

STATIONS OF ORGANIZATIONS OF THE SIGNAL CORPS

Organization	Station
1st Field Signal Battalion	American Forces in Germany
2nd " " "	Camp Taylor, Kentucky
3rd " " "	Schofield Barracks, Honolulu, H. T.
4th " " "	Corozal, Canal Zone
5th " " "	Camp Pike, Arkansas
6th " " "	Camp Grant, Illinois
7th " " "	Fort Bliss, Texas
8th " " "	Camp Dodge, Iowa
9th " " "	Camp Gordon, Georgia
10th " " "	Camp Funston, Kansas
51st Telegraph Battalion	Fort Sam Houston, Texas
52nd " " "	Fort Sam Houston, Texas
53rd " " "	Co. D - Siberia,
54th " " "	Co. E - Schofield Barracks, Honolulu, H. T.
55th " " "	Corozal, Canal Zone
	Camp Alfred Vail, New Jersey
1st Service Company	Valdez, Alaska
2nd " " "	Fort Gibben, Alaska
3rd " " "	Boston, Massachusetts
4th " " "	New York City
5th " " "	Charleston, South Carolina
6th " " "	Chicago, Illinois
7th " " "	Fort Sam Houston, Texas
8th " " "	San Francisco, California
9th " " "	Honolulu, H. T.
10th " " "	Manila, Philippine Islands
11th " " "	Corozal, Canal Zone
15th " " "	Camp Alfred Vail, New Jersey
17th " " "	Washington, D. C. -
27th " " "	Seattle, Washington
Signal Corps Detachment	Silesia

U.S. Signal Office

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WAR DEPARTMENT
OFFICE OF THE CHIEF SIGNAL OFFICER
Washington

INFORMATION BULLETIN Classification canceled April 1, 1920
 NO. 1 - 5 by authority of CSD (C. I. S. S. P. C. S. I. O. S. M. A. Y. S. O.)
 By M. M. Young
 (Name and grade of officer, organization, and date) M. M. Young, Capt. Sig. C.
29 May 20
 ANNOUNCEMENT

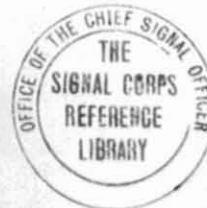
Hereafter there will be published by the Office of the Chief Signal Officer bimonthly bulletins of information. These will be mimeographed in sufficient numbers to allow their distribution to all Signal Corps reserve officers. Later it is hoped that these bulletins will be printed.

It is the belief of this Office that these publications will be of interest to all Signal Corps officers, both those on the active list and those on the inactive list, interested in their own particular branch of the service and the Army, and will also keep them informed of future plans of organization and training, development of Signal Corps methods and equipment, applications of lessons learned in the World War, and of matters of general interest to the Signal Corps.

This Office is desirous of obtaining and invites officers of the Signal Corps of the Regular Army and of the Reserve Corps to submit to this Office discussions, articles, letters and suggestions for publication in these bulletins. All matter for publication should be mailed to the following address:

War Department
 Office of the Chief Signal Officer
 Training Section
 Washington, D. C.

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TARGET PRACTICE

The following instructions relative to target practice for reserve officers have been issued:

a. Authority is hereby given to assign reserve officers to organizations of the Regular Army for target practice, and for the expenditure of the same allowance of small arms ammunition therefor as officers of the Regular Army of the same arm of the service are entitled to.

b. Special Regulations No. 31 is being revised so as to provide that reserve officers on active duty, or assigned to organizations for target practice, shall be entitled to the same allowance of small arms ammunition as are officers of the Regular Army of the same arm of the service. Reserve Officers on inactive duty may be assigned by Department Commanders to an organization of the Regular Army for target practice at their own request but without pay.

COST OF EQUIPPING A SOLDIER IN THE WAR WITH GERMANY AND CIVIL WAR.

Costs per article for the War with Germany are averages of all purchases. Costs for Civil War are averages of lowest and highest prices paid, averages of all purchases being unavailable.

