

**Notes on the
Instructions and Regulations**
for the
Organization, Administration, and Training
of the
Volunteer Communication Reserve

**PUBLISHED AS A GUIDE
FOR NAVY AND NAVAL RESERVE PERSONNEL**

These notes are published in connection with United States Naval Reserve Regulations which are Part H of the Bureau of Navigation Manual. For the sake of brevity regulations in Part H Bureau of Navigation Manual are referred to by number and not quoted verbatim.



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The Volunteer Communication Reserve is composed of officers and men of the Volunteer Naval Reserve of classes C-V(S) (officers) and V-3 (enlisted men). When the Naval Reserve was reorganized by act of Congress approved February 28, 1925, which became effective July 1, 1925, this Communication Reserve personnel was allowed, to provide for the personnel requirements of the Naval Communication Service in case of war or national emergency.

During the last war the Naval Communication Service was expanded fourfold between the entrance of the United States into the war and the declaration of the armistice. This expansion was accomplished by enlisting personnel from the amateur and commercial radio fields, in the Naval Reserve, and by the establishment of training schools in various localities. Necessarily the instruction courses were intensive and the period of instruction short, resulting in some only partially qualified men being detailed to important communication duties. The results obtained were surprisingly good but would have been much better had there been a completely or even partially trained reserve ready for duty at the beginning of the war.

With this idea in mind, based upon past experience, it was decided to procure officers and enlisted personnel for the present Volunteer Communication Reserve, and after procurement, to establish some system for training and instruction in time of peace.

It was further learned from experience during 1925 and 1926, that in order to interest and recruit the desired personnel, that some form of organization was a basic necessity and further that some form of Naval Reserve radio activity was required in order to maintain interest and secure continued willingness to study Naval Communication procedure and methods.

Experience during 1927 and 1928 has shown the further need for establishing headquarters for radio stations and meeting places for the instruction of personnel, not only in communication, but in some of the general customs, courtesies, and requirements of the naval service.

The purpose then, of these notes, is to describe in simple language, the system now in effect, together with suggested ways and means for accomplishment.

The volunteer feature of the organization is particularly to be stressed and the fact stands out clearly that such progress as has been made, has been due very largely to the time, effort, and funds given so freely by the personnel of the Communication Reserve.

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[Synopsis of contents of Naval Reserve regulations contained in Part H of Bureau of Navigation Manual]

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MEMORANDUM

TO :

FROM :

SUBJECT :

1. [Illegible text]

2. [Illegible text]

3. [Illegible text]

4. [Illegible text]

5. [Illegible text]

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7. [Illegible text]

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CHAPTER 1

GENERAL

Section 1. MISSION

1. The mission of the Naval Communication Reserve is to procure, organize, and train the officers and men necessary for the expansion and operation of the Naval Communication Service in time of national emergency.

Section 2. COMPOSITION AND ORGANIZATION

1. Designation of Volunteer Communication Reserve personnel:

- (a) C-V(S), communication volunteer special service officers.
- (b) V(S), chief and radio electricians (warrant).
- (c) V-3, enlisted men of radio and telegraph ratings.

2. Ratings in class V-3 are:
 - (a) CRM, RM1c, RM2c, RM3c.
 - (b) CT, T1c, T2c, T3c.
 - (c) Sea1c for radioman.
 - (d) Sea2c for radioman.

(N. B. V-3 Hospital Corps men are not included in the scope of these notes.)

3. Organization is on the basis of the naval district and the commandant of each district will administer the Communication Reserve organization within the district.

N-R-Regs. (H-3303-(4))

(H-1207)

(H-3202-(3))

Section 3. PROCUREMENT

1. Officers and men are procured by selection from the following sources:

- (a) Ex-naval officers.
- (b) Ex-Naval Reserve officers.
- (c) Executive personnel of—
 - (1) Commercial telegraph and cable companies.
 - (2) Commercial radio companies.
 - (3) Radio engineers and experts in traffic.
- (d) Operating personnel of commercial shore radio stations.
- (e) Operating personnel of ship radio stations.
- (f) Operating personnel of airplane radio stations.
- (g) Amateur radio operators.
- (h) Inexperienced men interested in radio.
- (i) Sound recording experts engaged in photo and sound film recording.
- (j) Personnel of telephone companies.
- (k) Employees of electric power companies.
- (l) Telegraph and radio operators employed by press associations.
- (m) Employees of stock brokers—expert in telegraphy.
- (n) Communication personnel of scientific expeditions.
- (o) Ex-Navy radiomen.
- (p) College students interested in radio or wire communication.
- (q) Employees of radio manufacturing companies.
- (r) Railroad telegraphers.

Section 4. TRANSFERS

1. Transfers between certain classes of the Naval Reserve may be made by commandants (H-2601) (H-3602). Transfer between other classes may only be made by approval of the Bureau of Navigation (H-3601—H-3602).

2. Commandants have been authorized by Bureau of Navigation (Naval Reserve circular letter No. 27-29 of October 12, 1929) to submit names of such V-3 personnel as they desire transferred to class V-6. Such transfers will be authorized in the cases of V-3 men who have failed to maintain their proficiency, who have lost their Department of Commerce licenses, and have lost interest in the Naval Communication Reserve.

3. The object of transferring men from class V-3 to class V-6 is to provide a means for eliminating disinterested men from sections and units of the Volunteer Communication Reserve, in order that interest and activity in connection with training may be maintained.

4. Requests for transfer from class V-3 to class V-6 may be originated by Communication Reserve officers in immediate command of the men concerned

and such requests should then be forwarded to the Bureau of Navigation with the commandant's recommendations.

5. Radioman ratings in F-1 (Fleet Naval Reserve) may be filled by transfer of rated V-3 men, when vacancies exist in the fleet division pay grades and provided the men to be transferred are professionally qualified for such rating in class F-1, in accordance with Bureau of Navigation Manual. Such transfers are authorized by the Bureau of Navigation, upon recommendation of the district commandant.

Section 5. PEACE-TIME UTILIZATION OF VOLUNTEER COMMUNICATION RESERVE

1. Officers of class C-V(S) may, with their own consent and when authorized by proper authority, be utilized in time of peace for:

- (a) Recruiting, organizing, administering, and training the Volunteer Communication Reserve.
- (b) On temporary active training duty with or without pay at naval district headquarters, communication offices, shore radio stations, coding board, radio direction finder stations, and on shipboard for any duties for which they are qualified.

