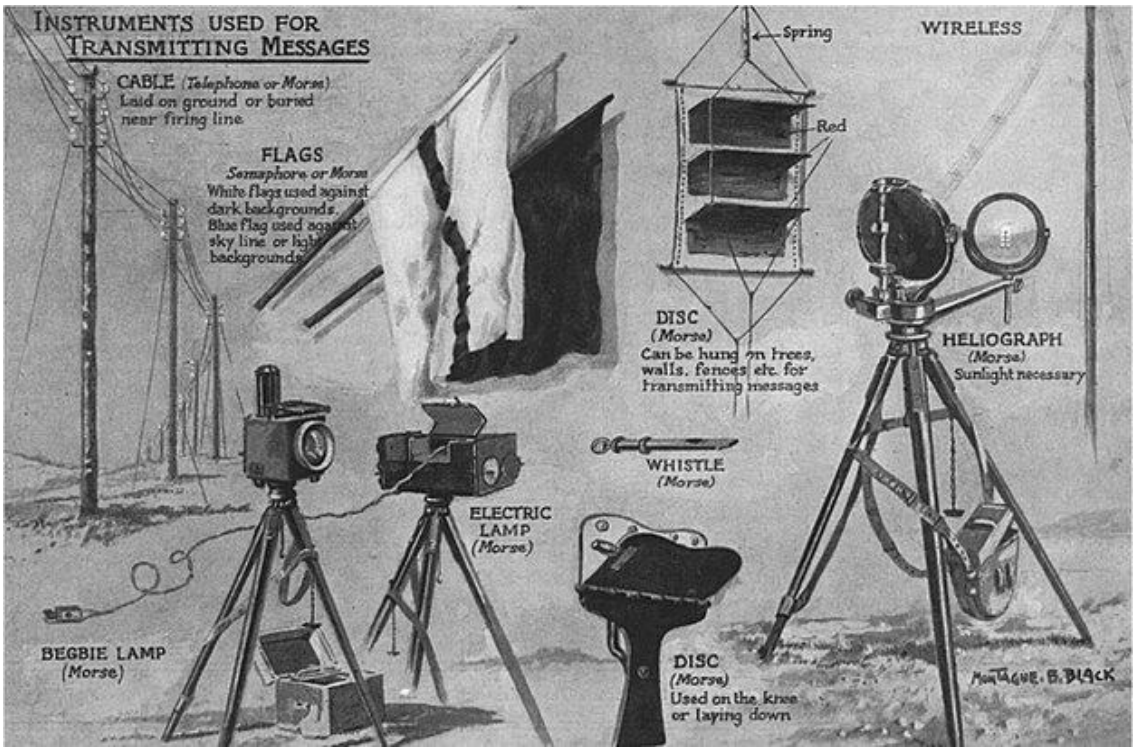
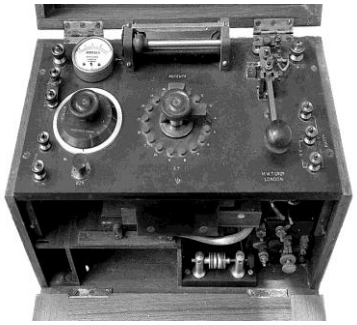


