SIGNAL SCHOOL.

COMMANDING OFFICERS.

NOTE.—Until 6th April, 1920, the Commanding Officer was known as "Superintendent of Signal Schools." On that date the title was changed to "Captain H.M. Signal School."

Name.	*Rank.*	*Date.*	*Remarks.*
D. R. L. Nicholson	Captain	1-1-04—10-8-05	R.A., 1916. V.A., 1920. V.A.C. Reserve Fleet, 1922-23. Admiral, 1925. K.C.M.G., 1919. K.C.V.O., 1919.
H. G. Sandeman	Comdr.	11-8-05—31-7-06	
A. F. Everett	Captain	1-8-06—24-3-08	Commodore 1st Cl., 19-11-13. Captain of Fleet, 1913-15. Naval Asst. First Sea Lord, 1916. R.A., 1917. C.-in-C. North America and W.I., 1918-20. First member of Australian Naval Board, 1921-23. V.A., 1922. C.-in-C. China, 1924-25. Admiral, 1926. C.B., 1914. K.C.M.G., 1919. K.C.V.O., 1920.
E. M. Phillpotts	Captain	11-1-11—30-7-12	R.A., 1918. V.A. 1923. Admiral, 1927. C B., 1916.
F. L. Field	Captain	31-7-12—17-9-15	R.A., 1919. Third Sea Lord and Controller, 1920-22. R.A. Comdg. Battle Cr. Sq., 1923-24. V.A., 1924. Deputy Chief of Naval Staff, 1925-27. Admiral, 1928. C.-in-C. Med., 1928-1930. First Sea Lord, 1930. K.C.B., 1923. K.C.M.G. 1924.
C. E. Collins ...	Comdr.	18-9-15—12-9-16	
J. D. Allen, C.B.	Captain	13-9-16—14-9-18	R.A., 1924. V.A., 1929. C.B., 1914.
A. K. Macrorie, C.M.G., M.V.O.	Captain	15-9-18—15-11-20	R.A., 1924. V.A., 1929. M.V.O., 1913. C.M.G., 1919
L. G. Preston, C.B.	Captain	16-11-20—15-11-22	Senior Officer Grand Fleet Minesweeping Flotillas during the War. R.A., 1925. R.A. Comdg. 3rd Cr. Sq., 1926-28. V.A., 1930. Fourth Sea Lord, 1930. C.B., 1916.
C. Seymour, D.S.O.	Captain	16-11-22—29-4-25	R.A., 1926. V.A., 1931. D.S.O., 1915.
J. K. im Thurn, C.M.G., C.B.E	Captain	30-4-25—1-1-28	R.A., 1929. Asst. Chief Naval Staff, April 1931. C.B.E., 1919. C.M.G., 1924. C.B., 1931.
J. S. C. Salmond	Captain	2-1-28—1-1-30	
W. B. Mackenzie	Captain	2-1-30—3-1-32	
H. Fitzherbert, C.M.G.	Captain	4-1-32—	

The rating of Second Yeoman of Signals (Petty Officer 2nd class) was substituted for that of Signalman, and a new intermediate rating of Leading Signalman was established. In addition the Signal Branch included the higher ratings of Yeoman and Chief Yeoman of Signals, who received pay at the rate of 2/5 and 2/11 a day respectively.

Finally, the Circular Letter said that a " higher standard " qualification will be instituted, involving instruction in electric telegraphy, electric light, heliography, etc. Not more than 15 per cent. of the signal ratings were to qualify for the higher standard, which entitled them to 3d. a day extra pay.

Admiralty Letter N. 2713, *of 30th October,* 1888.

My Lords propose to establish a School of Signalling at one or two of the Home Ports, where the subjects required for the higher standard will be taught. As a first step they have been in communication with Her Majesty's Postmaster General, and it has been arranged that four Chief Yeoman or Yeomen of Signals shall undergo a five months Post Office course to fit them for the duty of Signal Instructor.

Admiralty Letter N. 3305, *of 12th December,* 1888.

The Lords Commissioners of the Admiralty have decided there are to be two Schools of Signalling; one at Portsmouth on board the *Duke of Wellington,* the other at Devonport, when the Barracks are properly organised.

At Portsmouth, the Gunnery Lieutenant of the *Duke of Wellington* was to take charge of the signalling instruction, and it would be necessary that he should undergo the Post Office course.

> On receiving this Admiralty Letter, the Commander-in-Chief called on the Flag Captain, who was also in charge of the *Duke of Wellington,* to report what facilities, etc. would be needed.

Report by Captain Robert Woodward, C.B., R.N., dated 18th December, 1888.

" A suitable place can be found on board H.M.S. *Victory* for the instruction room. The *Victory* is proposed on account of the incessant and unavoidable noise in the *Duke of Wellington,* occasioned by the various drills being carried out."

With regard to supervision of the Signal School, the Flag Captain added " I beg to point out that the stay of Lieutenants (G) in the ship is very short, and during my command of eleven months I have already had three and am now without one. Therefore I would suggest that a suitable Warrant Officer have charge until a Lieutenant can be appointed solely to undertake this work."

