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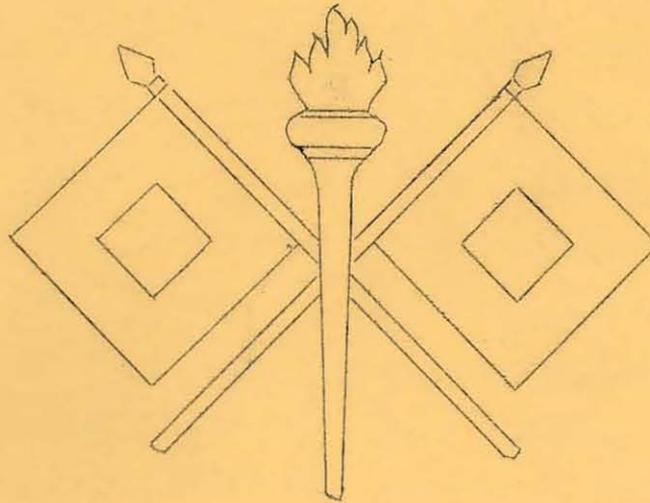
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# WAR DEPARTMENT

## OFFICE OF THE CHIEF SIGNAL OFFICER

### INFORMATION LETTER

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INTELLIGENCE DIVISION  
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WASHINGTON, D.C.

1942

INTELLIGENCE DIVISION  
OCSigO

January 1, 1942.

SIGNAL CORPS INFORMATION LETTER

NO. 2

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WAR DEPARTMENT  
OFFICE OF THE CHIEF SIGNAL OFFICER  
WASHINGTON, D. C.

January 1, 1942.

SIGNAL CORPS INFORMATION LETTER

NO. 2.

1. The Signal Corps Information Letter (SCIL) is issued monthly in this form. Its purpose is to keep officers in charge of field activities informed of matters of interest, such as new developments in Signal Corps Equipment, changes in methods, progress in procurement of major Signal Corps items of equipment, etc.

2. The letter will be compiled largely from information regularly available in this office. However, all Signal Corps agencies are invited to submit items of general interest. Such items should be sent to the Intelligence Division, Office of the Chief Signal Officer, not later than the 20th of each month for inclusion in the letter of the first of the succeeding month.

3. Distribution of the letter will be made to army, corps, and division signal officers; commanding officers of signal companies, battalions, corps area and department signal officers; post, camp, depot and Procurement District signal officers; the signal officers of bases and task forces; the signal officers of the Armored Force; signal officers on the staffs of major headquarters of the Army Air Forces; and Signal Officer G.H.Q.

4. Requisitions for new types of equipment will not be submitted on the basis of information contained in the SCIL.

5. Restricted - A document will be classified and marked "Restricted" when the information it contains is for official use only or of such nature that its disclosure should be limited for reasons of administrative privacy or should be denied the general public. The "Restricted" mark will be placed on a document only by authority of a commissioned officer.

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CONGRATULATIONS

FROM

CHIEF OF STAFF

December 24, 1941.

My dear General Olmstead:

Will you please express to your officers and their Assistants my very real appreciation of the loyal and efficient manner in which they have carried their portion of the tremendous load thrown upon the War Department in the past year. My thanks go to you personally for your advice and strong support.

With every good wish for you in the future,

Faithfully yours,

(Signed) G. C. MARSHALL

Major General Dawson Olmstead  
Chief of the Signal Corps

### III

#### OFFICIALS SPEAK

Major General Dawson Olmstead, Chief Signal Officer of the Army; the Honorable Henry L. Stimson, Secretary of War; and the Honorable Robert P. Patterson, Under Secretary of War, are shown in the photograph on the next page.

General Olmstead is addressing a meeting of the Advisory Board and Advisory Council of the Signal Corps on the purposes and functions of the recently-created Coordination and Equipment Division in the Office of the Chief Signal Officer.

The meeting was also addressed by Secretary Stimson; Under Secretary Patterson; General George C. Marshall, Chief of Staff; Col. Hugh Mitchell, head of the new Coordination and Equipment Division; and Dr. Frank B. Jewett, chairman of the board, Bell Laboratories, Inc.



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## ADVISORY BOARD

First Meeting:

The first meeting of the Chief Signal Officer's recently formed Civilian Advisory Board was held December 1, 1941 in the Munitions Building, Washington, D. C., with noted leaders in the communications field, both civilian and military, in attendance.

Prior to meeting with branch chiefs to whom they had been assigned, members of the Advisory Board heard short addresses by the Honorable Henry L. Stimson, Secretary of War; the Honorable Robert P. Patterson, Under Secretary of War; and General George C. Marshall, Chief of Staff.

Major General Dawson Olmstead, Chief Signal Officer of the Army, opened the meeting, explained its purpose, and introduced Secretary of War Stimson. (The text of General Olmstead's address follows on page 9 of this issue of the SCIL.)

The Advisory Board of civilian personnel, comprising the most distinguished array of experts in their respective fields in the communications industry, was created to meet more effectively the extraordinary expansion of Signal Corps activities in the National Defense program, now an all-out war effort.

## ADDRESS BY GENERAL OLMSTEAD

Mr. Secretary, Judge Patterson, General Marshall,  
Gentlemen:

When I reported to the Chief of Staff as Chief Signal Officer, he directed me to accomplish two things: first, to coordinate the communications in the Army; second, to decrease the number of different types of radio sets in use by the Army. The Chief of Staff amplified this directive by stating that he considered communications down in the fighting regiments as an attribute of command, like fire power and mobility; further, that he realized that communications per se might be technically perfected by placing them under a single head but that centralized bureau control was not desired. On the other hand, it was desired that the Chief Signal Officer, in his capacity as technical advisor to the War Department on communication matters, make pertinent recommendations which, when approved by the Chief of Staff, would constitute directives to the Army.

In order to implement this directive, I have caused to be set up in my office a Coordination and Equipment Division, to which have been assigned several Signal Corps officers and a communications specialist in the grade of field officer from each of the following: Air Corps, Armored Force, Infantry, Field Artillery, Cavalry and Coast Artillery, and liaison officers from the Marine Corps and the Navy. These officers have been selected by their Chiefs of Arms and are in constant communication with them, so that this group constitutes a military body by which the Chief Signal Officer hopes to arrive at speedy and mature recommendations in the field of communications.

To further implement the Office of the Chief Signal Officer for this duty, an Advisory Board has been formed composed of the following gentlemen from civilian life, prominent in the field of communications:

Dr. Frank B. Jewett, Chairman of the Board, Bell Laboratories, Inc. and President of the National Academy of Sciences.

Dr. W. R. G. Baker, Vice President, General Electric Company, an expert in radio, particularly in television.

Dr. William P. Hilliard, Vice President in Charge of Sales and Engineering, Bendix Radio Corporation, an engineer who has been closely associated with the development of aviation radio.

Mr. Walter Evans, Manager, Radio Division, Westinghouse Electric and Manufacturing Company, an engineer active in the development of radio equipment for the Government.

Mr. J. B. Coleman, Chief Engineer, Special Apparatus Engineering Division, RCA Manufacturing Company, an engineer of outstanding qualifications in the design of direction finding, television facsimile and other radio equipment.

Dr. L. M. Hull, President, Aircraft Radio Corporation and former head of their Frequency Laboratories, and a pioneer in the research and development of aviation radio equipment in connection with military and commercial airways.

Brigadier General William I. Westervelt, U. S. Army, Retired. After his retirement from the Army he was prominent in the commercial field with Sears Roebuck and other nationally known firms, and is now associated with the Vice President on the Supply Priorities and Allocations Board.