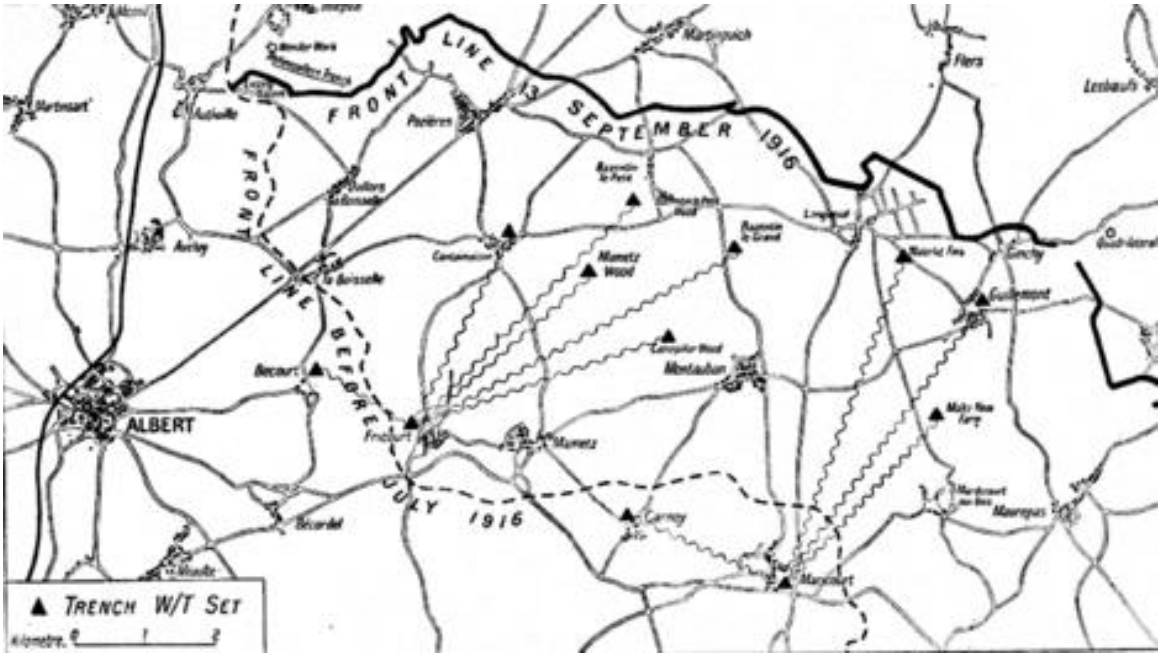

**Figure 5. Instruments used for the transmitting of messages**

As consequence of entrenchment, a very different form of signalling quickly evolved, as visual signalling became perilous in the extreme for the operator who raised himself mere inches above the parapet of a trench. Telephone and telegraph communication required the use of cables which were vulnerable to damage by enemy fire and the passage of soldiers' boots and tanks across the battlefield, a problem not solved even if the cables were buried to a depth of 6 feet.[xi]

The difficulties of using cabling methods for communications made the development of a wireless form almost obligatory. Wireless methods also had the potential to enable troops moving rapidly forward or in retreat to keep in touch with other units and HQ. Unfortunately the early wireless transmitters were still in a primitive state of development and had the disadvantage of being bulky, heavy, costly to produce, and in need of frequent re-charging. Careful planning of frequencies was required in order to minimize interference from neighbouring spark transmitters and it was vulnerable to eavesdropping, jamming and fake enemy signals. The problem of eavesdropping made the use of codes or encryption necessary which slowed down the speed of communication.[xii]

**Figure 6. The W/T 50W DC Trench Set, also known as the British Forces (BF) Set**






**Map 1.Map showing the deployment of the wireless sets near the front from July to September 1916**

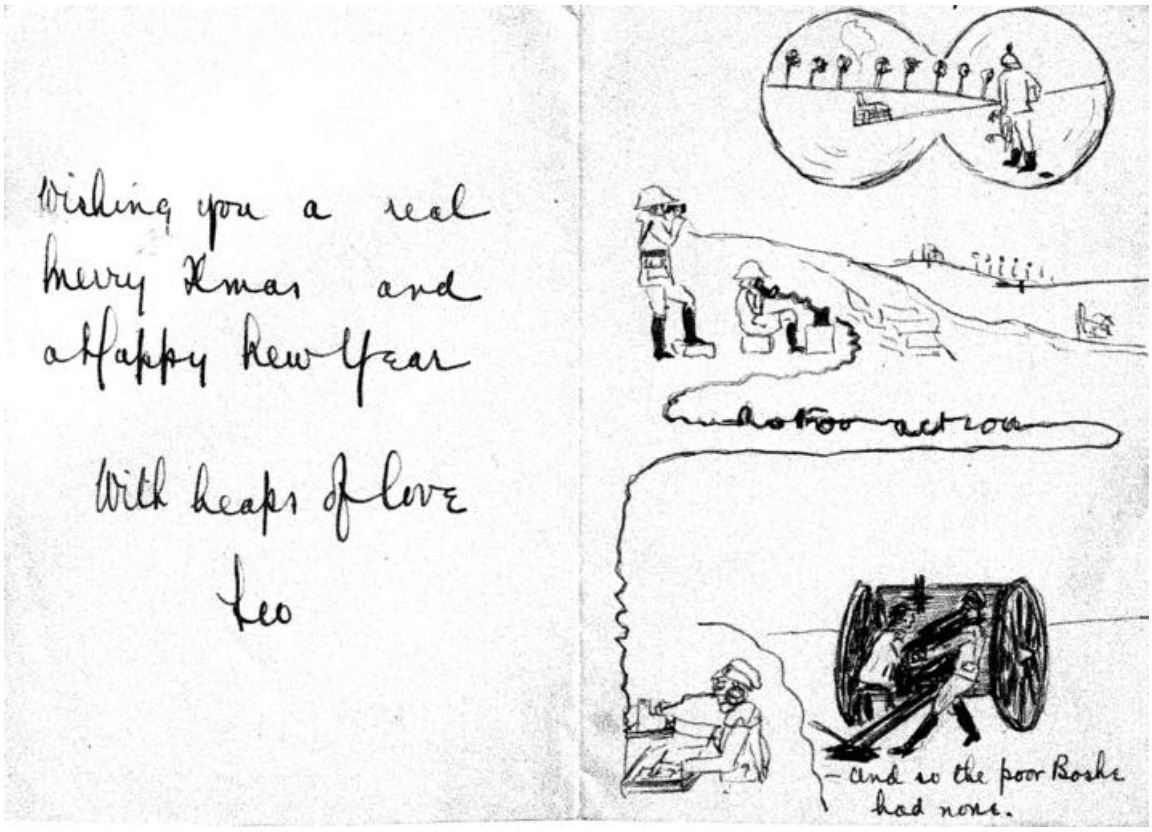
**Figure 7. The Wilson Set in use at the Somme**