2. Enlisted men of class V-3 may, with their own consent and at the pleasure of proper authority, be utilized with or without pay for:

- (a) Communication duties ashore.
- (b) Communication duties afloat.

3. The Volunteer Communication Reserve as an organization can be utilized in time of peace for:

- (a) Emergency radio communication.
- (b) Disaster relief communication.
- (c) Intra and inter district reserve communication.
- (d) To furnish communication personnel for week-end or summer-training cruises (for eagle boats and destroyers).
- (e) To provide receiving stations to cover special flights.
- (f) To provide personnel and equipment for conducting special high-frequency tests with naval stations.
- (g) To establish communication with and interest civilian radio personnel in joining the Naval Reserve.
- (h) In certain cases to furnish uniformed personnel for street parades or ceremonial occasions. At localities where divisions of the Fleet Naval Reserve are located, the Fleet Reserve personnel will handle street parades and ceremonial functions, but in other localities the Volunteer Naval Reserve may participate when and if properly drilled.
- (i) To furnish personnel for scientific and exploring expeditions.
- (j) To assist in radio instruction of members of the Fleet Naval Reserve.
- (k) In general to cooperate in all possible ways with the Naval Communication Service, and other branches of the Naval Reserve.

CHAPTER 2

Section 1. ADMINISTRATION

1. The Volunteer Communication Reserve is administered by the commandant of each naval district subject to rules and regulations of the Bureau of Navigation. All matters relating to commissioned and enlisted personnel are under the cognizance of the Bureau of Navigation.

2. All Naval Reserve radio communication ashore is likewise under jurisdiction of district commandant, subject to rules and regulations promulgated by the Chief of Naval Operations. This includes Volunteer and Fleet Naval Reserve and Aviation Reserve Communication.

Section 2

1. The organization within a naval district and the chain of command is as follows:

- (a) The district commandant.
- (b) Such regular officer as the commandant may detail to represent him and to act as instructor-inspector for the Communication Reserve.
- (c) Volunteer Communication Reserve commander.
- (d) Section commanders.
- (e) Unit commanders.
- (f) (1) Individual officers.
(2) Warrant officers.
(3) V-3 radiomen.
(4) V-3 telegraphists.
(5) V-3 sea1c.
(6) V-3 sea2c.

2. The Communication Reserve commander may have other V(S) officers assigned to him as executive officer, medical officer, personnel officer, etc., according to size and needs of the district.

3. The function of the Communication Reserve commander is to serve as aide to the commandant for Communication Reserve activities. The Communication Reserve commander is expected to supervise and synchronize the activities of the various section commanders.

4. For these reasons it is important that the officers selected as Communication Reserve commanders and as section commanders should not only be prominent in commercial and amateur radio but also should have the personal qualifications of leadership, enthusiasm, and standing in the local community.

5. The degree of organization which can be effected is in almost direct proportion to the effort and time which can be devoted by these officers to this voluntary work. For this reason, whenever possible, such officers should be selected whose civilian employment will not militate against their efforts to organize the Communication Reserve.

Section 3. RECRUITING

1. Each naval district has been assigned a quota of V-3 men to be recruited within the district. (See sec. 3, Procurement.) The subject of recruiting this

class of men has been covered by means of circular letters from the Bureau of Navigation to commandants of the several districts. Briefly, instructions have been issued that Navy recruiting officers and divisions of the Fleet Naval Reserve shall cooperate in every possible way to assist in the physical examination and enlistment of applicants.

2. Under certain conditions, temporary training duty with pay and mileage, of a few days duration, may be authorized for reserve medical officers in order that they may visit localities where several applicants have applied for enlistment. By authority of the Secretary of the Navy certain medical officers, upon application by the commandants to the Bureau of Navigation, may be appointed Naval Reserve recruiting officers. A specific request for such authority must be made in each case. Such authority will be granted only in localities where there are no naval recruiting officers or Naval Reserve officers already authorized to act in such a capacity.

3. In localities where there are divisions of the Fleet Naval Reserve, prospective applicants for class V-3 may be sent to the Fleet Naval Reserve armories on regular Fleet Reserve drill nights for physical examination by the fleet division medical officer. In other localities where reserve medical officers reside and practice medicine, it is frequently possible to arrange for such examinations to be conducted during private office hours.

4. In order to stimulate interest and promote recruiting it is desirable for C-V(S) officers to attend meetings and conventions of commercial and amateur radio operators in order to explain the interest and benefit to be derived by enlisting in the Volunteer Communication Reserve.

5. It is frequently possible to secure cooperation from the local chambers of commerce and the municipal officials of towns and cities in making available office or armory space where meetings may be held as a preliminary to enlistment. Publicity can frequently be obtained in the same manner.

6. The Department of Commerce publishes each year a list of amateur radio stations of the United States. A canvass should be made of the names of owners of amateur stations located in each naval district with a view toward securing the enlistment of such of them as may be physically and professionally qualified.

7. Commandants should keep in touch with United States supervisors of radio of the Department of Commerce located in their respective districts, and procure from them from time to time names of radio operators who have been issued commercial and amateur radio operator's licenses.

8. The large commercial communication companies employ considerable numbers of commercial operators and these companies are usually willing to furnish lists of names of their operators.

Section 4. INSTRUCTION AND TRAINING WITHIN THE DISTRICT

1. The instruction and training of C-V(S) and V-3 personnel serves a double purpose:

- (a) It increases the individual's knowledge of naval communication methods and procedure.
- (b) It stimulates and maintains his interest in the Naval Reserve.

2. Officers and men of the Communication Reserve are enabled to obtain training and increase their knowledge of naval communications by the following methods:

- (a) By studying at home Naval Communication Instructions, Radio Manual, Boat Book, U. S. Navy, Instruction Course for Radioman, Naval Radio Operators' Signals, and certain other publications that are available.

- (b) By participating in radio communication involving instruction in naval communication methods.
- (c) By attending in person drills held in armories or other public quarters in charge of commissioned or petty officers of the Communication Reserve in conjunction with divisions of the Fleet Naval Reserve.

3. Such training and drilling as described above is on a voluntary basis without pay and is to be considered entirely separately from the officially authorized training duty with or without pay when under orders which will be discussed in Chapter V. The term "radio drill" used herein is used to describe the training and instruction conducted by means of radio communication and is not to be confused with the term "drill" as defined by article H-2707 of Naval Reserve Regulations.

