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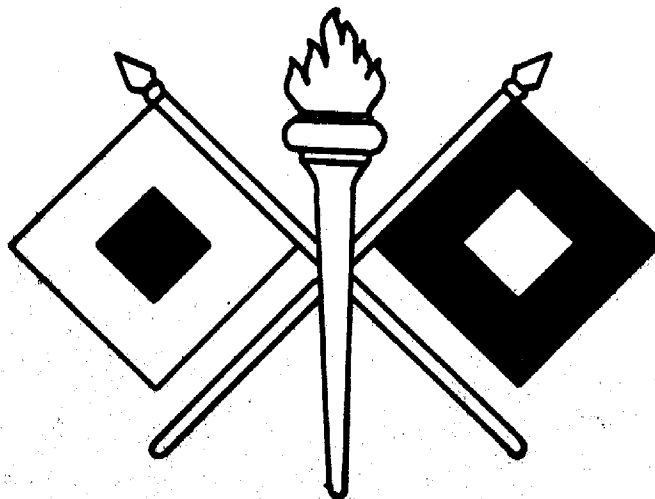
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**RESTRICTED**

# WAR DEPARTMENT

## OFFICE OF THE CHIEF SIGNAL OFFICER

# INFORMATION LETTER



**NO. 7**

**WASHINGTON, D.C.**

**JUNE 1, 1942**

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

June 1, 1942

SIGNAL CORPS INFORMATION LETTER

NO. 7

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

June 1, 1942

SIGNAL CORPS INFORMATION LETTER

No. 7.

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 is 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 reach 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.

RESTRICTED

THE SECRETARY OF WAR

THE SECRETARY OF WAR

Gen. George C. Marshall  
THE CHIEF OF STAFF

Brig. Gen. J. McCloy  
THE ASSISTANT SECRETARY OF WAR

Brig. Gen. J. McCloy  
THE UNDER SECRETARY OF WAR

Brig. Gen. Edwin B. Smedley  
COMMANDING GENERAL  
SERVICES OF SUPPLY

Brig. Gen. A. Coady Jr.  
THE CHIEF SIGNAL OFFICER

BOARDS & COMMITTEES

ADVISORY COUNCIL

EXECUTIVE OFFICER  
EXECUTIVE OFFICE STAFF  
EXECUTIVE STAFF  
ADMINISTRATIVE STAFF  
PLANNING STAFF  
OPERATIONS STAFF  
INTEGRATION STAFF  
MAJOR STAFF