Mr. L. C. F. Horle, Manager of the Radio Manufacturing Association's Materiel Bureau, prominent in the radio field, a former President and now on the Board of Directors of the Institute of Radio Engineers.

This group, together with Major E. H. Armstrong, Inventor of the Superheterodyne Receiving System, and more recently of the Frequency Modulation Transmitting and Receiving System, have agreed to serve without remuneration, and in most cases they represent large communication activities having no table engineering facilities, so that the War Department can feel that the best talent of the country is consulted and used in the recommendations submitted by the Chief Signal Officer.

Next, there exists the Chief Signal Officer's Advisory Council, composed of Reserve Officers prominent in communication and other Signal Corps activities. These gentlemen are:

Colonel David Sarnoff, President, Radio Corporation of America.

Colonel C. O. Bickelhaupt, Asst. Vice President, American Telephone and Telegraph Company.

Lt. Col. Leon E. Rudd, Superintendent, Western Union Telegraph Co.

Lt. Col. F. W. Wosencraft, R.C.A. Communications, Inc., for a number of years general solicitor.

Lt. Col. Edwin Lee White, Engineer with Federal Communications Commission.

Lt. Col. William Carter Henry, President of the Northern Ohio Telephone Company and Vice President of the United States Independent Telephone Association.

Lt. Col. E. R. Shute, Vice President, Western Union Telegraph Company.

Lt. Col. Darryl F. Zanuck, Chairman of the Research Council of the Academy of Motion Picture Arts and Sciences and a producer of motion pictures.

Major Clinton B. Allsop, Vice President, Postal Telephone and Telegraph Company.

Major David W. Magowan, Vice President and Advertising Director, Western Newspaper Union.

In addition to handling current communication problems it is the intention of the Chief Signal Officer to cause to be reviewed by these groups the major items of Signal Corps equipment in order to make sure that they embody the latest developments of science, and that the Army is equipped with the best and most efficient communications equipment that can be produced.

Finally, the Chief Signal Officer has reorganized his office to provide for an Assistant and three Branch Chiefs:

Lt. Col. James A. Code, Jr., Assistant to the Chief Signal Officer.

Colonel Roger B. Colton, Chief of Materiel Branch

Colonel Otis K. Sadtler, Chief of Operations Branch

Lt. Col. Kirke B. Lawton, Chief of Administrative Branch.

The Coordination and Equipment Division of the Operations Branch is headed by Colonel Hugh Mitchell. This decentralization is to provide means for efficiently taking care of the greatly expanded duties and the vastly increased volume of business devolving upon the Chief Signal Officer.

To give a brief idea of this expansion, I might say, on the supply side, the current appropriations, with the first two supplementals, available to the Chief Signal Officer for administrative obligation exceed one and one-quarter billion dollars. On the military side, the Signal Corps at the present time is undoubtedly expanding more rapidly than any other arm of the Service to provide for the greatly increased communication activities, and to include a very large Aircraft Warning Service that is practically in its infancy. The Signal Corps has at the present time approximately 3,800 officers, 40,275 enlisted men and 10,000 civilian employees with an additional 1,123 officers and 26,205 enlisted men authorized in pending legislation. The activities of the Signal Corps now form a very important military and industrial part of the National Defense.

I have assembled a group of gentlemen I am going to depend upon to do justice to the gravity and magnitude of our mission. Feeling as keenly as I do the importance of our present duties and the seriousness of our situation, I have asked, and am honored to have the Secretary of War, the Under Secretary of War and the Chief of Staff address you.

HENRY L. STIMSON

**THE SECRETARY OF WAR**

ROBERT P. PATTERSON

**THE UNDER SECRETARY OF WAR**

GEN. G. C. MARSHALL

**THE CHIEF OF STAFF**

MAJ. GEN. DAWSON OLMSTEAD

**THE CHIEF SIGNAL OFFICER**

COL. J. A. CODE JR.

**BOARDS &  
COMMITTEES**

**ADVISORY  
COUNCIL**

**ASSISTANT TO THE  
CHIEF SIGNAL OFFICER**

COL. J. A. CODE JR.

**EXECUTIVE OFFICER  
EXECUTIVE OFFICE**

**EXECUTIVE  
CONTROL  
DIVISION**

COL. R. B. COLTON

**MATERIEL BRANCH**

CHIEF OF MATERIEL BRANCH

LT. COL. T. C. RIVES

**RESEARCH &  
DEVELOPMENT  
DIVISION**

LT. COL. E. V. ELDER

**SCHEDULING  
DIVISION**

LT. COL. C. D. CUNY

**PROCUREMENT  
DIVISION**

LT. COL. R. C. HILDRETH

**STORAGE &  
ISSUE  
DIVISION**

LT. COL. J. M. HEATH

**MAINTENANCE  
DIVISION**

LT. COL. C. E. SNOW

**LEGAL  
DIVISION**

LT. COL. P. C. GRIPPER

**PLANT  
DIVISION**

COL. O. K. BADTLER

**OPERATIONS BRANCH**

CHIEF OF OPERATIONS BRANCH

LT. COL. F. H. LANAHAN JR.

**WAR PLANS  
& TRAINING  
DIVISION**

COL. HUGH MITCHELL

**CO-ORDINATION  
& EQUIPMENT  
DIVISION**

LT. COL. F. C. MEADE

**AIR  
COMMUNICATIONS  
DIVISION**

MAJ. W. T. GUEST

**COMMUNICATION  
LIAISON  
DIVISION**

LT. COL. R. T. SCHLOSBERG

**PHOTOGRAPHIC  
DIVISION**

LT. COL. EDWARD FRENCH

**TRAFFIC  
DIVISION**

LT. COL. R. W. MINCKLER

**SIGNAL  
INTELLIGENCE  
SERVICE**

LT. COL. K. B. LAWTON

**ADMINISTRATIVE BRANCH**

CHIEF OF ADMINISTRATIVE BRANCH

LT. COL. J. T. WATSON JR.

**FISCAL  
DIVISION**

CAPT. H. V. FOREEN

**SERVICE  
DIVISION**

LT. COL. H. L. P. KING

**MILITARY  
PERSONNEL  
DIVISION**

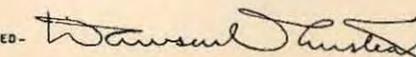
MAJ. H. C. TAYLOR

**CIVILIAN  
PERSONNEL  
DIVISION**

MAJ. C. J. MCINTYRE

**INTELLIGENCE  
DIVISION**

APPROVED -



DAWSON OLMSTEAD  
MAJOR GENERAL, U. S. ARMY  
CHIEF SIGNAL OFFICER

## VII

### STORAGE AND ISSUE

#### Night Shifts Busy:

In addition to officers on duty 24 hours a day, the Storage and Issue Division has initiated night shifts in all of its sections. The Requisition, Task Force, and the Machine Posting Sections having a night complement sufficient to carry any load imposed upon those sections. Other sections in the Division are operated by cadres so as to give service to the sections which are operating in greater forces.

#### Direct Line Teletype:

A direct line teletype connection between Storage and Issue Division and the Philadelphia Signal Depot, also the Signal Section, Fairfield Air Depot, Patterson Field, Fairfield, Ohio has been installed. This installation has resulted in a great step-up of the handling of requisitions between the points mentioned.

## VIII

### SCHEDULING

#### Order Section:

An Order Section was activated as part of Scheduling Division on 12-15-41 and is charged with the preparation of District Procurement Orders for all equipment that is procured by the Signal Corps, including equipment on Signal Corps programs, Defense Aid programs, and on purchase requests from the Plant and Storage and Issue Divisions.