4. The present system of radio drill is based upon the following:

- (a) National reserve radio network.
 - (b) District reserve radio network.
 - (c) Section reserve radio network.
- (See ch. 3, secs. 1 to 9, inclusive.)

5. It should be possible for members of the Communication Reserve, owning and operating amateur radio stations, to participate by radio in these drills in any naval district in which they reside.

6. Much stress has been laid upon the importance of cooperation between the Fleet Reserve and the Volunteer Communication Reserve, with particular reference to the mutual benefit to be derived by this organization. The Fleet Naval Reserve is usually in a position to offer armory space, lockers, ordnance, certain articles of uniform, and other facilities. The Communication Reserve is in a position to offer expert communication officers to give instruction to Fleet Reserve personnel, to man the radio equipment of local reserve vessels or armory radio stations, and to give instruction in the theory of radio and in practical radio operating, and in many cases C-V(S) officers may act as communication officers for local fleet divisions.

7. Instructions have been forwarded to commandants of all naval districts by letter requesting that steps be taken to insure the full cooperation between these two branches of the Naval Reserve. If, in any particular locality proper cooperation is not available, this condition should be reported to the district commandant in order that corrective action may be taken.

8. The Chief of Naval Operations (Director of Naval Communications) is responsible for supervising the conduct of all Naval Reserve communications by radio. Only one Naval Reserve radio communication system shall be maintained on shore, and both Volunteer and Fleet Naval Reserve shall be included therein. As the Volunteer Communication Reserve commander is responsible in each district (under the commandant) for the operation of the master and alternate control reserve radio station, such officer is charged with the responsibility of supervising all reserve radio communications ashore within the district, and is further responsible to the commandant for the proper conduct thereof.

9. In many cases, the commandant has detailed his district communication officer as inspector-instructor for the Communication Reserve within his district, and in such cases, the point of contact with the Communication Reserve commander is with the district communication officer.

10. There has been some difference of opinion with regard to the desirability of instructing Communication Reservists in infantry drill and the manual of arms. It is self-evident that this type of instruction can only be given to units

where several men can be drilled in a group, and can be properly outfitted with uniforms and ordnance equipment. This form of drill has proven of great value from the standpoint of maintaining interest and diversifying instruction. It furthermore tends to improve the morale and military bearing of the personnel, and tends to impress upon the personnel that they are actually connected with a military organization. For these reasons, it is believed that in localities where facilities are available for properly safeguarding ordnance equipment to prevent loss or theft, and where 10 or more officers and men can be grouped together, that a limited amount of close-order infantry drill and instruction in manual of arms is desirable. On the other hand, such drills shall be considered secondary to the main mission, which is to train in radio operation and naval procedure.

11. While, as a general thing, V-3 radiomen are not called upon for visual signaling, there will be cases when C-V(S) officers will require some knowledge of visual signaling. It is, therefore, important that a certain amount of study be given to the Boat Book of the U. S. Navy, 1927, of which several hundred copies have been distributed to the several districts during the latter part of 1930.

Section 5. PROMOTIONS IN RANK

1. Naval Reserve Regulations now in effect provide definitely the method for promoting C-V(S) officers. It is unnecessary to repeat in detail in these notes information contained in other publications. However, it will not be out of place to state in a general way what forms the basis of promoting C-V(S) officers. In general, the following conditions are considered:

- (a) Physical qualification.
- (b) An increase in professional knowledge of commercial or amateur radio.
- (c) An increase in knowledge of naval communication methods and procedure during service in grade.
- (d) A consistent effort and interest displayed in connection with training, drilling, or organization of the Naval Communication Reserve.
- (e) Recommendations of civilians, civilian employers, Naval Reserve and naval officers.

The mere fact of four or more years' service in grade is of itself not a qualification for promotion.

2. Any officer may ascertain his position on the Naval Reserve precedence list by addressing an inquiry to the Bureau of Navigation via commandant of his district. The promotion of special service officers is based upon the precedence list of the Fleet Naval Reserve and each Special Service officer has been assigned a running mate therein.

Section 6. ADVANCEMENT IN RATING

1. Advancement in rating of class V-3 men has been made the subject of letters of instruction to commandants of all naval districts. It is not considered necessary to repeat in detail the requirements which have already been stated in Bureau of Navigation Naval Reserve circular letter No. 33-29 dated November 12, 1929. Since date thereof, no changes have been made in requirements except that as a general rule the idea has been adopted of requiring a man to serve one year in a given rating before being considered eligible for advancement. This is not compulsory.

2. The Bureau feels it is desirable to reward enlisted men who have demonstrated their zeal and increased efficiency by advancement in rating. Commanding officers of sections and units should make it their duty to see that enlisted men are afforded as much opportunity as possible for improving their professional knowledge and qualifying for advancement. Examinations may be made up based upon the requirements of Bureau of Navigation Manual, Part D, paragraph 5220, (1), (2), (3) and (4).

3. Under the provisions of circular letter No. 33-29, if a radioman should qualify for advancement in rating through having procured a higher grade commercial operator's license, commanding officers should, nevertheless, assure themselves that the applicant for advancement has increased to a reasonable degree his general knowledge of naval subjects, such as is stated in Bureau of Navigation Manual, Part D, paragraph 5220.

4. All rated radiomen should make a determined effort to acquire the knowledge necessary to enable them to perform the duties of their rating at sea on a vessel of the United States Navy. When such information has been acquired and is accompanied by satisfactory operating ability, there should be little or no difficulty in qualifying for advancement in rating.

CHAPTER 3

NAVAL RESERVE RADIO ASHORE

GENERAL

The Naval Communication Service operates established communication circuits continuously connecting all district headquarters. The Naval Reserve district network is established principally for radio drills, but in addition, for the purpose of connecting its network with the regular naval communication system for emergency communications.

In addition, an arrangement is provided for emergency use, by means of which the district reserve radio networks may be interconnected for inspection and emergency use in event a portion of the regular naval communication network is at any time incapacitated. This latter reserve network is drilled under the designation of "The National Reserve Network."

Section 1

1. Naval Reserve radio ashore includes but one system of radio transmitting and receiving by organizations of the Fleet and Volunteer Communication Reserve. It includes all transmitting stations ashore, included in Naval Reserve armories, public or Government quarters, assigned to use of Naval Reserve and on floating nonmobile vessels.