Col. Carl G. Mendenhall  
ASSISTANT TO THE CHIEF SIGNAL OFFICER  
EXECUTIVE CONTROL BRANCH STAFF

MAJ. J. E. PETERSON  
EVALUATION & CONNECTION BRANCH STAFF

MAJ. J. C. OWEN  
METHODS & SPECIAL STUDIES DIVISION STAFF

Brig. Gen. C. W. MILLIGAN  
FIELD SERVICE STAFF  
SECTION OF FIELD SERVICE

Col. I. Weston Jr.  
ADMINISTRATIVE BRANCH STAFF  
CHIEF OF ADMINISTRATIVE BRANCH

MAJ. A. W. JENNINGS  
PERSONNEL DIVISION STAFF

MAJ. A. W. JENNINGS  
TRAINING DIVISION STAFF

MAJ. E. T. FOSTER  
SERVICE DIVISION STAFF

MAJ. E. T. FOSTER  
PHOTOGRAPHIC DIVISION STAFF

Brig. Gen. C. W. MILLIGAN  
OPERATIONS BRANCH STAFF  
CHIEF OF OPERATIONS BRANCH

MAJ. J. E. PETERSON  
MILITARY PERSONNEL DIVISION STAFF

MAJ. J. E. PETERSON  
OPERATIONS DIVISION STAFF

MAJ. J. E. PETERSON  
MILITARY TRAINING DIVISION STAFF

Brig. Gen. R. E. GARDNER  
COMMUNICATIONS CO-ORDINATING BRANCH STAFF  
CHIEF OF COMMUNICATIONS BRANCH

MAJ. J. E. PETERSON  
GENERAL INVESTIGATION DIVISION STAFF

MAJ. J. E. PETERSON  
RESEARCH DIVISION STAFF

MAJ. J. E. PETERSON  
PROCEDURES DIVISION STAFF

Brig. Gen. J. C. HINES  
INFORMATION & AIRCRAFT COMMUNICATIONS BRANCH STAFF  
CHIEF OF INFORMATION BRANCH

MAJ. J. E. PETERSON  
INFORMATION DIVISION STAFF

MAJ. J. E. PETERSON  
AIRCRAFT DIVISION STAFF

MAJ. J. E. PETERSON  
INSTALLATION DIVISION STAFF

MAJ. J. E. PETERSON  
MAINTENANCE DIVISION STAFF

Brig. Gen. R. B. COLTON  
SUPPLY SERVICE STAFF  
SECTION OF SUPPLY SERVICE

Brig. Gen. R. B. COLTON  
MATERIAL BRANCH STAFF  
CHIEF OF MATERIAL BRANCH

MAJ. J. E. PETERSON  
GENERAL DEVELOPMENT DIVISION STAFF

MAJ. J. E. PETERSON  
SCHEDULES DIVISION STAFF

MAJ. J. E. PETERSON  
MAINTENANCE DIVISION STAFF

MAJ. J. E. PETERSON  
PROCUREMENT DIVISION STAFF

MAJ. J. E. PETERSON  
STORAGE & ISSUE DIVISION STAFF

MAJ. J. E. PETERSON  
LEGAL DIVISION STAFF

Brig. Gen. F. B. BROWN  
COMMUNICATIONS BRANCH STAFF  
CHIEF OF COMMUNICATIONS BRANCH

MAJ. J. E. PETERSON  
ORGANIZATION DIVISION STAFF

MAJ. J. E. PETERSON  
PLANT DIVISION STAFF

MAJ. J. E. PETERSON  
TRAFFIC DIVISION STAFF

MAJ. J. E. PETERSON  
SIGNAL INTELLIGENCE SERVICE STAFF

APPROVED - *Robert H. Trent*  
MAJOR GENERAL, U.S. ARMY  
CHIEF SIGNAL OFFICER, U.S. ARMY

IV

CHIEF SIGNAL OFFICER

Dedicates Signal Depot:

The new Signal Corps Depot at Lexington, Kentucky, was formally dedicated on Friday, May 29. Major-General Dawson Olmstead, Chief Signal Officer of the Army, was the guest of honor and principal speaker. Other distinguished guests included The Honorable Keen Johnson, Governor of Kentucky, Senators A. B. Chandler and Alben W. Barkley, and Honorable Virgin Chapman, all of Kentucky, and Major General A. W. Gullion, the Provost Marshall General of the Army. Lt. Col. Charles M. Simpson, Jr., of the Office of the Chief Signal Officer, was master of ceremonies.

From Lexington, General Olmstead proceeded to Camp Crowder, near Neosho, Mo., for his first inspection of Signal Corps activities at that post. A parade and review, during which he made a short address, were held in the General's honor on Sunday, May 31.

General Olmstead's address at Lexington follows:

"Col. Watts, Distinguished Guests, Ladies and Gentlemen:

"I am happy to be with you here in this charming and historic American community. The deeds of bygone gallant sons and gracious daughters of old Kentucky seem to pervade the very atmosphere of this enchanted land, to revive the courtly figures of a generation that is past — figures that made Kentucky's history as glamorous as it is famous.

"However, it is not past glories upon which we shall dwell, but on the grim realities confronting us today, a situation forced upon us by tyrannical despots who would rob us of all those things which we hold precious, those liberties which we obtained only by generations of constant vigilance and struggle.