This section consists of seven commodity subsections, one Timing subsection, and one Records subsection, each under the direction of a civilian engineer who is a specialist in the particular type of equipment procured by his subsection or of recording data or coordinating deliveries of equipment.

The subsections are arranged as follows:

- 1 - Ground Radio
- 2 - Secret Equipment
- 3 - Aircraft Equipment
- 4 - Vehicular Radio
- 5 - Wire Communication
- 6 - Wire and Cable
- 7 - Miscellaneous
- 8 - Timing
- 9 - Records

IX

CIVILIAN PERSONNEL

Recent Actions:

Due to the emergency now existing blanket authority was given to all Corps Areas and exempted posts and stations to employ any civilian personnel required, reports to be made to this office on a weekly basis for allocation of funds.

The Signal Officer of the Department of Hawaii has been authorized to use all employees on necessary overtime work and to pay time and one-half overtime.

This office obtained authority from the Office of the Secretary of War to grant CSO Panama blanket authority to employ personnel without limit as to time, provided appropriate and sufficient measures are taken to safe-guard the health, morals, and well-being of said personnel.

A press release was authorized as of December 12, 1941 to newspapers, magazines, and radio broadcast regarding the urgent need for radio engineers, cable splicers, cable testers, automatic telephone engineers familiar with central office equipment.

All previous restrictions on travel orders for civilian employees were revoked and Corps Areas, Laboratories, Supply districts were granted blanket authority to issue necessary travel orders for civilian employees locally.

Thursday, December 18, began the two-day conference of civilian training officers and civilian training administrators from all Corps Areas, Air Depots, Supply Depots, and exempted stations for the purpose of outlining and coordinating the training program.

## LEGAL

Awards and Contracts:

The Legal Division of the Materiel Branch of the Office of the Chief Signal Officer has set up a section on Awards and Contracts which has the function, among others, of reviewing all awards submitted to it, for the purpose of passing on their conformity to law and regulations and the sufficiency of the paper record.

The Officer in Charge is the working member of the Committee on Awards recently set up in the Materiel Branch. To this Committee are sent all awards submitted to the Office of the Chief Signal Officer by contracting officers for instructions, recommendations, or approval.

A recent directive authorized the four Procurement Districts to make awards on negotiated contracts not exceeding \$1,000,000, without submitting the same to the Office of the Chief Signal Officer. All contracting officers, except those in the Procurement Districts, Laboratories and Alaska Communication System, must submit all awards in excess of \$10,000 to the Office of the Chief Signal Officer for approval.

Patents and Inventions:

The Legal Division has also a Section on Patents and Inventions to examine inventions submitted to the Signal Corps and render opinions on their patentability. This Section prepares and files applications for patents on inventions of government personnel in which the Signal Corps has an interest and which are filed fee-exempt under the Act of 1883.

## XI

### PLANT

#### Demand for Facilities:

The outstanding development in the Plant Division within the last month has been the unprecedented demand for leased telephone and teletype facilities since the outbreak of the War. These demands which originated in various branches, were all satisfied within a few hours of their receipt.

It should be noted that this growing demand for leased facilities, reduces the telephone lines available for the completion of toll messages and will therefore delay the completion of such messages. The removal of additional toll facilities from message use, for this purpose, will add to the present delay in the completion of individual messages, to the disadvantage of everyone requiring toll service.

#### Purchase of Equipment:

The purchase of guard radio equipment for 37 Army Air Fields, each consisting of one fixed and two mobile sets of 25 watts power output F.M., has been initiated. Also, action has been taken to either rehabilitate the present fixed radio stations, or to construct new stations in 200 localities.

#### Flying Field Equipment:

Equipment designed to increase the safety of aircraft operation by providing direct reading indication of wind direction and velocity is being installed at 53 Flying Fields. The installation of this equipment at 250 additional Fields is contemplated.

## RESEARCH AND DEVELOPMENT

Develop New Cable:

The Signal Corps Laboratories have obtained test samples of a spiral four field cable which is an improvement over the British Quad cable. The development was undertaken in close cooperation with British technical advisors and leading American cable manufacturers to produce a cable which can be handled on present standard reels and reel equipment with a talking range of 45 miles without repeaters.

The talking range with repeaters is practically unlimited as British tests on similar cables have been conducted over a distance of 1,000 miles using one pair for communication in each direction, using four wire repeaters. The cable is designed with fairly flat transmission characteristics up to 10,000 cycles, thus permitting carrier current telephony and telegraphy.

The design of the cables is such that the two pairs are balanced to eliminate cross talk. The four conductors are enclosed within a steel wire shield which gives the cable an overall tensile strength in excess of 600 lbs.

The cable is designated as cable WC-548 (Spiral Four). It is anticipated that quantities for extended service tests will be made available in the near future.

Revise W-110-B Specifications:

Specifications for wire W-110-B have recently been revised to provide for not more than one factory splice per conductor mile and to provide for an improved splice whereby the strands of the conductor ends shall be intermeshed with an overlap of not less than  $3/4$  inch. The overlapped strands shall be bound together with wire to support the strand ends, and the joint soldered. Upon completion of the soldering operation, the binding wire to be removed. The tensile strength of the spliced conductor shall be at least 85 per cent of that of an unspliced conductor.

It is believed that numerous complaints from the field will be eliminated with the improved factory splice as above described.

## XIII

### WAR PLANS AND TRAINING

#### School Expansion:

The Signal Corps School, Fort Monmouth, New Jersey, has been expanded to take care of an additional eight hundred students. This increased capacity was attained by reduction in the Replacement Training Center at Fort Monmouth.

#### Camp Crowder:

Authority has been granted the Chief Signal Officer for the establishment of a Signal Corps Replacement Training Center at Camp Crowder, Neosho, Missouri, of approximately three times the capacity of the Replacement Training Center at Fort Monmouth. The initial intake of trainees is expected about February 15, 1942. Brigadier General W. S. Rumbough will command.

Signal Corps units will probably be called upon to provide 15 sergeant majors and 37 first sergeants. As far as practicable, the remainder of the cadre personnel will be obtained from the Signal Corps Replacement Training Center and other non-tactical sources.

#### New Publications:

The following publications of possible interest to Signal Corps officers have been printed recently:

- AR 105-260 Sept. 25, 1941, Signal Corps:  
Training Films and Film Strips.  
5 cents.
- FM 22-5 Aug. 4, 1941. Infantry Drill  
Regulations. 30 cents.
- FM 21-26 Sept. 17, 1941. Advanced Map  
and Aerial Photograph Reading.  
20 cents.

(Army Regulations may be obtained from the Superintendent of Documents, Washington, D.C.; Field Manuals from the Government Printing Office, Washington, D.C.)

Pigeon Leg Bands:

Ten thousand six hundred (10,600) Leg Bands PG-16 were purchased and will be distributed to 13 different pigeon lofts where they will be used for banding 1942 youngsters. This is a considerably larger number than was purchased last year, and is to take care of the increased breeding activities.

## SIGNAL CORPS LABORATORIES

Design Trends in Vehicular Radio Sets:

Trends in design concerning vehicular radio sets, recently adopted or now under development, are the subject of discussion this month.

The design of vehicular radio sets has undergone a marked change during the past year. At the present time, some of the vehicular radio sets being developed employ amplitude modulation, but the majority of new sets employ frequency modulation. While the most recently adopted sets utilize many crystals, the tendency in sets under development is to decrease the number of crystals yet retain crystal performance. The physical size of crystals has been greatly reduced because of the demand for more compact transmitters using many crystals.