2. The national reserve network is made up of the following classes of stations:

- (a) Senior control radio station controlled by Navy Department; and naval district radio stations.
- (b) Master control radio stations in each naval district.
- (c) Alternate control radio stations in each naval district.

3. District nets are made up of:

- (a) Master and alternate control radio stations.
- (b) Section control stations.
- (c) Unit or individual stations.

Section 2. NATIONAL RESERVE NET

1. The purposes of the national reserve radio net are as follows:

- (a) To standardize reserve radio operations in the several districts.
- (b) To establish a nation-wide emergency radio organization that will contact the Naval Communication Service, through its naval district radio stations, in case of emergency.
- (c) To measure frequencies of control stations.
- (d) To instruct control stations in operating and procedure.
- (e) To set an example of correct operating and procedure to district networks and section nets.
- (f) To create general interest.
- (g) To furnish emergency communication for the Red Cross.

Section 3. DISTRICT NET

1. The purposes of the district net are in general those of the national net, and in addition have the following functions:

- (a) To coordinate the radio activities of individual sections within the districts.
- (b) To permit the organization of a district on a radio emergency basis.
- (c) To furnish the commandant with the means of rapid communication between district headquarters and the several Naval Reserve organizations, including Fleet and Volunteer Naval Reserve.
- (d) To facilitate the procurement of weather or other reports, particularly when commercial communication facilities may be out of commission.

Section 4. LOCAL NET

2. The local net is composed of individual amateur stations located within the boundaries of any given section of a naval district. At the present time (November, 1930), the district net and the local net are practically the same organization, inasmuch as in most districts, organization has not proceeded far enough to segregate the two. Eventually, it is proposed that control stations will contact only other control stations in other districts, and their own section control stations. The section control stations will, in turn, contact individual or local net stations, and stations of the Fleet Naval Reserve.

Section 5. EQUIPMENT

1. There were three classes of equipment in use for Naval Reserve radio communications in November, 1930. These were as follows:

- (a) Government-owned transmitters and receivers.
- (b) Composite equipment partly furnished by the Navy and partly by private individuals (to be replaced).
- (c) Privately furnished equipment.

2. Of the 23 reserve control stations in operation at that time, 18 were privately owned, 3 were composite and 2 had been furnished entirely by the Navy Department. It is the policy of the department to replace gradually privately owned equipment with Government-owned equipment when funds are available.

3. In general, the power of master and alternate control stations is limited to a maximum of 250 watts output, and further, to such less power as proves sufficient to conduct the requisite communication. Transmitters must be crystal controlled, and the plate supply must be as nearly free from modulation as is possible.

4. Inasmuch as the operation of control station transmitters is closely observed by the Office of Naval Communications and by the district communication officer in each district, it is not considered necessary to give further requirements herein.

Section 6. FREQUENCIES USED

- (a) Master and alternate control stations use 4,045 kilocycles.
- (b) Section control stations use amateur frequencies between 3,550 and 4,000 kilocycles.
- (c) Individual or unit stations use frequencies between 3,550 and 4,000 kilocycles.

1. In case of public emergency involving danger to life or damage to property, any of the above stations are authorized to use 8,000 kilocycles during daylight hours or when 4,045 kilocycles is not efficient.

2. In general, an effort should be made in each district to arrange the operation of section, unit and individual stations upon the same amateur frequency, this being for the sake of efficiency.

Section 7. PROCEDURE AND REGULATION OF NAVAL RESERVE RADIO

1. The procedure used in regulation of Naval Reserve radio stations, section, unit or individual stations, shall be the same as required for shore stations of the Regular Navy. In addition, these stations are subject to rules and regulations for the government of radio by United States Department of Commerce.

Section 8. NATIONAL EMERGENCY RADIO DRILLS

1. These are usually held once each quarter when directed by the Chief of Naval Operations (Director of Naval Communications). All master and alternate control stations in each naval district are expected to take part unless excused by competent authority.

2. The purpose of the national emergency radio drill is to test speed of mobilization, degree of liaison between commandants and control station personnel, and rapidity of communication over the national network.

Section 9. LOCAL OR DISTRICT EMERGENCY RADIO DRILLS

1. Local or district emergency radio drills may be held when and as desired by commandants and are for the same purpose as stated in connection with national emergency radio drills, and in addition to test the completeness of reserve radio mobilization within the district.

Section 10. MISCELLANEOUS

1. There are many Communication Reservists who reside in localities where it is impossible for them to attend in person, drills in armories. Under the reserve radio system, which has been built up, it is possible for individual reservists remotely located, to receive instruction and training by radio and to maintain contact with the Naval Reserve and the naval service, which contact could not be maintained in any other way.

Section 11. EMERGENCY COMMUNICATION IN CONNECTION WITH AMERICAN RED CROSS RELIEF

1. A detailed plan for the utilization of the Naval Reserve radio system has been developed for use in emergency in connection with American Red Cross relief. This is thoroughly covered by letter from Chief of Naval Operations to commandants of all naval districts under date of June 7, 1930. It is not considered necessary to restate herein the provisions thereof. Copies of this letter may be obtained by Naval Reservists upon application to the commandant of their respective districts.

2. It may be said, however, that in case of local or national emergency, each Naval Reservist owning and operating a Naval Reserve or amateur radio station should take such steps as may appear necessary or desirable to establish emergency communication, and where absence of instructions from the commandant or other responsible officer exists, should initiate such action as may be necessary in connection with radio communication to effect relief and to furnish emergency channel of communications until such time as the regular channels of communication are reestablished. In case of emergency, Naval communication system shall be used to connect the various naval districts, and to connect Washington with the districts. The district reserve stations are to connect with the local district regular Navy radio station.

CHAPTER 4

RADIO MATERIAL, ORDNANCE, AND CLOTHING

Section 1. NEW RADIO MATERIAL

1. Due to the limitations imposed upon the purchase of new radio material by the reserve appropriations, it has not been possible to furnish any considerable amount of radio transmitting and receiving, or power equipment. It is, however, the policy of the Bureau of Navigation, when available funds permit, to furnish transmitting and receiving equipment for master and alternate control stations which have been assigned Navy call signs and Navy frequencies. During the latter part of 1930 a contract was awarded for seven crystal-controlled transmitting sets which will be furnished to seven control stations in various naval districts. The bureau recognizes the need of this equipment, and will make same available when possible without additional request on the part of the naval districts concerned.