"The goal upon which this country has set its sights in the present conflict can be attained only with the close cooperation of the Signal Corps. The swift movement of troops and supplies over far-flung lines of action on land, sea, and in the air in modern war is made possible only on the basis of an effective system of communications. To illustrate, if the Signal Corps were suddenly ordered to cease all operations

in the present war, our entire military machine would collapse.

"The Lexington Signal Depot which is being dedicated here today will play a very important part in the Signal Corps' essential functions as an arm and service of the United States Army. Besides its tactical duties, the Signal Corps is charged with the responsibility of developing, supplying, operating, and maintaining all communication equipment of our rapidly expanding Army.

"Selection of this site is in keeping with the broad policies of the War Department in maintaining our Supply Depots and other equally important activities at points strategically located throughout the nation. This immense warehouse, built in record time, is one of the finest examples of any similar construction work in the country. From it supplies of vital Signal Corps equipment, not only for our own communications needs, but for those of our embattled Allies, will flow in an ever-increasing stream to help in engulfing our foes.

"In addition to establishing the largest Signal Corps Supply Depot here, the immediate area has been selected as an immense training center for Signal Corps civilian personnel. Thousands of these civilians, after brief training courses as mechanic learners in about 15 vocational schools located in cities and towns of Kentucky, will be assigned to the Lafayette, Johnson, and Transylvania schools in Lexington, the Power Supply School in Paris, and several schools at the Avon Depot.

"There they will be given advanced technical studies and practical training in subjects as radio, power motors, electronics and Aircraft Warning. While under instruction all of these trainees will receive compensation to afford their assimilation in the surrounding area.

"These civilian trainees, and thousands who will succeed them in their studies, upon completion of their courses, will be assigned to duty in the Signal Corps where their services will be utilized in assisting the military personnel in the myriad of activities and responsibilities of this vast and important Arm of the service.

"We are pleased to become an active part of this area of your state, and I hope you are as happy to have us with you as we are to be here. You can expect us to exert every effort to maintain the tenor of the business, official and natural pursuits of your very attractive community.

"The struggle ahead will be a mighty one. We must be a united and determined nation, with courage and dignity, but with a devastating wrath against those malignant forces which are attempting to meddle with our fine heritage.

"I have every confidence that whatever task or sacrifice the future may hold in store, Kentuckians -- always colorful fighters -- will be in the thick of the scrap, on foreign fronts as well as here at home, contributing their slashing punches to our enemies who would enslave us. I know you will not let your country down. For its part, I am happy to state, the Signal Corps will continue to furnish our Army with the greatest communications facilities of any Army in the world.

"Final victory will be ours -- of that you may be certain -- and on that triumphant day we shall have made clear to our foes that although slow to anger, when once aroused America can gather together a fighting efficiency that will crush any power on earth that threatens our freedom and security.

"In dedicating this magnificent new building to the service of our country, I pay high tribute to Col. Laurence Watts, Commanding Officer, and his assistants at this Depot, for their diligence and loyalty in this undertaking; to the press for its fine spirit of cooperation at all times; to the citizens of Winchester, Lexington, Paris, Avon, and other towns, for their unfaltering kindness and hospitality, and to Colonel Menger, the contractors and hundreds of workmen, without whose unflagging labor this mighty contribution to our nation's all-out war effort would not have been possible.

"Thank you!"

CG, SOS Inspection Tour:

An inspection tour of Signal Corps activities at various posts in the state of Florida was made a few weeks ago by General Brehon B. Somervell, Commanding General, Services of Supply.

The journey was undertaken at the invitation of Major-General Dawson Olmstead, Chief Signal Officer of the Army, who accompanied General Somervell and other Army officers on the tour, which was covered by plane and automobile.

Leaving Washington by plane on Friday morning, April 24, General Somervell and his entourage arrived in Orlando for an inspection of the Signal Corps activities at that post. Lieut. Col.

Thomas J. Cody is Signal Officer at Orlando.