Captain Woodward suggested that the signal course should be 110 days with five hours instruction per day.

Admiralty Letter N. 3882, *of 24th January,* 1889.

This letter approved most of the suggestions contained in the Flag Captain's report and added that "the course of instruction is to be commenced on board H.M.S. *Victory* as soon as practicable. Mr. John Newell, Torpedo Boatswain of H.M.S. *Vernon* will be appointed to superintend the signalling instruction."

Admiralty Letter M. 3156, *of 4th November,* 1889.

"A limited number of Chief Yeomen of Signals will be promoted to the rank of Boatswain."

Nine were promoted and these became the first Signal Boatswains in the Royal Navy.

Admiralty Letter M. 578, *of 3rd March,* 1890.

"In the *Victory* one Boatswain (S) is to be borne when available in lieu of the Torpedo Boatswain hitherto sanctioned."

Signal Boatswains were appointed to the *Vivid* in 1890, and the *Pembroke* in 1891. These appointments no doubt mark the establishment of Signal Schools at Devonport and Chatham, as subsequent Navy Lists shew that these officers were in charge of signalling instruction.

Letter from C.-in-C. Portsmouth to Admiralty, 5th Nov., 1895.

The Commander-in-Chief recommended that the Signal School should be placed in charge of a "Commander or senior Lieutenant, specially selected for his knowledge of signal duties, as in consequence of the largely increased number of signalmen, the school of signalling on board H.M.S. *Victory* has now grown so important. Further, it might be desirable that he should periodically inspect the Signal Schools at the other ports, so that there may be uniformity of training."

Admiralty appointment dated 19th November, 1895.

"Commander L. G. Tufnell, from half-pay to H.M.S. *Victory* in charge of Signal School. This officer (and his successors in the appointment) is authorised to inspect and report, through the respective Commanders-in-Chief, upon the Signal Schools at Sheerness and Devonport."

Commander Tufnell thus became the first Superintendent of Signal Schools. At a later date, after he had become an Admiral, he served as a Lieutenant-Colonel with the British Expeditionary Force during the Great War.

Transfer of the Signal School.

In 1904, visual signal training at Portsmouth was transferred to H.M.S. *Hercules*, then lying alongside the Dockyard, but this was a temporary measure, as two years later the Signal School moved into the Royal Naval Barracks.

From 1906 onwards the School has remained in the Barracks, although on several occasions in the past, its rapid expansion has raised the question of creating a separate signal establishment at Alverstoke, or elsewhere.

As it now exists, the Signal School occupies the whole of " K " and " L " blocks, and all except the first floor of " M " and " V " blocks. In addition, the lecture rooms and wireless experimental section have overflowed into hutments built in close proximity to the rest of the School.

The Pigeon Service.

For some years before homing pigeons gained official recognition, a number of these birds were kept and trained privately by naval officers, who were impressed by the advantages to be gained by this means of communicating between ships and the shore.
For example—

The Captain of H.M.S. *Vulcan* (afterwards Sir John Durnford) reported in 1893 that his executive officer (Admiral Bernard Currey) owned some homing pigeons which were being trained on board. Also, during the naval manoeuvres of 1893, the Gentlemen of the Belfast Homing Society lent eight birds to the *Vulcan*. They had been released at distances between 40 and 120 miles from Belfast and all had homed correctly.

Commander Spencer Login of H.M.S. *Excellent* was commended by the Admiralty in 1894, for arranging an experimental flight by one of the Whale Island pigeons. This bird was released from H.M.S. *Rodney* in thick weather off the Start at 4 p.m., and reached Whale Island at 9.30 a.m. the following morning, the distance being 120 miles.

In 1896, Commander C. H. Bayly of H.M.S. *Excellent*, and Commander Winnington Ingram of the Royal Naval Barracks, Devonport, placed a number of homing pigeons at the disposal of the Admiralty. Their offer was accepted, and this event marks the birth of the " War Pigeon Service " as it was termed in subsequent official correspondence.

On 22nd June, 1896, in a letter to the Commander-in-Chief, the Admiralty said that "Commander Tufnell of the Signal School is to take charge of this year's training, both of the birds at Portsmouth and those at Devonport. Mr. William Barrett, Gunner R.N., who has a practical acquaintance with the training of homing pigeons, will be appointed to assist him, and one Leading Signalman is to be selected and trained for the duty of taking charge of the pigeons."

The next step was to construct a naval pigeon loft; this was built in the Royal Clarence Yard, Gosport, and was commissioned in 1897 by Mr. William Barrett (a) with a complement of 200 birds.

> There were two Gunners named William Barrett, distinguished in the Navy List by the letters (a) and (b). As the officer in charge of the pigeoncote at Gosport, the duties of Mr. Barrett (a) included the instruction of selected signal ratings in the handling of homing pigeons under service conditions.