Section 2. OBSOLETE RADIO MATERIAL

1. Certain excess radio equipment carried in appropriation purchase account under the cognizance of the radio division, Bureau of Engineering, is available for issue without cost to the Naval Reserve. This equipment was listed in Chief of Naval Operations' letter, Op-20-L, March 6, 1930, addressed to commandants, all naval districts, and consisted principally of intermediate and low-frequency Navy-type receiving sets and separate vacuum tube detectors.

2. No Government-owned radio material, either new or excess equipment, can be furnished for installation by reservists in a private residence. Such equipment may be furnished when so recommended by the commandant of the naval district, for installation in the following classes of quarters:

- (a) Naval Reserve armories.
- (b) Government-owned buildings.
- (c) Public quarters, furnished to organizations of the Communication Reserve by cities, counties, chambers of commerce, public buildings, etc.

Such approved locations must be capable of being properly secured in order that Government property will not be lost or stolen.

3. In some instances, a small amount of money has been made available to the commandant of certain districts from subhead 3 of Naval Reserve appropriations, for the purchase of keys, telephones, buzzer sets, vacuum tubes, etc., but amounts so made available have been very limited and may not be available in the future.

4. Requests for all types or kinds of radio material must be submitted to the Bureau of Navigation via the commandant of the district in which the request is originated. Such request should contain a description of the quarters in which the equipment is to be installed in order that the commandant and the Bureau of Navigation may determine whether or not quarters comply with the requirements.

5. Whenever practicable, Communication Reserve radio material should be installed in Fleet Naval Reserve armories in order that such equipment may be made jointly available for use of both the Communication and Fleet Naval Reserve. It is, however, desired to emphasize that radio communications ashore by the Naval Reserve and all its branches, including Fleet, Aviation and Volunteer, is primarily under the jurisdiction and command of the commandant, the district communication officer and the Volunteer Communication Reserve commander of each district. The commandants, in turn, are responsible to the Chief of Naval Operations for the proper conduct and operation of Naval Reserve radio stations.

Section 3. ORDNANCE

1. Rifles, service automatic pistols, and other articles of ordnance are issued at the pleasure of the Bureau of Ordnance. Under certain conditions, commandants have been authorized to issue rifles on the custody receipt of commanding officers of sections or units of the Volunteer Communication Reserve. Rifles, .38-caliber pistols, belts, and bayonets may be obtained on custody receipt subject to the following:

- (a) When the section or unit requesting ordnance is located in quarters where ordnance can be properly safeguarded to prevent loss or theft.
- (b) When the officer in charge of a section or unit is considered qualified by the commandant to exercise proper supervision over the care of ordnance to prevent its deterioration.
- (c) When ordnance already issued to a division of the Fleet Naval Reserve is not available to a section or unit of the Communication Reserve.
- (d) When the ordnance is to be used for instruction in connection with infantry drill and manual of arms.
- (e) When the ordnance is to be used for target practice on a properly supervised rifle range.
- (f) When required in order to enable sections or units to participate in street parades under arms.

2. It should be borne in mind that great care must be taken to avoid loss or theft of pieces of ordnance, and that the Naval Reserve officer signing the custody receipt is held personally responsible for loss under such conditions and that the officer assuming the responsibility for custody must take every possible precaution to avoid loss, damage, or theft.

3. Requests for ordnance should be directed by the local organization to the commandant of the district in which the request originates. It is necessary that these requests be referred to the Bureau of Navigation. Ammunition is considered an expendible item and may usually be procured in limited quantities without cost from the supply officer of any naval station.

4. It has proved desirable in armories and other headquarters of sections and units of the Communication Reserve to afford class V-3 men an opportunity to learn the rudiments of close-order infantry drill and the manual of arms. In localities where there are no divisions of the Fleet Naval Reserve, it is frequently possible for units of the Communication Reserve to participate in street parades or other functions under arms. In localities where divisions of the Fleet Naval Reserves are located, officers and men of classes C-V(S) and V-3 may be included with the divisions of the Fleet Naval Reserve in street parades or other ceremonies, provided this is agreed to by the officers

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of the fleet divisions concerned. It should be understood that the Fleet Naval Reserve takes precedence in street parades in localities where fleet divisions exist.

Section 4. UNIFORMS FOR OFFICERS AND MEN

1. In time of peace, officers of class C-V(S) are not furnished with uniforms at Government expense, but procure them at their own expense. Officers who have not provided themselves with the items of uniform prescribed in article H-1713 of the Naval Reserve Regulations, will be unable to undergo a period of training duty at a naval station or on a naval ship.

2. As a general thing, one service blue and two service white uniforms will be sufficient except for duty aboard ship in the summer time, when a minimum of six service white uniforms are usually required.

3. The Bureau of Navigation has recently authorized the issue of a limited number of special blue and white uniforms to enlisted men of class V-3. These uniforms are to be issued subject to Bureau of Navigation circular letter No. 40-30, dated August 20, 1930, addressed to commandants of all naval districts. This letter states in detail the number of uniforms allowed each district, and the conditions under which they may be issued. They are not to be issued to men remotely located from sections or units and are only to be issued to sections or units when 10 or more men regularly attend drill, together in an armory or other quarters provided for the purpose. A few uniforms will be available at naval district headquarters for issue to men reporting for temporary training duty. In all cases, uniforms remain the property of the Navy, and must be returned by the individual when so directed by the commandant or other competent authority. The times when uniforms may be worn is specified in Naval Reserve Regulations H-1714.

4. Requisitions for clothing for men of class V-3 will be made out by commanding officers of sections and units in quadruplicate on forms to be procured from the district commandant. These requisitions will be addressed from the local commanding officer to officer in charge, naval supply depot, Brooklyn, N. Y., via commandant, Bureau of Navigation and Bureau of Supplies and Accounts. The clothing will be shipped direct from naval supply depot, Brooklyn, N. Y., to the commanding officer of the local organization originating the requisition. Commandants of districts are required to scrutinize these requisitions with care to see that they comply in all respects with the requirements of Bureau of Navigation circular letter 40-30, dated August 20, 1930.

CHAPTER 5

TRAINING DUTY

1. Training duty is defined in Naval Reserve Regulations paragraph H-2716. The following paragraphs in Naval Reserve Regulations are applicable: H-2717, 1422, 1421, 1420, 1720, and 3704.