From Orlando the party flew to Tampa, where they inspected Signal Corps activities of the Third Interceptor Command at Drew Field, commanded by Brigadier-General Carlyle H. Wash. Major General Walter H. Frank, Commander of the Third Corps Air Force, was also present, together with Lieutenant-Colonel Benjamin Stern, Signal Officer at Drew Field.

Morrison Field, West Palm Beach, was visited the next morning and an inspection was made of the Air Corps School, Colonel John W. Monahan commanding.

A visit also was made to Riviera, where a temporary school for the instruction of Signal Corps troops in Aircraft Warning is holding sessions in a warehouse, pending completion of school facilities at Camp Murphy, the new Signal Corps post located at Hobe Sound, 20 miles from West Palm Beach.

Later, General Somervell and the entire party made an inspection tour of Camp Murphy, both by plane and automobile. Col. Hugh Mitchell is commandant of Camp Murphy, and Lieut. Col. James W. Green is Assistant Commandant.

Accompanying General Somervell and General Olmstead were: Brig. Gen. C. R. Huebner, Services of Supply; Col. F. C. Meade, Office of the Chief Signal Officer; Lieut. Col. R. C. Maude, Signal Corps, Office Director of Air Defense; Capt. H. K. Hastings, Services of Supply, Aide-de-Camp, and Capt. W. B. Latta, Office of the Chief Signal Officer.

#### Visits West Point:

Major-General Dawson Olmstead, Chief Signal Officer of the Army, accompanied by his Aide, Captain William B. Latta, visited New York on May 7 for an inspection tour of Signal Corps activities in that vicinity. The tour included a trip to the United States Military Academy at West Point.

In the morning General Olmstead visited Governor's Island in New York Harbor and inspected the Signal Office of the Headquarters, 2nd Corps Area, where Major General Thomas A. Terry is Commanding General. Colonel George P. Dixon is Signal Officer.

From Governor's Island General Olmstead proceeded to West Point, arriving in the afternoon. He was met by Major General Francis B. Wilby, Superintendent of the United States Military Academy. Later, General Olmstead gave an informal talk on "The Signal Corps in This War," to the First and Second Classes of



the Corps of Cadets, and interested officers at the historic institution.

On Friday the General made an inspection of the Signal Corps Photographic Center at Astoria, L.I., the chief activity of which is the production of training films for distribution to the various Arms and Services of the Army. Col. Melvin E. Gillette, Signal Corps, is the officer in charge.

Fort Monmouth, N.J., where he was formerly Commanding General, was visited by General Olmstead on Saturday. Brigadier General George L. Van Deusen is Commanding General of that Signal Corps post.

Messages to Personnel:

Major General Olmstead, Chief Signal Officer of the Army, sent the following messages to all officers and civilian employees of the Signal Corps during May, 1942:

The first message, dated May 12, states:

1. Congress has entrusted the Signal Corps with a tremendous responsibility -- the investment of over 4 billion dollars for winning the war.

2. At first thought it might be assumed that this need concern only those charged with procurement. Obviously, the war effort will be hampered and money will be wasted if the wrong things are ordered, or if the right things are ordered in the wrong quantities.

3. Any use of money, material, or human effort which does not contribute directly toward winning the war is waste. Therefore, this great responsibility goes far beyond that of placing "million dollar orders." It is too big for any one man or small group of men. It calls for both team-work and individual effort. The Chief Signal Officer needs the help of every employee.

4. Economy is an individual responsibility. 1,000 "GEM" paper clips weigh 1.56 lbs. If each one of the 5,000 persons employed in the OCSigO should carelessly throw away just one clip a day, there would be wasted in one month enough metal for a 500 lb. bomb on Tokio.

5. Time is money too. If you waste time, not only does the work you could do remain undone, but you are wasting the vitally needed office space which you occupy. If twice as many words as necessary are used in writing a letter, it takes twice the time

of the writer, the stenographer, and all who read it.