	Costs	
	Civil War	War with Germany
Total Expenditures*	\$274,000,000	\$1,308,000,000
Cost per soldier**	50.00	168.00
Field shoes	2.48	7.45
Breeches, wool dismounted	3.73	6.70
Underdrawers, winter	1.25	2.00
S stockings, wool, heavy	.38	.55
Undershirts, winter	1.51	2.00
Blankets, wool	4.97	6.50
Overcoats, dismounted	9.84	12.17
Coats, wool	9.38	9.79
Leggins, cotton	.99	.92

*Total expenditure for Q.M.C. for clothing and equipage.

**Includes Ordnance items; Civil War figure is for year 1862.

SIGNAL CORPS UNITS OF THE RESERVE OFFICERS' TRAINING CORPS

The Signal Corps is making every effort to develop its Reserve Officers' Training Corps to the highest possible state of efficiency. The primary object of this Training Corps is to provide systematic military training at several educational institutions for the purpose of qualifying selected students as reserve officers in the military forces of the United States. It is intended to attain this object during the time that students are pursuing general or professional duties with the least practicable interference with their civil careers by employing methods designed to fit men physically, mentally and morally for pursuits of peace as well as pursuits of war. It is believed that such military training will add greatly in the development of better citizens. It should be the aim of educational institutions to maintain one or more units of the Reserve Officers' Training Corps in order that in time of national emergency there may be instantly available a large number of educated men physically efficient and trained in the fundamentals of military science and tactics and fitted to lead intelligently the units of the Army upon which the safety of the country will depend. The extent to which this object is accomplished will be the measure of success of the Reserve Officers' Training Corps.

Already Signal Corps Units of the R.O.T.C. have been established at the following educational institutions:

A. & M. College of Texas,	College Station, Texas
Columbia University,	New York City
College of the City of New York,	New York City
Cornell University,	Ithaca, New York
Carnegie Institute of Technology,	Pittsburgh, Pa.
Georgia School of Technology,	Atlanta, Georgia
Massachusetts Inst. of Tech.,	Cambridge, Mass.
University of Illinois,	Urbana, Illinois
University of Michigan,	Ann Arbor, Michigan
University of Minnesota,	Minneapolis, Minn.
University of Wisconsin,	Madison, Wisconsin
Yale University,	New Haven, Conn.

Due to the shortage of commissioned personnel in the Signal Corps it has not been possible to detail officers as instructors to all of these institutions, but selected noncommissioned officers have been assigned to them. It is hoped that in the future conditions may permit the detail of suitable officers for this important duty.

The summer camp for students enrolled in the Signal Corps Units at the above-named institutions will be held at Camp Alfred Wail, Little Silver, New Jersey, from June 24 to August 4, 1920. No camps for reserve officers are to be held this year.

(MILITARY STRENGTH OF U.S., continued)

	Registered for draft, 18 - 45	Physically fit for Mil. Service	Per Cent Physically fit
Mississippi	344,724	275,900	80.0
Florida	209,248	167,400	80.0
Wisconsin	586,290	463,800	80.0
Illinois	1,574,877	1,256,000	79.8
New Hampshire	95,153	75,300	79.7
Iowa	524,456	417,400	79.6
New Mexico	91,013	64,200	70.3
Missouri	765,045	605,700	79.3
Kentucky	486,739	385,900	79.3
New Jersey	762,435	603,900	79.2
P ennsylvania	2,069,407	1,636,300	79.1
North Carolina	482,463	379,500	78.7
Colorado	216,820	170,600	78.7
Utah	103,052	80,500	78.1
Oregon	179,456	140,000	78.0
South Carolina	307,350	239,000	77.8
Georgia	549,235	425,600	77.5
Connecticut	374,400	289,500	77.3
Michigan	873,383	669,800	76.7
Louisiana	392,316	299,500	76.1
New York	2,511,046	1,907,200	76.0
Maryland	313,489	236,900	75.6
Virginia	465,439	351,100	75.4
Tennessee	474,347	357,800	75.4
Washington	328,466	242,100	73.7
California	839,614	617,100	73.5
Massachusetts	886,728	649,700	73.3
Maine	159,631	104,400	65.4
Vermont	71,484	46,200	64.6
Rhode Island	134,515	77,400	57.6
TOTAL	23,908,576	18,798,600	78.6

MILITARY STRENGTH OF THE UNITED STATES

Twenty-four million men were registered for the draft. About 3,600,000 were examined either by the draft board doctors or the camp surgeons. Of this number, 79 per cent passed both examinations as fit for either full or limited military service.