The change from amplitude modulated to frequency modulated equipment has taken place concurrently with a change to higher operating frequencies. More positive communication and greater freedom from ignition interference resulted from the change to frequency modulation. Although frequency modulation requires approximately twice the channel width of amplitude modulation, more channels are actually available because of the change to higher frequencies. There are 395 channels 20-kc wide available in the high frequency band now being used compared to 250 channels 10-kc wide in the former low-frequency band.

Recently adopted transmitters utilize 80 crystals in obtaining 80 channels. Push-button tuning is used enabling any one of ten predetermined channels to be selected instantly. The receiver used in conjunction with the above transmitter has a similar arrangement of push-buttons. This makes it possible to net several of these radio sets quickly. In the transmitters under development six crystals are used in one model to obtain 80 channels, and in another model these same 80 channels are obtained using only one crystal.

The present size of crystals used in Signal Corps transmitters is approximately  $3/8$  inch square. This small size is possible because of the very low output required from the oscillator tube to drive modern power tubes. Although ten crystals are mounted in the transmitters, they occupy very little room because of their unique construction. The major surfaces of the crystals

are coated with electro-deposited silver which serve as the electrodes. Contact to the electrodes is made by a fine wire silver-soldered to the silver plating. The crystal is then sealed in a bakelite case.

These rapid changes in the design of vehicular radio equipment are due to the rigorous demands of modern warfare, the speed of which depends entirely on the excellence of its communications.

## CHIEF SIGNAL OFFICER

Inspection Tour:

Major General Dawson Olmstead, Chief Signal Officer of the Army, arrived December 4, 1941 at the Panama Canal Zone for a two weeks' inspection tour of communication installations and operations of the Caribbean Defense Command.

General Olmstead was conducted on the tour by Lieutenant General Frank M. Andrews, Commanding General of the Caribbean Defense Command, and Brigadier General Harry C. Ingles, Signal Officer of the Caribbean Defense Command.

The Chief Signal Officer was accompanied on his trip to these vital defense areas by Colonel C. O. Bickelhaupt, vice president, American Telephone and Telegraph Company, and Major Harold O. Bixby, of the Materiel Branch, Office of the Chief Signal Officer.

General Olmstead's itinerary included the Panama Canal Zone, Trinidad, British Guiana, St. Lucia, Antigua, St. Croix, Puerto Rico, and Jamaica. He returned to Washington on December 17.

Training Films:

"Training Film Activities of the Signal Corps," an article written by General Olmstead, appeared in the December 13, 1941, issue of Foreign Commerce Weekly.

Holiday Message:

On December 19, 1941, the Chief Signal Officer addressed the following remarks to all members of the Signal Corps.

"My holiday message to all ranks of our Corps, wherever located, is:

"Constantly remember the Signal Corps is responsible for the communications of the Army. Its primary mission is to get the message through. Its other responsibilities are only a means to that end. We who wear the crossed flags of the Signal Corps of the United States Army must be ever alert, vigilant, and determined that each message delivered to us is

dispatched promptly, safeguarded on its way, and delivered accurately at its destination. Failure to fight the message through shirks the high traditions of our Corps. Therefore, during the present emergency, regardless of personal sacrifice, our motto is: GET THE MESSAGE THROUGH!"

Community Chest:

General Olmstead received the following letter on December 4, 1941 from Brigadier General A. D. Surles concerning the marvelous response of Signal Corps officers in and near Washington, D. C., to the annual Washington Community Chest drive:

"Dear General Olmstead:

"It is noted with gratification that your office has exceeded its allotted quota for the Washington Community Chest.

"I desire to express, through you, my appreciation to your Division Chairman, Lt. Colonel Henry Daniels, for having accomplished his mission.

"Sincerely yours,

/s/ A. D. Surles

Brigadier General, U. S. Army,  
Chairman."

OK in Hawaii:

The Chief Signal Officer received the following radiogram, dated December 9, 1941, following the Japanese attack on Pearl Harbor:

"ALL SIGNAL OFFICERS OF THE HAWAIIAN DEPT AND THEIR FAMILIES ARE OK."

## TRAFFIC

Great Expansion:

The Traffic Division in the Office of the Chief Signal Officer comprises the following sections:

1. War Department Message Center
2. Code Room
3. Administration of the Alaska Communications System
4. Signal Property Officer
5. Seventeenth Signal Service Company, whose personnel operate the WAR Transmitting Station, Fort Myer, Va., and the remote receiving station at Battery Cove, Va.
6. Army Amateur Radio System
7. Administrative officers and personnel

During the past month, there has been a great expansion in the activities of this division and its personnel has increased almost three-fold. The Code Room space and personnel has doubled and additional wire facilities and radio channels were added to take care of the increased traffic demands due to the war.

Leased-wire Circuits:

It has been found necessary to use female teletypewriter operators for the many additional TWX and other leased-wires which have been installed in the War Department Message Center. It is believed that the expanding Army will necessitate the replacement of many of the male teletypewriter operators by women at this Headquarters. In this connection, it is possible that the radio-type apparatus recently manufactured by the I.B.M. Company, which is an adaptation of teletypewriter to radio circuits, will enable the employment of women as operators in place of the trained radio operators now required for the high-speed visual recording equipment. The following leased-wire circuits are now in operation from the War Department Message Center:

- 3- Postal Telegraph Company
- 4- Western Union Telegraph Company
- 2- G. I. New York
- 2- Baltimore

- 2- TWX
- 1- Department of Agriculture
- 1- Department of Justice
- 1- G. H. Q.
- 1- Bolling Field
- 2- Philadelphia Depot
- 2- London (W.U.)

Commercial Cooperation:

The various commercial communication companies -- A.T. & T., R.C.A., Postal Telegraph, Mackay Radio and Western Union have cooperated with this division in extending and improving their facilities so that important messages can be handled to all parts of the world with the minimum of delay.

All amateur radio operations including the Army Amateur Radio System were suspended on December 7, 1941, as ordered by the F.C.C. The attention of all amateur radio operators was directed to the War Department's need for their services by announcement over the various broadcast networks and by transmissions from Army Amateur Net Control Station WLM, Washington, D. C.

XVII

MAINTENANCE

Distribute Circular:

Circular 11-1, OCSigO, December 8, 1941, "Maintenance of Signal Corps Equipment in the Hands of Ground Troops" was distributed to the field on December 12, 1941. All officers and non-commissioned officers concerned with maintenance of ground equipment should receive a copy of this circular, as it delineates the echelons and channels of maintenance. Paragraphs are included on maintenance of Radio Sets SCR-268, Teletype equipment, Photographic equipment, and Typewriters MC-38, also on the duties of Corps Area Repair Shops which are now the fourth echelon of maintenance.

Repair Shops:

Signal Corps Repair Shops, present and proposed, now number fifty-six, (56). They are distributed as follows:

Air Depot Shops

Fairfield Air Depot Shop -----	Patterson Field, Ohio
Middletown Air Depot Shop -----	Middletown, Pa.
Mines Field Air Terminal Shop --	Los Angeles, Calif.
Mobile Air Depot Shop -----	Mobile, Alabama
Ogden Air Depot Shop(Proposed) -	Ogden, Utah
Oklahoma Air Depot Shop (Proposed) -----	Oklahoma City, Okla.
Rome Air Depot Shop(Proposed) --	Rome, New York
Sacramento Air Depot Shop -----	San Antonio, Texas
San Bernardino Air Depot Shop (Proposed) -----	San Bernardino, Calif.
Spokane Air Depot Shop (Proposed) -----	Spokane, Washington
Wellston Air Depot Shop (Proposed) -----	Wellston, Ga.