In 1904 the stock of birds was increased to 300. Many of these naval pigeons set up fine records for oversea flying, and the photographs of some of them with a brief account of their flights are still preserved in the Signal School.

The birds were eventually sold, and the Gosport pigeon loft was finally closed in 1908, but it is of interest to note that homing pigeons have been used subsequently for naval purposes both during the Great War and on certain occasions afterwards.

Wireless Telegraphy.

It was the development of wireless communication which led to the abolition of the War Pigeon Service, and it is for this reason that the subject of wireless telegraphy follows in this brief account of the history of signalling.

July, 1901, saw the official establishment of a separate wireless section in H.M.S. *Vernon*, the headquarters of torpedo and electrical training at Portsmouth. In addition to early experimental work, the new department undertook the instruction of selected signal ratings who volunteered for wireless duty, but it was not until 1908 that a separate Telegraphist Branch was formed. The majority of the telegraphist ratings transferred from the Signal Branch, but the specialist officers were either Torpedo Lieutenants or Marine officers who had undergone a course of instruction on board the *Vernon*.

In June, 1917, the entire Wireless department was transferred from the *Vernon* to the Signal School, and from that time onwards became part of the Naval Signal Service.

The " C.S.S."

On 6th April, 1920, the Superintendent of Signal Schools, Captain A. K. Macrorie, C.M.G., M.V.O., was re-appointed with the title " The Captain, H.M. Signal School," which is shortened in signals to the initial letters C.S.S.

This change of title marks the demise of the Signal Schools at Chatham and Devonport, which were dissolved for reasons of economy, and were formally closed in August, 1922. Thenceforward Portsmouth became responsible for all signal training, ratings from Chatham and Devonport being drafted to this port when necessary to undergo courses of instruction.

The Great War, 1914-1918.

The war period was one of intense research and development in signalling materiel, more particularly in wireless telegraphy and underwater communication. Indeed, it is not too much to say that the progress made during this period affected the entire field of commercial as well as Service communications.

The increased activities of the Signal School led to a large expansion in the numbers of the civilian scientific, technical and clerical staffs (including W.R.N.S.) who were employed in the experimental department of the School. Moreover, workshops had to be provided, which were equipped as perfectly as those to be found in factories belonging to any commercial undertaking of a similar nature.

Towards the end of the war the experimental department undertook the development of anti-submarine devices, other than those which were already being developed by H.M.S. *Vernon*, and to cope with this additional task a further increase of staff and workshops was necessary. There was, however, no logical reason why this state of affairs should continue after the return of peace conditions. The work was outside the proper sphere of a Signal School, and consequently, in April, 1927, the A/S. department was transferred to H.M.S. *Osprey*, the anti-submarine school at Portland.

Signal and Wireless instruction.

The Signal School is divided into two departments, " Instructional " and " Experimental," the former of which undertakes the training of officers and men in all subjects that come under the heading of naval communications.

Theoretical instruction in electrical and mathematical subjects is given by officers belonging to the staff of the School. Practical instruction in visual training is imparted in a variety of ways, of which flag and flashing exercises and marching manoeuvres are no doubt familiar to all who live in the Royal Naval Barracks.

For the benefit of those who seek knowledge and skill in wireless telegraphy, wireless offices are provided similar in all respects to the offices fitted in different types of men-of-war.

The instruction of officers includes courses for those specialising in signal and torpedo duties, Observers, Sub-Lieutenants, Royal Indian Marine, Royal Naval Reserve and Royal Naval Volunteer Reserve Officers. In addition, many foreign naval officers have passed through the Signal School, including officers belonging to the Chinese, Chilian, Egyptian, Jugo-Slav, Siamese and Turkish Navies.

The instruction of ratings includes courses for Petty Officers who are qualifying for Warrant Rank and the training of Marine Signallers for the Naval Examination Service.

The Experimental Department.

This branch of the Signal School is responsible for the development of all signalling materiel, including wireless apparatus, up to and including first trials at sea, the fitting out of all new construction, home Dockyard refits, and the alterations and additions of ships in commission.

In addition, the Experimental Department maintains a special staff to test all electrical apparatus and components, supplied for signalling purposes, before their acceptance for issue to the Naval Service.

Seagoing Tenders and attached Ships.

Before the war, the *Vernon* employed a gunboat (H.M.S. *Niger*) and a cruiser (H.M.S. *Vindictive*) on experimental wireless work. Since then experimental work and the preliminary sea trials of new apparatus have been carried out in tenders and ships " attached " to the Signal School.

The number of these vessels has now, in 1932, been reduced to two, His Majesty's Ships *Concord* and *Sardonyx*, but at various times they have included :—

The battleship *Centurion*, later commissioned as the Fleet Target Ship.

A cruiser, H.M.S. *Antrim*, subsequently relieved by H.M.S. *Yarmouth*.

A destroyer, H.M.S *Truant*, since broken up; her bell is preserved in the Signal School.

A patrol vessel "P.59," a submarine "H.43," a coastal motor boat, and finally an aeroplane.