Below are given, by states, the percentages so passed as reported by the Surgeon General, and the number registered as shown in the report of the Provost Marshal General for 1918. Assuming that the same percentages would have held if all registrants had been examined, there were nearly 19,000,000 between the ages of 18 and 45 physically fit for military service. Their distribution by states is shown:

	Registered for draft 18 -- 45	Physically fit for Mil. Service	Per Cent physically fit
Wyoming	59,977	52,300	87.2
Nebraska	287,414	248,600	86.5
Kansas	382,065	325,900	85.3
Arizona	94,310	79,900	84.7
District of Columbia	90,361	75,600	83.7
Montana	201,256	168,500	83.7
Arkansas	365,904	305,900	83.6
North Dakota	160,292	133,500	83.3
Texas	990,522	816,200	82.4
West Virginia	325,266	267,400	82.2
Alabama	444,842	364,900	82.0
Idaho	105,337	86,400	82.0
Indiana	639,834	522,500	81.7
Oklahoma	435,668	355,000	81.5
Nevada	30,803	25,100	81.4
South Dakota	145,706	118,300	81.2
Ohio	1,389,474	1,128,600	81.2
Minnesota	541,607	438,800	81.0
Delaware	55,277	44,300	80.2

The following letters were received by the Commanding Officer, 7th Field Signal Battalion, after the review and inspection held at El Paso for General Pershing:

" HEADQUARTERS EL PASO DISTRICT
U. S. ARMY
El Paso, Texas February 4, 1920.

From: Chief of Staff,
To: Commanding Officer, 7th Field Signal Battalion, Fort Bliss, Texas.
Subject: Inspection and Review of Troops of this Command by
General Pershing.

1. The Commanding General desires me to express to you, your officers and men his deep appreciation of the splendid showing made by the 7th Field Signal Battalion at the inspection and review of this command by General Pershing on February 2nd, 1920, and to congratulate all concerned with the preparation and training of the units of your command which took part in the compact display of military activities.

2. The entire command presented a most presentable appearance on all occasions and has reason to be proud of the many favorable comments elicited from the General of the Army and the Officers of his staff.

3. It may also be of interest to know that the splendid review and exhibitions which were witnessed by thousands of civilians have been the means of bringing about closer relations and a better understanding between the Army and citizens of this district, which cannot fail to be of lasting benefit to both.

4. Please see that the contents of this communication are made known to all members of your command.

By command of Major-General HOWSE:

F. W. GLOVER
Colonel of Cavalry, USA
Chief of Staff.

THE SIGNAL CORPS LOOP RADIO SET

This Set (SCR-77) was designed and built by the Signal Corps in 1918-1919, in order to furnish radio communication between Infantry Battalion Headquarters and Regimental Headquarters, and between Battalion Machine Gun Headquarters of an Infantry Division and Infantry Battalion Headquarters. It is also designed to establish communication between shock troops and supporting troops, and may be used to establish communication for short periods in shell holes, and is used as "over the top" equipment to communicate with supporting Artillery, and to establish communication between organizations of different units, latterly and from front to rear.

The apparatus consists of a portable two-way vacuum tube transmitting and receiving set with a loop antenna, a little more than one meter square; power furnished from storage battery; two-way break-in key with a transmitting range of five miles, using wave-lengths of 74 to 76 meters.