General Depot Shops

Atlanta General Depot Shop (Proposed) -----	Atlanta, Ga.
Chicago Quartermaster Depot Shop -----	Chicago, Illinois

New York Port of Embarkation

Shop ----- Brooklyn, N. Y.  
 San Antonio General Depot Shop - San Antonio, Texas  
 San Francisco General Depot Shop San Francisco, Calif.  
 Seattle Port of Embarkation  
 Shop ----- Seattle, Washington  
 Utah General Depot Shop  
 (Proposed) ----- Ogden, Utah

Signal Depot Shops

Lexington Signal Depot Shop ---- Lexington, Ky.  
 Philadelphia Signal Depot Shop - Philadelphia, Pa.

Over-Seas Shops - All Classes - Eleven (11)

Corps Area Shops

<u>Corps Area</u>	<u>Shop</u>	<u>Date Placed, or to be Placed, in Operation</u>
FIRST -----	Boston, Mass. -----	9/15/41
SECOND -----	New York City, N. Y. -----	11/1/41
	Madison Barracks, N. Y. --	12/1/41
THIRD -----	Baltimore, Md. -----	Under Organization
FOURTH -----	Atlanta, Ga. -----	Estimated 1/2/42
	Camp Beauregard, La. -----	Limited Operation 12/15/41
	Camp Blanding, Fla. -----	Estimated 1/2/42
	Camp Forrest, Tenn. -----	Limited Operation 12/15/41
	Camp Shelby, Miss. -----	Estimated 1/2/42
	Fort Benning, Ga. -----	11/15/41
	Fort Bragg, N. C. -----	11/15/41
	Fort Jackson, S. C. -----	11/15/41
FIFTH -----	Columbus, Ohio -----	Under Organization
SIXTH -----	Fort Custer, Mich. -----	11/12/41
SEVENTH -----	Omaha, Nebraska -----	11/25/41
EIGHTH -----	Fort Bliss, Texas -----	11/3/41
	Fort Crockett, Texas -----	11/15/41
	Fort Sill, Okla. -----	12/1/41
	Camp Bowie, Texas -----	11/10/41
	Camp Barkeley, Texas -----	11/15/41
	Camp Hulen, Texas -----	12/1/41
NINTH -----	Fort Lewis, Washington ---	12/1/41
	Fort Ord, California -----	12/1/41
	Camp Haan, California -----	10/28/41

XVIII

PHOTOGRAPHIC

Photographic Laboratory, Army War College:

A new floor is now in the process of construction on top of the Photographic Laboratory at the Army War College, D.C. This third floor, to be completed on or about the 15th of February, will provide the laboratory personnel with the additional space necessary to accommodate the greatly increased demands being made on the photographic laboratory during this emergency.

The Officer-in-Charge plans to locate the entire sound and re-recording department on the new third floor. It is anticipated that the sound equipment will consist of one projector and five other necessary units (heads).

In addition, located on the new floor will be all of the film strip activities, one or two editorial rooms and the film inspection facilities.

Under this new arrangement the second floor will house the following departments: printing, negative matching, editing, film vaults, and executive.

The disposition of the first floor -- still department, developers, files, portrait studios -- remains virtually unchanged, except for the additional room provided by the reshuffling of the departments to be located on the third floor.

Equipment Capacity:

As a result of modernization of equipment at the Photographic Laboratory, the following figures have been released by the Officer-in-Charge concerning present film capacity:

35mm Negative Developer	2,000 ft. per hour
	25,000 ft. per diem
35mm Positive Developer	3,000 ft. per hour
	50,000 ft. per diem
16mm Negative Developer	1,200 ft. per hour

16mm Positive Developer 9,000 ft. per hour

16mm Release prints at rate of 100 reels per diem.

New Training Films Released:

TF 1-174, "Aircraft Hydraulic Systems, BC 1 Airplane"

TF 11-257, "Care and Maintenance of Tapered Roller Bearings"

TF 5-263, "Double Apron Fence"

TF 11-296, "The Technique and Mechanics of Arrest and Search of Persons"

New Film Strips Released:

FS 5-12 "Military Water Supply - Procurement"

FS 7-56, "Browning Machine Gun, Cal. .30 M1917"  
(Part XII)

FS 7-58, "Browning Machine Gun, Cal. .30 M1917"  
(Part XIV)

FS 10-59, "Sheet Metal Work, Body, Fender, & Radiator Repairs"

FS 10-61, "The Storage Battery"

Field Manual 21-6 includes some other training films which have not yet been approved for release. All of these will receive initial distributions determined by the General Staff G-3 and the Office of the Chief Signal Officer, as soon as they have been approved. No requisitions should be placed by libraries for prints of any subject prior to receipt of the initial prints to be furnished on this basis.

Still Picture Section:

The Still Picture Section of the Photographic Division is developing a portable camera and finishing equipment. This outfit will be carried in a case not larger than the average grip. It will consist of a small camera, daylight developing tank and an enlarger that can be used either with a storage battery of an automobile or 110-volt AC current. Trays, chemicals and paper will be included in this outfit. With an outfit such as this it will be possible to process photographs anywhere at any time even in an automobile. This outfit will be of great value for Military Attaches and for use of Military Missions.

## FORT MONMOUTH

Signal Corps School:

The present state of hostilities has brought into effect an even greater intensification of planning for expansion of the several activities of the Signal Corps School and the Signal Corps Replacement Training Center. Contemplated expansion will deal with both the intensity and the extent of training. New courses and greater numbers of students will be paralleled with increased instructional personnel, space, and equipment.

As these plans mature and become effective, information concerning them will be included in subsequent editions of the Signal Corps Information Letter so that troops in the field may know of the efforts made in meeting their needs.

The Signal Corps Replacement Training Center has set up the cadre for Camp Crowder. It is expected that this cadre will depart for Camp Crowder early in January, 1941. During the month of November, 1271 selectees and Regular Army enlistments trained at the Replacement Center were transferred to organizations in accordance with requisitions.

The Enlisted Men's Department, due to the contemplated expansion of the Army, now has an expansion under consideration which will include increases in the number of instructors and of space and equipment. At present the Department has approximately 1500 students, there being a slightly larger percentage in radio courses than in wire courses.

At present about two-fifths of these students are Replacement Center trainees and three-fifths are on detached service from organizations outside Fort Monmouth. During the past month, about 400 students have completed training in the various specialized courses and have been returned to their organizations or the Replacement Center.

A new course covering teaching methods has been inaugurated. The course is available only to noncommissioned officers of organizations, not being offered to replacement center trainees. One additional week is necessary to complete this short course.

At present the Officers' Department of the Signal

Corps School is giving instruction to 120 students of the October class who are to graduate January 5, 1942. The November class consists of 115 students who are scheduled to graduate in February. On December 15, the department is prepared to receive the December class of student officers who will be given instruction as indicated in the Signal Corps Information Letter of December 1, 1941. Students are selected from all grades. Attempts are made to use an ever increasing amount of visual education, the only limit being the amount of material available on the subjects covered.

In-so-far as possible it has been the policy to return all officers who have been assigned to Signal Corps organizations to those organizations. Occasionally, however, mutual transfers or other factors have made it necessary to ask for a reassignment of these officers. Officers coming from other arms who are assigned to duty with the Signal Corps or are transferred to duty with the Signal Corps, are assigned to Signal Corps organizations in accordance with their specialties.