In 1916, Coll would have been urgently training signallers in the use of a new wireless innovation, replacing the BF sets, and known as the Wilson Set. Despite its drawbacks it was pressed into service in earnest ready for the Battle of the Somme in August 1916.[xiii]

The use of wireless technology was successful in providing speedy contact with HQ until wired communication links could be established. However, as the sets were very cumbersome and the requirement to erect elaborate aerial arrays invited enemy fire, its use was not universally popular.

By 1917 the problem of having an elaborate aerial that attracted enemy fire was solved by a newly developed trench warfare set, the Marconi W/T Set Forward Spark 20 Watt B. It was a technological leap which quickly became known as the 'Loop Set' due to its 3 foot square base tubing loop aerial with an adapted bayonet for a ground mounting. It had a working range of 2000 yards and required little training to use. The new transmitter was also relatively compact making it more easily transportable.[xiv]

**Figure 8. The Marconi W/T Set Forward Spark 20 Watt transmitter**





Despite these scientific and novel developments, field commanders remained cautious and were much happier with tried and trusted wire telegraph and telephone lines[xv] reflected in this hand drawn Christmas card dated 1917. It was from Coll's future brother-in-law, Leo Barton, stationed in France with the Royal Field Artillery.

Troops at the front still made extensive use of the kerosene powered Begbie signalling lamps, as well as rockets, Very lights, klaxons, rattles, whistles and megaphones. WW1 saw a huge increase in the use of pigeons and dogs to carry messages and the deployment of motorcycle despatch riders for the first time. Over shorter distances between trenches messengers were used where necessary.[xvi]

**In the photograph on the right, Coll is riding a Triumph model 'H' roadster motor cycle. It had a 550cc side valve four stroke engine and a three speed gear box with a belt transmission. It was introduced in 1915 and soon earned the nickname 'Trusty Triumph'. Over 20,000 Model H bikes were supplied to the British forces in WW1.[xvii]**

Below are copies of two pages taken from a training manual titled 'Instructions for the Training of the British Armies in France', dated January 1918, cancelling the previous edition of June 1917.[xviii] It still retains some of the 1914 signalling techniques that stayed the course, for example, flags, Lucas Lamp and the folding shutter, but note the inclusion of 'pigeon handling' ,'message carrying rockets' , the Fullerphone and 'wireless'.

## Appendix VI.

### ARMY SIGNAL SCHOOL.

Number of Students.

A.F.A.: 6 Officers; 20 Other Ranks.

Infantry: 14 Officers; 115 Other Ranks.

Signal Service: 10* Officers; 45* Other Ranks.

*Duration of Course*—Six Weeks.

### (A) SYLLABUS "A."

*(for Regimental Signallers.)*

1. (2 weeks) Visual Signalling.

Reading and sending* with small flag, Lucas lamp, and folding shutter.