This set employs an entirely new type of radio communication. In its final form it embodies the following military requisites:

- (1) Extreme portability.
- (2) Ruggedness and few parts.
- (3) Simplicity of operation.
- (4) No aeriels.
- (5) No ground or counterpoise.
- (6) Remarkable freedom from interference.
- (7) Two-way break-in communication.
- (8) Considerable degree of secrecy.

in brief: A battalion-regimental undamped short-wave telegraph set, contained in a small set box weighing about 27 pounds, operated by a detachment of Signal Corps troops assigned to regimental headquarters and forming one of the most important radio nets of an Infantry Division.

The training is along standard commercial and Army methods, and corresponds to the highly equipped and thoroughly efficient plan of a modern Trade school. There are fourteen different courses taught, any of which not only fits the soldier for his duties in the Army but qualifies him in a trade which insures him ready employment after his service with the colors has expired. The specialties taught are Morse Telegraphy, Radio Telegraphy, Telephone and Telegraph Repeater and Testboard Men, Telephone and Telegraph Equipment and Maintenance Men, Telephone and Telegraph Linemen, Telephone and Telegraph Cablemen, Telephone Switchboard Operators, Submarine Cable Operating and Testing, Highspeed Printing Telegraphy, Radio Specialists, Photography, Meteorology, Motor Mechanics and Chauffeurs.

The courses are of an elementary nature for the first three months, the remaining three months being devoted entirely to the respective specialties, including shop and outside work and a series of terrain exercises.

The plant laboratory and shop are as complete as can be seen in any trade school, resembling more nearly a standard commercial system.

The school is purely a technical one: no tactics are taught except where necessary to demonstrate the use of apparatus.

There are at present eight officers and four hundred and thirty eight enlisted students enrolled, the first class graduating on April 15, 1920.

The school site is beautifully located at Little Silver, New Jersey, healthful and within one and one-half hour's ride to New York City and twenty minutes ride from Asbury Park. The terrain and the inlets from the Atlantic Ocean afford excellent opportunities for a variety of problems. These will include all classes of line and cable construction, and operating and maintenance experience. The surrounding country, which is a health resort, affords opportunity for athletics, surf bathing and numerous other pastimes enjoyed in no other school.

The scheme now is that eventually every enlisted man of the Signal Corps will eventually take a course in some specialty at this School.

The Officers' Section is being given a special course in systems of communication to fit them to command and supervise instruction in Signal Corps Units.

The American Telephone & Telegraph Company, the Western Union Telegraph Company, The Westinghouse Electric Company and others have had representatives inspect the school and have unanimously agreed as to its soundness of policy. They have offered any assistance desired, even going so far as to offer positions to such men graduating after they are discharged from the Army.

- 8 -

HEADQUARTERS EL PASO DISTRICT
El Paso, Texas

February 5, 1920.

From: Commanding General, El Paso District.
To: Commanding Officer, 7th Field Signal Battalion,
Fort Bliss, Texas.
Subject: Educational and Vocational Exhibits and Material Display.

1. I desire to congratulate you and the Officers and enlisted men of your command for the excellent display of material in connection with the recent exhibits held at Fort Bliss.
2. Your display was highly complimented by General Pershing and his staff, as well as by various civilians of El Paso and vicinity. Work of this kind not only promotes the welfare of the Army but brings the various representative civic bodies into closer and more intimate relations with the service at large.
3. Please convey to your Officers and enlisted men my sincere appreciation of their efforts in staging exhibits which are a credit to the United States Army.

ROBERT L. HOWSE
Major-General U.S. Army. "

THE SIGNAL CORPS SCHOOL AT LITTLE SILVER, N. J.

The Signal Corps School was organized September 30, 1919, the first class having been entered October 1 of the same year.

This School is the result of the advice of experienced officers of the Army, who believed that the days of the "Jack of all Trades" were ended, and to properly construct, operate, maintain and control the existing systems of Line of Information in the United States and possessions, as well as in tactically organized divisions, specialists along all lines were required. To this end the School has worked and produced. It is being conducted by a specially selected corps of instructors, military and civilian.

The amount of signal traffic dealt with became very great, and on the lines of communication alone more than 23,000 telegrams have been transmitted in 24 hours. Similarly, at general headquarters as many as 8,000 telegrams have been dealt with in 24 hours, besides 3,400 letters carried by dispatch riders; and army headquarters had handled 10,000 telegrams and 5,000 letters in the same space of time, and a corps, 4,500 telegrams and 3,000 letters. In addition to telegrams and letters, there has been at all times a great volume of telephone traffic.