2. Particular attention is invited to the provisions of H-3704.

Section 1. TRAINING DUTY WITH PAY

1. Subject to the provisions of the foregoing, class C-V(S) officers and V-3 men may be ordered to training duty for a period of 15 days per year afloat or ashore. Duty afloat is limited by:

- (a) Vacancies in fleet division cruising quotas.
- (b) Funds available for pay.

2. In this connection, the Bureau of Navigation has authorized commandants to fill vacancies in fleet divisions quotas with C-V(S) officers and class V-3 radiomen, depending upon the exigencies of the particular occasion.

3. Fifteen days' annual training duty ashore with pay may be authorized for officers and men subject to:

- (a) Approval of district commandants.
- (b) Availability of funds.

Section 2. TRAINING DUTY WITHOUT PAY

1. Training duty without pay ashore or afloat may be authorized by district commandants or by the senior officer present of any naval force or the commanding officer of a naval vessel.

2. Physical examinations are required at the beginning of and termination of training duty, whether performed with or without pay.

Section 3. TRAINING DUTY ASHORE

1. The duties to which Communication Reserve personnel are assigned are usually included among the following:

- (a) *For officers.*—Duty at naval district headquarters, naval radio stations or naval radio compass stations, including duty with coding or decoding boards, general duties of a district communication office, inspection of radio material, practical operation of transmitting and receiving equipment determining bearings at radio direction finder stations, and in general duties of communication officers ashore.

Section 4. TRAINING DUTY AFLOAT

1. Class C-V(S) officers will be assigned to duty by the commanding officer of any vessel to which they may be assigned for temporary training duty. This class of reserve officer, if without previous experience on board a naval vessel,

should explain their lack of experience, and should not undertake to perform duties for which they are not qualified until they have been properly instructed. Duties usually assigned will be those of ship's radio officer or assistant communication officer. Every C-V(S) officer should attempt to undergo 15 days' training duty afloat not less than once every four years.

Section 5. UNIFORMS REQUIRED

1. Officers and men performing training duty with or without pay are usually required to wear uniforms. Men of class V-3, if not already supplied with uniforms, may usually procure same when first reporting at naval district headquarters. These will be turned in when the man has completed his training duty and before he returns to his home.

2. Officers should furnish themselves with not less than one service blue uniform and three service white uniforms for duty ashore or one service blue and six service white uniforms for duty afloat. Other uniforms are not required. See Naval Reserve Regulations, article H-1713. When uniforms are to be worn is prescribed in H-1714.

3. The proper procedure to follow is for an officer or man to write to the commandant of his district, making application for the class of duty which he desires. While it may not be possible to grant all requests, they will be given consideration in the order of receipt. The Bureau of Navigation considers it desirable for as many officers and men of class C-V(S) and V-3 to be cruised as accommodations and funds will permit.

CHAPTER 6

NAVY-AMATEUR RADIO NET

Section 1. DESCRIPTION

1. The Navy-amateur radio net as organized in certain districts is composed of civilian radio amateurs not enlisted in the Naval Reserve. It may, to a degree, be considered in the light of an auxiliary to the Naval Communication Reserve. It is composed almost entirely of amateurs who own and operate amateur radio stations licensed by the Department of Commerce.

Section 2. PURPOSES

1. The purpose of the Navy-amateur radio net is as follows:

- (a) To interest nonenlisted civilians in enlisting in class V-3 of the Naval Reserve.
- (b) To furnish an emergency network of amateur radio stations in localities where there is no organization of the Naval Communication Reserve.

2. In districts where the Naval Communication Reserve has been organized, the Navy-amateur net is frequently absorbed because most of its members eventually enlist in class V-3. However, men who are not physically qualified for enlistment frequently can be of value in radio communication in case of emergency by their contact through the Navy-amateur net. Young men not yet 18 may form contacts with the Naval Reserve through the Navy-amateur net so that when they become 18 they may desire to enlist.

3. Commandants have been authorized to issue certificates of membership in the district-Navy-amateur nets. Activities of the Navy-amateur net should not be permitted to detract from interest and effective organization of the Naval Communication Reserve in any district.

CHAPTER 7

MISCELLANEOUS

Section 1. COOPERATION BETWEEN FLEET AND VOLUNTEER NAVAL RESERVE IN RADIO COMMUNICATIONS

1. Instructions have been promulgated to commandants intended to accomplish the following:

(a) To assure a high degree of cooperation between Fleet and Volunteer Naval Reserve communication organization ashore. Commandants have been authorized to assign class C-V(S) officers and class V-3 men to battalions and divisions of the Fleet Naval Reserve for the purpose of giving instruction to members of the Fleet Naval Reserve in radio communication. Commanding officers of Fleet Reserve battalions and divisions should avail themselves of the services of these officers on a voluntary basis without pay, whenever it is practicable to so arrange.

2. Commandants have further been instructed to make available the facilities of Fleet Naval Reserve armories to organizations of the Communication Reserve. In this connection, commanding officers of fleet divisions should make available, when practicable, space in Naval Reserve armories for the installation of radio equipment and provide means for properly securing the same to prevent tampering or loss of equipment.

3. In certain districts, drills of the Fleet Naval Reserve and Communication Reserve are being held on the same nights, in order that communication between the master control radio stations and the armory radio stations may be established.

4. The Volunteer Communication Reserve commander of each naval district is considered responsible (under the commandant) for all Naval Reserve radio communications conducted ashore and for all instruction in communication methods and procedure conducted by radio. Only one radio communication system is authorized and such system is to include all radio communication ashore for both Fleet and Volunteer Naval Reserve. A master and an alternate control reserve radio station has been authorized in all naval districts (with one or two exceptions), these stations being charged with the control of reserve radio communication within the district.

5. Stations of the Naval Reserve ashore, including reserve control stations and individual stations in an amateur status, whether operated in Naval Reserve armories or by individual Naval Reservists are not authorized to communicate with naval vessels unless in case of emergency or when so directed by competent authority.

Section 2. ASSIGNMENT AND USE OF NAVAL CALL SIGNS

1. Master and alternate control reserve radio stations have been assigned naval call signs. These call signs (for example, NDA, NDB, NDC, NDE, etc.) have been assigned for use on 4,045 kilocycles for the following purposes:

(a) To conduct radio drills.