Subjects dealt with in T.M.S., 1917, with special reference to Chapters VI. and VII.

Lectures on S.S. 191, "Inter-communication in the Field," and organization of visual communication.

Map reading and use of compass.

Five minute lectures by Students.

Reading and sending † with D3 telephone and Fullerphone.

2. (2 weeks) Telephony, etc.

Lectures on Elementary Electricity and theory of Telephones.

Practical Instruction and lectures on Fullerphone, D3 telephone, trench telephone and buzzer and magneto switch units.

Laying, jointing, testing and localising faults in overground cables.

Wiring offices: organization of a small signal office, office routine and method of dealing with messages.

Practical instruction and lectures on message carrying rockets and in care and handling of pigeons.

Lectures on S.S. 191, "Inter-communication in the Field," and organization of runners.

Five minute lectures by students.

3. (1 week) Forward Wireless Sets.

4. (1 week) Combined Signal Schemes.

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* Or equivalent numbers at shorter courses.

† The time allotted to practice in reading and sending, as distinct from the transmission of messages during schemes, should be the minimum necessary for "refreshing" and passing the prescribed tests for Instructors' and Assistant Instructors' Certificates.

**Appendix XX.**

**G.H.Q. WIRELESS SCHOOL.**
**(Signal Base Depot.)**

*Course "C."*

**Number of Students—15 Signal Service Officers.**
***Duration of Course*—4 weeks.**

*Course "D."*

**Number of Students—15 Wireless Telegraphy N.C.O.s of Divisional Signal Companies.**
***Duration of Course*—6 weeks.**

*Course "I."*

**Students: Listening Set personnel.**
***Duration of Course*—Six weeks.**

**(A detailed syllabus of the above courses has been issued to all concerned.)**

**Instructions for the Training of the British Armies in France: Revised Edition for June 1917**

**Figure 10. The Fullerphone Mark IV**

The problem of the Germans evesdropping on the communication channels of the Allied army was resolved by Captain Algernon Fuller. He developed the 'Fullerphone' which used a twisted pair of wires instead of an earth return which overcame the induction problem of previous sets that had enabled the Germans to pick up the Allied signals. By 1918 most divisions had adopted Fullerphones for all their forward communication circuits [xix]

The problem the RGA experienced of hitting unseen targets accurately from well behind the battle lines was improved immensely with the support of the Royal Flying Corps (RFC) as illustrated. The use of detailed grid maps, together with wireless telegraphy, enabled the RFC pilots to identify the position of an enemy target as a coordinate. The information was then transmitted in Morse code to a land station attached to the RGA Siege Batteries. The RFC could also feedback the accuracy of their shots allowing for corrections. The capacity to take out the numerous German artillery guns accurately did much to win the First World War.[xx]

**Figure 11. The RFC used cameras and telegraphy to identify enemy targets for the RFA**

Before the end of WW1, the first official agreement to form a separate Signal Corps was made, but due to policy delays, the Royal Warrant was not signed until 28th June 1920. Six weeks His Majesty the King conferred the title 'Royal Corps of Signals'.

Coll spent his entire war service in the UK which meant that, despite his service to his country, he was not entitled to any medals.

On demobilisation in February 1919, Coll rejoined Mr Cox, and in January 1920 entered into a partnership agreement with him, the firm being called 'Cox and Underhill'. However, Mr Cox died in May of that year and Coll took sole charge of the practice.

In 1928 Coll married Gladys Kathleen Barton (see below). In early 1930, Graham, their only child was born.

**Figure 12.**
**Collingwoode in civilian dress**

**Figure 13.**
**Left to right: Leo Barton (brother-in-law), Mrs C Barton (mother-in-law), the groom, Collingwoode and his bride Gladys Barton, Mr Holland Hobbiss (best man and fellow architect), Audrey Barton (sister-in-law), and Coll's mother Mrs Clara Underhill**

During WW2 Coll, being over the maximum age to enlist, like his father in WW1, served in the Home Guard. Coll instructed a platoon in signalling.
At the age of eighteen, Col's son Graham was conscripted into the army to complete the obligatory two years National Service serving in the Intelligence Corps, attached to the Royal Corps of Signals stationed in Vienna with the British Troops in Austria (BTA). Following in his father's footsteps, Graham later served as a signaller in the 48th (South Midland) Corps of Signals (T.A.) from 1957-1963, attaining the rank of Lieutenant.