Something of the extent of the constructional work required, in particular to meet the constant changes of the battle line and the movement of headquarters, can be gathered from the fact that as many as 6,500 miles of field cable have been issued in a single week. The average weekly issue of such cable for the whole of 1918 was approximately 3,300 miles."

"Discipline has never had such a vindication in any war as in the present one, and it is their discipline which most distinguishes our new armies from all similarly created armies of the past. At the outset the lack of deep-seated and instinctive discipline placed our new troops at a disadvantage compared with the methodically trained enemy. This disadvantage, however, was overcome, and during the last two years the discipline of all ranks of our new armies, from whatever part of the Empire they have come, was excellent. Born from a widespread and intelligent appreciation of the magnitude of the issues at stake and a firm belief in the justice of our cause, it drew strength and permanence from a common-sense recognition of what discipline really means -- from a general realization that true discipline demands as much from officers as from men, and that without mutual trust, understanding, and confidence on the part of all ranks the highest form of discipline is impossible.

Drawn from every sphere of life, from every profession, department, and industry of the British Empire, and thrust suddenly into a totally new situation full of unknown difficulties, all ranks have devoted their lives and energies to the service of their country in the whole-hearted manner which the magnitude of the issues warranted. The policy of putting complete trust in subordinate commanders and of allowing them a free hand in the choice of means to attain their object has proved most successful. Young officers, whatever their previous education may have been, have learned their duties with enthusiasm and speed, and have accepted their responsibilities unflinchingly.

LAST REPORT OF FIELD MARCHAL SIR DOUGLAS HAIG.

The following interesting extracts (one on the development of the British Signal Service during the World War, the other on discipline) are quoted from the last report of Field Marshal Sir Douglas Haig:

"An intelligent understanding of "the other man's job" is the first essential of successful cooperation. To obtain the best results from the vast and complex machine composing a modern army, deep study of work other than one's own is necessary for all arms. For this study much time is needed, as well as much practical application of the principles evolved, and for reasons already explained, opportunity sufficient for adequate training could not be found. None the less, the best possible use was made of such opportunities as offered, and much was in fact accomplished.

As a natural corollary to the general increase of our forces, the signal service, required alike for the proper coordination of supply and for the direction and control of the battle, has grown almost out of recognition. From an original establishment of under 2,400 officers and men, trained and equipped chiefly for mobile warfare, at the end of 1918 the personnel of the signal service had risen to 42,000, fully equipped with all the latest devices of modern science to act efficiently under all conditions as the nervous system to the whole vast organism of our army.

The commencement of trench warfare and the greater use of artillery led to a rapid development of the signal system, which, as fresh units were introduced became more and more elaborate. At the same time, the increase in the power and range of artillery made the maintenance of communications constantly more difficult. Many miles of deep trenches were dug in which cables containing 50 to 100 circuits were buried to gain protection from shell fire. The use of wireless communication gradually became more widely spread and finally constituted part of the signal establishment of all formations down to divisions. To provide an alternative method of communication with front-line troops, in 1915, carrier pigeons were introduced and a special branch of the signal service was formed controlling ultimately some 20,000 birds. In 1917 a messenger-dog service was started for similar purposes and did good work on a number of occasions.

The expansion of the work of the signal service in the more forward areas was accompanied by a similar development on the lines of communication, at general headquarters, armies, and corps. Construction and railway companies were formed and about 1,500 miles of main telegraph and telephone routes constructed in the lines of communication area alone, in addition to many miles in army areas. Provision had to be made for communicating with London, Paris, and Marseille, as well as between the different allied headquarters. On the advance of our forces to the Rhine telephone communication was established between general headquarters at Montreuil and Cologne. Signal communication entailing the putting up of many thousands of miles of wire was provided also for the control of railway traffic, while to supplement electric communication generally a dispatch rider letter service was maintained by motor cyclists.