(b) For interdistrict communication between control stations.

- (c) For restricted communication with naval district headquarters' radio stations.
- (d) For communication with amateur radio stations belonging to members of the Naval Reserve.
- (e) For communication with amateur stations belonging to members of the Navy-amateur net and with amateurs.
- (f) For emergency communication with naval radio stations, commercial or other Government radio stations in case of emergency as prescribed in connection with American Red Cross relief.

2. Naval call signs are assigned by Office of Chief of Naval Operations after application to and approval by the commandant of the district. Only two such calls will be assigned in each naval district. These calls are to be used for official communication only. Any communication which is for the training, drilling, administration or recruiting of the Naval Reserve is considered as official communication. Naval procedure will be used in communicating with other control stations or with amateur stations owned and operated by commissioned or enlisted members of the Naval Reserve and in communicating with regular Navy radio stations. All other communications will be in commercial procedure.

Section 3. USE OF SPECIAL NAVAL RESERVE CALL SIGNS

1. A system involving the use of tactical and address call signs to be known as "Naval Reserve special call signs" was issued by the Chief of Naval Operations on November 19, 1929, and supplemented on December 9, 1929. The system provides a method of making up special call signs for the various types of organizations within the Naval Reserve, including Fleet Naval Reserve and Volunteer Communication Reserve. It provides individual call signs for commanding officers of such organizations as well as group call signs for both organizations. These call signs and their use are fully outlined in the following references:

Chief of Naval Operations Letters Op-20-L A6-2(2)/QR3(291119) dated November 19, 1929, and December 9, 1929.

It is considered unnecessary to restate in detail the instructions contained in those references.

2. In general, special Naval Reserve call signs will be found useful for conducting radio drills and in the headings of messages where it is desired to put the messages in official form for the action or information of a particular commanding officer. They are also useful in connection with tactical signal drills conducted by radio.

Section 4. FREQUENCY USE AND STABILITY

1. It is particularly important for stations of the Naval Reserve authorized to use Navy frequencies to insure correctness and stability in operation. The use of self-excited transmitters on 4,045 kilocycles, or any other Navy frequency, is not to be permitted except in case of emergency, as it has been found practically impossible to insure the necessary degree of accuracy in this type of transmitter. Instructions have been issued to commandants of all naval districts to the effect that master and alternate control stations, as well as naval district headquarters stations using 4,045 kilocycles must be crystal controlled. The Bureau of Navigation will furnish upon receipt of request from district commandants, a limited number of crystals ground to 4,045 kilocycles by the Naval Research Laboratory at Bellevue. If crystals already furnished

are fractured or become inoperative, request should be submitted to the Bureau of Navigation via commandants for replacement crystals.

2. Most reserve control station transmitters use "room temperature" type crystals. These will show a slight variation in frequency during operation but not enough to cause the transmitter to shift frequency beyond the limits of tolerance at present in effect. In operating transmitters on this frequency, care should be taken to be sure that all stages of radio-frequency amplification are properly tuned and that the transmitter is not radiating on other than the correct frequency. The Navy Department makes occasional measurements of the frequency upon which reserve control stations are transmitting and results of these measurements are forwarded from time to time to the offices of the various commandants.

3. Interference between stations located in different districts has been reported at times. A time-zone-district schedule sheet was compiled and forwarded by Chief of Naval Operations' letter, Op.-20-L dated November 5, 1930. This schedule will be revised from time to time as changes are made in the districts so that each district may be informed as to schedules observed by other districts. Reports of interference, if serious, should be submitted to Chief of Naval Operations via the district commandant. Under such conditions, an effort will be made to rearrange schedules between adjacent districts in order to preclude serious interference.

4. The correct and efficient operation of control stations is a very important matter. Such stations are copied by many individual Naval Reservists and by those not members of the Naval Reserve. If the standard of operating is good, a desirable impression is created and it is consequently of the greatest importance that officers and men connected with the operation of the control stations should be properly qualified as operators, and at least in the most generally used naval procedure. Before assigning a radioman to operate a control station transmitter, tests should be conducted on a buzzer to determine his proficiency. By maintaining a high standard of operating and use of correct procedure, control stations can set an example for other stations located in their districts.

5. Other stations of the Communication Reserve operated as section stations, unit stations or individual stations not assigned Navy call signs operate within the 3,550-4,000 kilocycles amateur band. In order to facilitate contact with these stations by the control stations, it is considered desirable for these amateur stations to be tuned to some particular frequency assigned to specific sections or units, by the Communication Reserve or section commander within each district. Individual stations of a unit, or individual section stations of a section, should be tuned to one frequency in order to facilitate the conduct of tactical signal drill by radio and to eliminate loss of time in tuning. In some districts 3,990 kilocycles is used for this purpose. In other districts 3,600 and 3,650 kilocycles are used. The selection of frequencies within the amateur band for this purpose is a function of the Communication Reserve commander in cooperation with the section or unit commanders. It is desirable for a district to select other frequencies for its amateur stations than those frequencies in use in an adjacent district in order to eliminate as much interdistrict interference as possible. There are no restrictions applicable to the transmitters operated by amateurs within the amateur bands except that they must comply with the requirements of the Department of Commerce. It is a considerable help to amateur stations if they can provide themselves with a monitor listener in order that they may tune their transmitter to zero beat with whatever control station they are in communication with. This system will enable a number of stations to tune to a frequency within accurate limits.

Section 5. PUBLICATIONS AND TRAINING COURSES

1. The organization, administration, training and drilling of the Naval Communication Reserve conforms in general to the rules, regulations, instructions and articles for the government of the Navy, and in particular to the following publications:

- Bureau of Navigation Manual.
- Naval Reserve Regulations, 1929 (A).
- Communication Instructions, 1929 (A).
- Radio Manual, 1929 (A).
- Bluejackets Manual.
- Boat Book, U. S. Navy, 1927 (A).
- Navy Training Courses for Radiomen.
- U. S. Naval Radio Operators Signals No. 1.

Of the above publications, those marked (A) have been made available to certain officers and men of the Communication Reserve in as great a quantity as could be procured and distributed, based upon expense and availability. Due to the limited number of copies available of the above publications they have been distributed through district commandants on a basis of furnishing them to officers and men that can use them to advantage and with the understanding that they remain the property of the Navy and may be recalled and reissued to others.