Some latitude is permitted these student officers in making their own selection of assignments, particularly with respect to the geographical location of the organization to which they are assigned. There are at present 24 Marine Corps officers, including those enrolling with the December class, all of whom will be returned to Marine Corps organizations. Since the beginning of hostilities, more than 20 officers have been relieved from duty as students, before completing all courses, and have been ordered to duty with troops.

The Officer Candidate Department, in accordance with the directive of War Department Circular No. 245, dated November 26, 1941, enrolled a class of approximately 250 on November 25 for the 31 weeks' course. Most recent plans call for a class of 500 to be enrolled early in January, which represents a doubling of the quota. The class which entered October 10 will graduate on January 9.

The Aircraft Warning Department is going ahead with its expansion and at present has a student body of 169 officers and men. Authority has been granted for expanded facilities, including additional buildings, which will give a capacity of 600 students. It is expected that the building program will be completed by April 1.

The basic military training and technical courses of this department require 13 weeks study. The process of enrolling and relieving students is a continuous operation so that the number of officers and men who complete the training will vary from one month to the next.

## AIR COMMUNICATIONS

Constitution and Activation of New Signal Aircraft  
Warning Units:

During the past month considerable progress has been made in activating Signal Aircraft Warning Units, and as a result, the following units have been activated at the station indicated.

<u>Unit</u>	<u>Station</u>
505th Sig AW Regt	McChord Field, Wash.
552d Sig AW Bn (Sep)	McChord Field, Wash.
605th Sig AW Plot Co	
Front (Plus 1 Filter Sec)	Ft. Lawton, Wash.
652d Sig AW Reporting Co	
Front	Ft. Lawton, Wash.
602d Sig AW Plot Co Front	Portland Air Base, Portland, Oreg.
655th Sig AW Reporting Co	
Front (Less 1 Reporting Plat)	Portland Air Base, Portland, Oreg.
504th Sig AW Regt	Camp Haan, Calif.
554th Sig AW Bn (Sep)	Camp Haan, Calif.
654th Sig AW Reporting Co	
Front (Plus 3 Reporting Plats)	Camp Haan, Calif.
656th Sig AW Reporting Co	
Front (Plus 2 Reporting Plats)	Camp Haan, Calif.
606th Sig AW Plot Co Front	
(Plus 2 Filter Secs)	Camp Haan, Calif.
604th Sig AW Plot Co Front	Camp Haan, Calif.
501st Sig AW Regt	Fort Dix, N. J.
502d Sig AW Regt	Fort Dix, N. J.
551st Sig AW Bn (Sep)	Fort Dix, N. J.
601st Sig AW Plot Co Front	Fort Dix, N. J.
651st Sig AW Rep Co Front	Fort Dix, N. J.
503d Sig AW Regt	Drew Field, Fla.
553d Sig AW Bn (Sep)	Drew Field, Fla.
603d Sig AW Plot Co Front	Drew Field, Fla.
653d Sig AW Rep Co Front	Drew Field, Fla.

### Disbanded Units:

At the time that the above new units were activated, the following Signal Aircraft Warning Units were disbanded:

3d Aircraft Warning Company, Ft. Lawton, Wash.  
4th Aircraft Warning Company, March Field, Calif.  
1st Aircraft Warning Company  
2d Aircraft Warning Company  
505th Operations Co AW  
530th Aircraft Warning Company

### Aircraft Warning Training:

With a view to having qualified officers in key positions in Aircraft Warning Units who are familiar with the theory of operation of radio detector equipment, the Chief Signal Officer initiated a plan for the training of Signal Corps officers in several colleges. Students selected for these courses are first sent to Cruft Laboratory, Harvard University, for a basic or refresher course in Electronics.

Officers who successfully complete this course are then sent to an advanced course in the Massachusetts Institute of Technology. Upon graduation from MIT, these officers are sent to the Aircraft Warning Department of the Signal Corps School for approximately 1 month to acquaint them with the actual detector equipment used by the Signal Corps.

At the present time, approximately 100 officers are undergoing instruction at Harvard and MIT. A new course is scheduled to begin at Harvard University on February 2, 1942. Approximately one hundred Signal Corps officers will be sent to this course.

### Advanced Course:

Plans are being prepared for establishing at the Signal Corps School, Fort Monmouth, New Jersey, a 3-months' advanced course for Signal Corps Reserve Officers, in the grade of captain or higher, covering the duties of Signal officers on the staffs of bomber commands, interceptor commands, and air forces, and the tactical employment of Signal Corps units assigned or attached to these commands. The capacity of this course will be such as to permit the enrollment of twenty officers each five weeks.

### Literature:

There is in process of preparation a Mobilization

Training Program for Signal Corps Units on duty with the Army Air Forces at Unit training centers to be known as MTP 11-3, 1942. It is anticipated that this program will be completed about January 1, 1942.

Field Manual FM 11-25, covering the Aircraft Warning Service, is at the present time approximately ninety-five percent complete. Every effort is being made to expedite the printing of this manual and arrange for its early distribution to the field.

## MILITARY PERSONNEL

Aircraft Warning Service:

A major problem has been the assignment of sufficient personnel for the immediate expansion of the Interceptor Commands.

In connection with this, on the day war was declared, (December 8, 1941) a conference was held to determine what new aircraft warning units were to be activated, where these units would be located, and what commissioned personnel would be needed to fill them.

Within that week new personnel was transferred to fulfill the program outlined.

Procurement of Qualified Selectees:

In connection with complaints received that qualified radio technicians, cable splicers, etc., were not being assigned in satisfactory numbers to Signal Corps units, a recommendation was made to The Adjutant General that a letter be issued calling attention of all Induction Centers to a directive that all plant department employees of American Telephone and Telegraph Companies, Western Union and Postal Telegraph operators, and amateur radio operators be sent to Signal Corps Replacement Centers. This recommendation was approved and acted upon.

All recruiting offices have been authorized to enlist all radio operators directly for the Signal Corps rather than have them wait for later allocation.

Action was taken to expedite the replacement of enlisted men by civilians in Corps Area Service Commands.

Classification of Officers:

On December 12, 1941, a rough draft of a classified code for officers on Signal Corps duty was established. This code is based on that used by The Adjutant General's Machine Records Section, but has been broken down a great deal to fit more specifically Signal Corps needs. This qualification code is in connection with the current effort to classify all officers on Signal Corps duty and to use the Machine Records equipment to record classification and assignment of officers on Signal Corps duty.

Increase in Officer Supply:

Action has been initiated to increase the authorization for the Electronics Training Group from 500 officers to a total of 1000 officers.

Promotions:

The following promotions have occurred among Signal Corps personnel in approximately the past month.

Colonel to Brigadier General (Temporary):

Rumbough, William S.  
Akin, Spencer B.

Lieutenant Colonel to Colonel (Temporary):

Code, James Arthur  
Moran, Richard Bartholomew  
Rumbough, William Samuel

Major to Lieutenant Colonel (Temporary)

Corput, Rex Van Den, Jr.  
Horn, Tyree Rivers  
Lanahan, Francis Henry, Jr.

Captain to Major:

Davis, Harry LeRoy

First Lieutenant to Captain:

Abernathy, Floyd Roy  
Allia, Domenico Jack  
Baldassari, Carlo  
Dart, Thomas Parker  
Herrmann, Howard William  
Hocker, Otis Beverly, Jr.  
Lown, Gilbert Arthur  
McCormick, Harold Donovan  
Timm, Edward Allen

First Lieutenant to Captain (Temporary):

Filiberti, George Joseph  
Litz, Wayne Pinkerton

Second Lieutenant to First Lieutenant:

Andrews, Charles Meade  
Burglund, Wilfred Paul  
Jackson, Keene Smith  
Reeves, Charles Pierce, Jr.  
Scurlock, James Paul

Second Lieutenant to First Lieutenant (Temporary)

Benton, Roy Hart  
Helgestad, James Elliott  
Hellis, Carl Theodore

Transfers:

The list of transfers of officer personnel in the Signal Corps has become so large that it is not feasible to include it in the SCIL at the present time.