SIGNAL CORPS WORK IN THE A.E.F.

After reading the above extracts from the report of Field Marshal Sir Douglas Haig the following facts connected with the work of the Signal Corps in the American Expeditionary Forces will be interesting:

"Two Armies, 12 Corps, 33 Divisions and 45 Field Signal Battalions connected therewith, were completely equipped with field signal supplies. Twenty-three telegraph battalions were equipped, of which eleven were outfitted to serve with Army and Corps troops. The Signal Corps constructed 1990 miles of permanent pole lines with 28,000 miles of wire, put up 3,250 miles of wire on French pole lines, and installed approximately 40,000 miles of combat lines. We leased from the French 20,400 miles of wire.

Telegraph offices on permanent lines numbered 134; perhaps twice that number were established temporarily on field lines.

Telephone exchanges on permanent lines numbered 273, those in the Advance Section 123, but the small temporary field installations were much more numerous. Over 9000 telephones were connected with the permanent lines. Practically our entire construction period was crowded in between January 1, 1918 and November 11, 1918.

Over 12,000,000 telegrams were handled over our military lines, about 1,600,000 long distance telephone calls and 47,000,000 local calls. Ninety percent of this whole business was handled between May 1, 1918 and July 1, 1919.

This service when reduced to a basis of the commercial cost, if rendered in this country, would be about \$9,000,000. With a total permanent plant investment of less than half that value, it appears that our A.E.F. wire systems were on a sound commercial basis.

By way of comparison it is interesting to note in Marshal Haig's final report that he gives the maximum number of telegrams per day as 23,000 on the Lines of Communication of the British Army in France, as the volume of business after four years' participation in the war. In the A.E.F. after fifteen months' participation we were handling about 35,000 messages per day in the S.O.S., the messages averaging more than double the length of the British, amounting to three times the telegraphic business over the corresponding British system. No numerical statement can be made from data at hand for the French, but anyone could see on the most casual inspection at French Headquarters that their use of wire communication did not compare in magnitude or importance with our own.

(S.C. IN THE A.E.F. continued)

A force of 976 telegraph and multiplex operators was required on the permanent lines at the peak of our load in November 1918. These men included a large percentage of the artists of their profession, with high ideals regarding duty, and the quality and quantity of work they could perform.

A tribute is due here to the 233 young women telephone operators for their quiet and efficient performance of duties. Their skill, tact and patience did much in expediting telephone business, especially at some of our largest and most crowded centers.

The profound influence that the modern American wire systems in France had on the location of the different headquarters, and as a factor in the prompt transaction of business generally should be noted. The insuperable difficulties under which the American postal service of the A.E.F. labored emphasized the value of the wire service. The telephone repeater gave easy clear telephone conversation between posts and headquarters, especially over the 315 miles that separated Tours from Chaumont. It is stated with full knowledge of the conditions, that the location of the two great headquarters thus separated would have been impossible without the American long distance telephone and the printing telegraph service, for European methods were entirely inadequate. It is also a fact that the state of the art would have prevented such operation anywhere three years previously.

In concluding this subject it should be noted that the Signal Corps, in providing for its early installations, appreciated that American temperament and customs demanded military wire systems which in magnitude and importance would greatly exceed those of our allies. Certainly the American in times of peace has turned to his wire communication with a frequency and dependence that puts him in a class by himself. He is accustomed to a service that for speed and efficiency is matched by no other country. And whatever may be our views, whatever limitations are attempted by the issuance of orders, the demand for such service by the American when militarized will be insistent. The Signal Corps being charged by law and regulations with supplying these needs must inevitably prepare for tasks much greater in proportion than the similar ones in other Armies."

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Our universities and public schools throughout the Empire have proved once more, as they have proved time and again in the past, that in the formation of character, which is the root of discipline, they have no rivals. Not that universities and public schools enjoy a monopoly of the qualities which make good officers. The life of the British Empire generally has proved sound under the severest tests, and while giving men whom it is an honor for any officer to command, has furnished officers of the highest standard from all ranks of society and all quarters of the world."