## Footnotes

i From the Graham Underhill archive

ii Information provided by Graham Underhill

iii Volunteer Training Corps WW1
https://en.wikipedia.org/wiki/Volunteer_Training_Corps_(World_War_I)

iv *Birmingham Daily Post, 31 July 1914*

v *Birmingham Daily Mail,* 11th June 1914

vi 1911 census
Photograph from the Graham Underhill archive

vii *Birmingham Gazette* 18th October 1915

viii Royal Artillery depots, training and home defence units
http://www.longlongtrail.co.uk/army/regiments-and-corps/the-royal-artillery-in-the-first-world-war/royal-artillery-depots-training-and-home-defence-units/

ix Army Camps WW1
http://www.airfieldresearchgroup.org.uk/forum/war-office-and-army-units/3816-army-camps-barracks-Hampshire
http://www.1914-1918.net/RE_ukbasedepots.html

x *Birmingham Daily Post* 12th October 1916

xi Instruments used for transmitting messages
http://www.bbc.co.uk/schools/0/ww1/25401271

xii Austin, Brian. Wireless in the Tranches, Radio Bygone No 142, April/May 2013 p 14-5
http://www.mpoweruk.com/papers/Wireless%20in%20the%20Trenches.pdf

xiii Army radio communication in the Great War Keith R Thrower, OBE: The 130-watt Wilson Trench Set & Short Wave Tuner Mk. III, pp 5-6
http://blogs.mhs.ox.ac.uk/innovatingincombat/files/2013/03/Army-radio-communication-in-the-Great-War_V2.pdf

xiv Austin, Brian. Wireless in the Tranches, Radio Bygone No 142, April/May 2013, p 16
http://www.mpoweruk.com/papers/Wireless%20in%20the%20Trenches.pdf

xv See xiii, p 10

xvi Innovating in Combat
http://blogs.mhs.ox.ac.uk/innovatingincombat/category/frontline-signalling/

xvii Triumph Motor cycles timeline 1883-1918: The Early Years
http://www.ianchadwick.com/motorcycles/triumph/time01.html

xviii Instructions for the Training of the British Armies in France: Provisional Edition for June 1917, pp 43-4
http://www.army.gov.au/~/media/Files/Our%20history/AAHU/Primary%20Materials/World%20War%20One%201914-1918/Training%20Materials/Instructions_for_the_Training_of_the_British_Armies_in_France_1918_UK.pdf

xix Imperial War Museum: Line Communication Equipment: The Fullerphone
http://www.iwm.org.uk/collections/item/object/30005590
Fullerphone
http://www.wftw.nl/ful.html

xx See xiii, p 10

## Maps

Map 1 Map showing the deployment of the wireless sets near the front in August 1916
Austin, Brian. Wireless in the Tranches, Radio Bygone No 142, April/May 2013, p 16
http://www.mpoweruk.com/papers/Wireless%20in%20the%20Trenches.pdf

## Illustrations

Figure 1 WW1 Poster from the Imperial War Museum, Catalogue Number Art/IWM PST 5145
http://www.iwm.org.uk/collections/item/object/28433

Figures 2,3, 4 12 and 13 From the personal archive of Graham Underhill

Figure 5 Instruments used for transmitting messages
http://www.bbc.co.uk/schools/0/ww1/25401271

Figure 6 The W/T 50W DC Trench Set, also known as the British Forces (BF) Set
http://blogs.mhs.ox.ac.uk/innovatingincombat/tag/british-army/

Figure 7 The Wilson Set in use at the Somme
http://blogs.mhs.ox.ac.uk/innovatingincombat/tag/british-army/

Figure 8 The Marconi W/T Set Forward Spark 20 Watt transmitter
http://blogs.mhs.ox.ac.uk/innovatingincombat/tag/british-army/

Figure 9 Instructions for Training the British Armies in France: Provisional Edition for June 1917, pp 43
See xviii

Figure 10 Fullerphone
http://www.wftw.nl/ful.html

Figure 11 Imperial War Museums. Royal Flying Corps taking aerial photographs. Ref Q 33850
https://en.wilipedia.org/wiki/Battle_of_Vimy_Ridge#?media/File;RFC_aircraft+with_aerial_reconnaisance_camera.jpg