## XXII

### COORDINATION AND EQUIPMENT

#### T/BA and T/A

The Tables of Basic Allowances and Tables of Allowances will hereafter be modified once every three months by the issue of a change incorporating all modifications authorized by The Adjutant General in the preceding period. When the table becomes unsuitable because of the number or complexity of changes, a complete new revised table will be published including all of the changes released since last publication of the table.

Upon request of The Adjutant General to delete all non-essential items from the Table of Basic Allowances, the Signal Corps Board has made a study and recommended the deletion of numerous items. After further study by the Office of the Chief Signal Officer, the list will be submitted to The Adjutant General on January 1, 1942, for approval.

The Signal Corps Board is now making a study of, and preparing recommendation for, a complete revision of Tables of Basic Allowances for Signal Corps Units. Changes will be based upon definite recommendations from officers in the field in answer to a recent questionnaire. It is probable that changes will be so extensive as to require a revision of the table rather than the publication of a scheduled change.

#### Notes to Field:

##### Truck, 4-ton, 6x6 Cargo:

This is a standard type Quartermaster truck which has recently been authorized for issue to Signal Corps units as a prime mover for Trailer K-37. Cab type hand brake control equipment for controlling brakes of the Trailer K-37 from the cab of the 4-ton truck is also authorized, to be mounted in the field. The Trailer K-37 when fully loaded is too heavy to be towed by Trucks K-43 or K-44 or Trucks 1½- or 2½-ton cargo.

##### Cable Recovering Device:

A suggested design for a cable recovering device to be attached to the winch of a Truck K-43 has been received in the Coordination and Equipment Division. This suggested device is

being given careful consideration and if it is found that a military need exists, it is contemplated setting up a project for development.

#### Radio Trucks, 3/4-ton, 4x4:

Coincidental with the change in basic design of light trucks from the present  $\frac{1}{2}$ -ton standard to the new 3/4-ton, low silhouette type, it is possible that radio trucks issued to Signal Corps organizations will be of the carryall type body. This will provide greater protection from the weather to operators as well as improving night operation under blackout conditions.

#### Field Wire Construction Truck:

Photographs showing temporary conversion of cargo trucks into field wire construction trucks by tactical units have been received in the Coordination and Equipment Division. These are being studied and consideration is being given to the design of a standard field wire construction truck for particular use by division signal companies.

#### Carbine, cal. .30, M-1:

Carbines, cal. .30, M-1, were authorized to Signal Corps units on Change No. 2, November 6, 1941, to Table of Basic Allowances for Signal Corps, No. 11, October 1, 1941, replacing Rifles, cal. .30, M-1. The contemplated use of the carbines is the same as that previously described for the rifles, the change being made in view of the facts that the shorter range of carbine is considered to be adequate for local defense of Signal Corps working parties and that both the carbine and its associated ammunition are lighter than the rifle and its ammunition. It is anticipated that provision will be made for carbine training ammunition for each enlisted man in Signal Corps units equipped with carbine.

#### Radio Set SCR-506:

This is a new type medium range, medium frequency, command set, amplitude modulated, for the Armored Force. It is the Signal Corps development of Armored Force Radio Set AF-II. It was developed primarily for use in the right sponson of Light Tank M-3 and in other armored vehicles. The transmitter has four preset frequency positions and one tunable position, permitting instant selection of any of five frequencies by a manually operated switch. The transmitter is master-oscillator controlled and has an output power of from 50 to 90 watts on cw and approximately one quarter of this power on voice. The frequency range of the transmitter is 2000 - 4500 kc.

The receiver incorporates an integral crystal calibrator which gives 100 and 20 kc intervals throughout the range of the receiver (2000-6000 kc). The receiver is manually controlled by means of a direct reading dial, calibrated in channel numbers and frequencies.

Radio Set SCR-290 Dropped:

During the current month the Chief of Coast Artillery agreed on the adoption of Radio Set SCR-284 (Already standardized), for use in searchlight platoons of anti-aircraft artillery. Further development work on Radio Set SCR-290 has been discontinued.

Military Characteristics Approved:

In accordance with recommendations contained in approved reports on Signal Corps Board Cases, The Adjutant General approved military characteristics for the following items:

Tool Equipment TE-58-() (Pneumatic):

This item consists of air compressor mounted on suitable truck or trailer together with base, rock drills, rock breakers, clay diggers, backfull tampers, sump pump, sprayer, etc., and accessories. Used for the construction of telephone and telegraph pole lines.

Trailer K-35:

This item is a dual-wheel trailer with swivel, caster-type, third wheel; pneumatic tires, traveling gross weight 8,000 pounds; payload, traveling 3,000 pounds, stationary 4,000 pounds, - 1½ ton net.

Truck K-53-():

This item is a 2½-ton truck, 6 x 6 (4dt), with van body. Purpose is for housing and transportation of various Signal Corps field installations requiring a high degree of mobility. Payload, 3,000 pounds traveling; stationary 4,000 pounds.

Test Board BD-103:

This item is to provide a roadside terminating point for lines laid by the construction platoon or company including trunks and long locals.

Connector M-234 (Self-soldering):

This item consists of a closed tube of solder contain-

ing flux and covered with a coat of combustible material in which is imbedded igniter. Compound to be ignited by friction with phosphorous compound such as on a safety match box.

Cable WC-548 (Spiral 4):

This item provides for two balanced self-transposed physical circuits in waterproof protection for use on long field lines in uncut 1/2 mile lengths. Four insulated conductors wound spirally about a central non-conductive core. Rubber covered.

Recommendations for Standardization:

The Chief Signal Officer forwarded to The Adjutant General recommendations by the Signal Corps Technical Committee that items be standardized as follows:

Hook LC-48 (Pole Carrying):

This item is for use in pole yards and for pole line construction.

Tool Equipment TE-64 (Earth Borer):

This item is for use with earth borer and pole setting trucks equipped with special body.

Maintenance Equipment ME-14 (Earth Borer):

This item is for use with earth borer and pole setting trucks equipped with special body other than Truck K-43-().

Maintenance Equipment ME-15 (Derrick):

This item is used with but is not a part of Truck K-43-().

Maintenance Equipment ME-16 (Winch):

This item is used with but not a part of Trucks K-43-() and K-44-().

## PROCUREMENT

Production Requirements Plan:

The Office of Production Management recently announced that effective January 1, 1942, the Defense Supplies Rating Plan will be superseded by the "Production Requirements Plan." This plan has been designed to enable the manufacturer to present a complete picture of his operations in relation to Defense and essential civilian needs, and to state his production requirements for these purposes. In this manner it will be possible for the Division of Priorities to give the manufacturers the proper priority assistance.

Applications filed in accordance with the Production Requirements Plan will contain information needed by the Office of Production Management for a clear picture of existing inventories and prospective needs for scarce materials.

A manufacturer who applies for priority assistance under the Plan will show the type and volume of products he has been making, their use in relation to defense or essential civilian needs, the amount of scarce materials he has on hand, and the additional amounts he will require to fill his production schedule for the next calendar quarter.

In determining what priority may be granted to the applicant, the Priorities Division will take into account (1) the amount of defense or essential civilian production involved, (2) the end use of the products, (3) the materials required for production, (4) the overall policies of the Supply Priorities and Allocations Board, and (5) the recommendations of the appropriate industrial branches of the Office of Production Management.