2. The Office of Chief of Naval Operations forwards direct without charge once a year to each C-V(S) officer and V-3 man the following publications:

- Commercial and Government Radio Stations of the United States (United States Department of Commerce.)
- Amateur Radio Stations of the United States (United States Department of Commerce.)

And once a month a copy of the communication division bulletin. Distribution of the following publication has been discontinued:

- Radio Service Bulletin (United State Department of Commerce).

3. Each month a number of officers and men change their place of residence without informing the Bureau of Navigation or the district commandant and in consequence copies of the monthly bulletin are returned unclaimed. Regulations require all personnel to inform the district commandants promptly of the change of address. Prompt compliance with this regulation will greatly facilitate distribution of the monthly bulletin and insure its delivery.

4. There are other publications that are sometimes desired by class C-V(S) officers pertaining to deck or engineering duties and navigation. Applications for information concerning these may be submitted to district commandants.

Section 6. CONFIDENTIAL AND SERVICE (RESTRICTED USE) PUBLICATIONS

1. As a general rule, publications classed as confidential are not issued to individuals in classes C-V(S) or V-3. The following publications, classed as "Service, for restricted use only," are issued to the personnel charged with the operation of master and alternate control stations:

- United States Naval Shore Communication Facilities No. 4. (For official use only.)
- United States Naval Radio Operator's Signals. (Service—for official use only.)
- Navy Service Cipher No. 2. (Official use only.)
- United States Navy Radio Call Book No. 1.

2. Commandants of districts making the issue will instruct the personnel with regards to the restrictions which must be observed in connection with their use.

Section 7. DESIGNATION OF RECRUITING OFFICERS

1. Naval Reserve Regulations, H-1306, provide that Volunteer Communication Reserve commanders, commanding officers of Communication Reserve sections and units, shall be appointed by the commandants of naval districts as Naval Reserve recruiting officers.

2. In localities where there is no class C-V(S) officer who may be so designated, in order to facilitate recruiting, commandants may designate a Naval Reserve officer of some other class who is authorized to make enlistments to act as recruiting officer pending the procurement of a suitable class C-V(S) officer. Upon application to the Bureau of Navigation, it is possible to obtain approval of the Secretary of the Navy for the designation of a Reserve Medical Corps officer as recruiting officer, in order that such officer may not only conduct requisite physical examinations, but may also complete the enlistment of class V-3 men. Officers may execute the oath of office before a designated recruiting officer, or before a notary public, or justice of the peace. Enlisted men may be sworn in only by a designated recruiting officer.

Section 8. ASSIGNMENT OF OTHER CLASSES OF RESERVE OFFICERS TO SECTIONS AND UNITS

1. Officers of other classes of the Naval Reserve may be assigned to voluntary duty without pay in connection with the administration and training of the Communication Reserve. Such assignment may be authorized by district commandants. It has been found that officers of class D-V(S), E-V(S), I-V(S), MC-V(G), and SC-V(S) are frequently of assistance and may be assigned various duties such as radio material officer, personnel officer, intelligence or publicity officer, supply officer, and medical officer. In localities where no divisions of the Fleet Naval Reserve are located, there are frequently to be found officers of the Naval Reserve who desire to maintain their contact with some organization of the Naval Reserve, although they may not be directly concerned with communications. The foregoing assignment will enable such officers to demonstrate their interest in the Naval Reserve and to maintain their contacts.

CHAPTER 8

FLEET NAVAL RESERVE COMMUNICATIONS ASHORE

Section 1. ARMORY EQUIPMENT

1. A number of naval districts have equipped the Fleet Naval Reserve armories with low-power transmitting and receiving equipment. According to regulations now in effect, these transmitters must be licensed and operated as amateur stations under the jurisdiction of the United States Department of Commerce. An operator's license by the Department of Commerce is required regardless of Naval Reserve qualifications as radiomen. Such stations must be licensed by the Department of Commerce in the name of the commanding officer of the fleet division or battalion.

2. Such stations located in Naval Reserve armories may communicate with other similar stations in other Naval Reserve armories or may communicate with the control stations of the Communication Reserve located within their district. They are not authorized or licensed to communicate with naval vessels or with commercial radio stations. Their status is the same as section and unit stations of the Volunteer Communication Reserve in so far as the use of call signs and frequencies are concerned. They may be assigned special Naval Reserve call signs as heretofore provided, and when using such call signs, must begin and terminate their period of transmission with their amateur call signs assigned by the Department of Commerce.

3. In districts where one or more fleet division armories are equipped with transmitting and receiving sets, it is desired that schedules be arranged between such stations and the reserve control stations within the district. Where a considerable number of Fleet Reserve armory stations have been installed, a regular radio drill can be conducted by the control station which will include the several Fleet Reserve radio stations. The following letters of instruction are applicable:

Bureau of Navigation circular letter, No. 13-30, dated March 7, 1930.

Chief of Naval Operations letter, Op-20-L, dated June 24, 1930.

The latter reference directed the coordination of Naval Reserve radio communications conducted by organizations of the Fleet Naval Reserve and Volunteer Communication Reserve and established a general policy in connection therewith.

CHAPTER 9

FLEET RESERVE AVIATION RADIO

Section 1

1. At the time of publication of these notes, the Bureau of Navigation is compiling complete data with reference to the status of radio communication in the aviation branch of the Fleet Naval Reserve. The data being accumulated is divided into three classifications:

- (a) Operating efficiency of personnel.
- (b) Radio material in use at air bases and in planes.
- (c) Class of communications conducted, frequencies used, distances covered, stations communicated with and radio service rendered.

2. The bureau desires to standardize as far as possible all phases of communication by radio in connection with the aviation branch of the Naval Reserve and will subsequently issue instructions in connection therewith as a supplement to these notes.

CHAPTER 10

CONCLUSION

1. It has not proved possible to include in these notes all of the details that may arise in connection with reserve radio communication. The development of the art of radio communication continues to advance with such rapidity that changes in methods and in equipment are of constant occurrence. The fundamental policy of the department is to weld together in so far as practicable, the various branches of the Naval Reserve into one radio communication system patterned after the Naval Communication Service; to eliminate duplication of effort and equipment between the various branches of the Naval Reserve and to establish a reserve communication system that will function efficiently for purpose of training officers and men and which may be called upon in case of emergency to supplement commercial systems of communication and the Naval Communication Service.