After considering all of these factors, the Priorities Division will be able to grant the manufacturer a preference rating, geared to his needs and the importance of his products, which can be used continuously over a calendar quarter to obtain critical materials.

Ratings under the new plan may apply to all or to any specified part of the producer's materials requirements. If all of the products covered in his application are destined for defense

or essential civilian use, he may be given a priority rating covering 100 per cent of his needs. In other cases the rating may apply only to the percentage of his materials requirements which will be directly incorporated in products regarded as being of basic importance in defense or in the national economy.

It is expected that this new device will permit an eligible manufacturer to use his rating to get all of the materials covered, and he will not have to bother to apply for aid by filling out PD-1's (the standard application form for an individual rating) or to extend each of the individual ratings on the orders he receives. The amount of paper work involved in filling defense orders will thus be substantially reduced.

Before the inauguration of the Production Requirements plan, a manufacturer whose products were used partly by the Army and Navy, partly by defense plants or by vital public services such as municipal fire and police departments, and partly by ordinary civilian industry might have had high priority ratings on some of his orders, lower ratings on others, and no ratings at all on the rest.

The net result was that he had to use a number of different processes in order to operate. The only courses open to him were to extend the high ratings on his orders in each individual case, or to use the Defense Supplies Rating Plan which gave him an A-10 rating for his defense orders only, or to make many separate applications.

The new plan will simplify this substantially. The manufacturer will first obtain form PD-25A. On this form he will show the kind and volume of products he has been making, the priority rating on orders he has filled in a recent quarter, the destination or end use of his products, and the inventory of materials which he has on hand, together with his anticipated materials requirements for the next calendar quarter.

As this information is obtained from all manufacturers handling defense or essential civilian orders, the Office of Production Management will be able to build up an overall picture of materials use and prospective requirements for defense. When the picture is reasonably complete, it will be possible to assign priority ratings with more exact relationship to the importance of a particular manufacturer's product and the total volume of materials available.

The new plan is to be applied first on a company basis. It is expected to form the foundation for similar plans on an in-

dustry basis as rapidly as the overall needs of the various industries are known in the Office of Production Management.

Since the anticipated requirements of a manufacturer may change if the pattern of his defense orders changes during a calendar quarter, the Production Requirements Plan provides that interim reports may be filed. The first quarter for which applications under the new plan will be received is January 1 to March 31, 1942.

Where necessary because of long-term commitments or the nature of his business a manufacturer may file an addition application covering the second quarter at the same time he files for the first. All applications must be for calendar quarters, however, so that the information obtained by the Office of Production Management will be uniform as to dates.

The Production Requirements Plan will go into effect for the first calendar quarter of 1942. The new PD-25A application forms are now ready for distribution from the Priorities Division of OPM in Washington, or field offices.

Signal Corps Officers are advised the Production Requirements Plan does not at this time change the priority system applying to Signal Corps procurement: Preference Rating Certificates, Form PD-3, will continue to be issued to cover Signal Corps purchases.

#### Earlier Planning Now Vital:

The planning for emergency procurement which was carried on for nearly 20 years preceding the present war effort is now one of the vital aids in expediting the flow of equipment to the combat objectives of the armies in the field. The expanded organization of the Office of the Chief Signal Officer in Washington and in the Procurement Districts has been designed for the effective prosecution of the current procurement program; and, in the initiation of many hundreds of projects relating to the purchasing procedure, the functional activities of the Procurement Planning units have been in the front line of operation.

The system of computation of requirements for the various troop objectives, which was developed as part of the procurement planning scheme, has been stepped up and is now operating at war-time tempo in estimating communications requirements for Overseas Departments, the Lend-Lease Program, our own military objectives, and for such auxiliary aids as may be asked for by the War Department General Staff. To facilitate the rapid accomplishment of this function the IBM tabulating unit which has been installed in the

Procurement Division within the past year is being utilized to the fullest extent.

The Educational Order experiment which has covered a two-year period of investigating sources of supply for communications equipments and educating industrial facilities in the manufacture of certain critical Signal Corps items, has demonstrated its value, not only in developing productive capacity for the items in question, but in disclosing certain chokepoints which would have occurred in the mass production activities called for by maximum war effort. Among the items contracted for as part of the forward planning orders were telephone and field wire items considered vital to defense communications, radio receivers and transmitters of intricate design, and dynamotor, switchboard and cordage units.

This feature of planning has had a mutually educational advantage in that the related studies of raw materials and manufacturing devices have been among the aids to organizing the smooth operation of the procurement routines. Researches which have been undertaken as a result of the educational-order program include extensive studies of critical raw materials for insulators for both radio and wire items, quartz crystal assemblies, and radio tubes of all classes, to name only a few of the projects now under way.

A development of these studies has disclosed the necessity for expansion of many of the contributory industries as well as of the facilities producing finished items or parts. At present, expansion projects are being processed for between 25 and 30 plants, some of which are being financed by the Government through the Defense Plant Corporation, a subsidiary of the RFC. This is a continuing function of Procurement Planning and has necessitated the addition of several industrial communications engineers in the different professional classifications to carry on the scientific investigative work involved, as well as a greatly augmented statistical force to coordinate the estimations of requirement and capacities being currently received.

The data compiled as a result of the industrial surveys conducted over a period of years has formed the basic information for the subcontracting factor which is now an important part of Signal Corps contract awards. The industrial survey is likewise a continuing function of procurement planning.

In connection with the interest of the Signal Corps in subcontracting, the data acquired on the recent tour of the Defense Trains throughout the United States has been incorporated into the records of the planning Section and will be available to the contracting personnel in their considerations of purchasing pro-

cedure involving "bits and pieces" methods. The Section is at present cooperating with the Contract Distribution Division of the Office of Production Management in its establishment of permanent displays in the important cities throughout the country where information will be available at all times to potential manufacturers of communications items.

This vast procurement program necessitates every bit of planning effort that can be devised to mobilize the industrial reinforcement to the military objectives. The success of the all-out activity directed toward supplying the various components of our own army and also furnishing to the armies of other democracies equipments vital to their communications operations will be assured through our constant research, study, and organization of the supply program to meet these urgent and complex requirements for national defense.

#### Inspection Districts:

The Philadelphia Signal Corps Procurement District is initiating plans to establish Inspection Districts at points within its District for the purpose of handling the inspection now charged to PhilSCPD. The plan is to place these Districts in close proximity to the plants of contractors, thereby eliminating excessive travel with incident saving in time and cost as well as considerable per diem allowances. The separate offices would issue any necessary travel orders, transportation requests and bills of lading to cover travel of personnel and shipment of material coming under its jurisdiction.

#### Subsection Moves:

In order to provide necessary space in Temporary Federal Office Building M, occupied by the Materiel Branch, steps have been taken to move the Compliance Review Subsection of the Priority Compliance Section, Procurement Division, to the building occupied by the Philadelphia Signal Corps Procurement District.

This Section, although physically located in Philadelphia, will be directly responsible to the Chief Signal Officer for its operation. The Administrative and Priority Subsections of the Priority Compliance Section will remain with the Procurement Division under the Materiel Branch in Washington, D. C.

#### Procedure Change:

In accordance with the recommendations of representatives of Wallace Clark and Company, the procedure previously followed in the Purchase Section of the Procurement Division has been changed

to the extent that district procurement instructions are now being prepared in the Scheduling Division. Other important changes involving the matter of handling procurement progress, follow-up, and statistics are being studied with a view to execution at an early date.