6. The American public willingly accepts rationing, pays higher taxes, and goes without luxuries and many necessities as part of the price they must pay to win the war; but, they are not willing to undergo these sacrifices to pay for avoidable waste. Each one of us is an integral part of the "American public." In the long run, our waste costs us money.

THE TIME AND MATERIAL WE SAVE TODAY MAY BRING A VICTORY TOMORROW.

The second message, dated May 13, is as follows:

1. The Signal Corps is charged with the serious responsibility of exercising a stewardship over the expenditure of great amounts of public funds. It must, at all times, be prepared to render a full account of its stewardship to the American people.

2. Each officer, in his relations with individuals and firms having business dealings with the Government, must continue to exercise a strict and ever vigilant rule of personal conduct to insure that relations of a compromising character, or even the appearance of such relations, may be scrupulously avoided.

3. The acceptance of the most casual entertainment or insignificant gift, however innocently offered, may tend to so compromise both the Signal Corps and an individual as to seriously impair public confidence.

The third message, dated May 19, reads:

1. Effective as of this date there has been established in the Communication Coordination Branch, The Signal Corps Reference Library.

2. It is planned to make this one of the outstanding technical reference libraries in the Service, and to this end various nationally known engineering societies are giving their generous and wholehearted cooperation.

3. As soon as permanent quarters are established for the Signal Corps this library will be placed in a readily accessible and central location for the convenience of all personnel.

4. It is recognized that the present war is fundamentally a war of science, in which knowledge will play a decisive role. The Signal Corps is comprised of communications special-

ists whose technical skill and scientific training are vital to the successful conduct of the war.

5. KNOWLEDGE IS POWER, and the KNOWLEDGE of the Scientist is the sum of his education, his experience and the reference data available to him. If the solution of even one vital problem can be expedited by the ready accessibility of technical data, then the library will have served its purpose.

6. A Library Advisory Board, composed of one representative from each Branch has been established and it will be the duty of these Branch representatives to assist the administration of the library to pass upon the necessity of each book requested by his Branch, to prevent undue expense. The success of the library will depend upon the wholehearted co-operation of all personnel, but particularly upon the judgment and intelligence of the Branch Library Representatives.

7. Mark this library another potent tool to enable the Signal Corps to play its full part in WINNING THIS WAR.

All messages were signed by Major General Dawson Olmstead, Chief Signal Officer of the Army.

Special Assistant Appointed:

Peter L. Schauble, Vice-President of the Bell Telephone Company of Pennsylvania, has been appointed Special Assistant to General Olmstead. His duties will be in connection with a program to attract to the Signal Corps the high type technical personnel required to meet the demands of modern warfare.

Mr. Schauble was appointed Vice-President in charge of Public Relations in 1941 after nearly 30 years service with the Bell Telephone Company of Pennsylvania. At the close of World War I, he wrote the history of the so-called "First Battalion," which was the first of the telegraph battalions organized by the various Bell Telephone Companies at the start of the War in 1917.

In his present work he will be associated with Colonel C. O. Bickelhaupt, who was Vice-President of the A. T. & T. before being called to active duty in the Signal Corps.

Directorate of Planning:

A Directorate of Planning to assist General Olmstead in anticipation and programming of future needs, and in the coordinating of the work of the Signal Corps on future requirements has been

established in the Office of the Chief Signal Officer.

Col. Frank C. Meade heads this important Planning Staff. Lt. Col. Wesley T. Guest handles the requirements for troops, supplies, and personnel; Lt. Col. V. A. Conrad is handling aircraft requirements; and Lt. Col. F. H. Lanahan is in charge of theaters of war subjects.

Complimentary Letter:

A recent letter of the Chief Signal Officer from the General Electric Company, of Schenectady, New York, reads as follows:

Dear General Olmstead:

I want you to know how very much we appreciate your dispatch of April 18th, telling of the use of General Electric radio equipment in raids on the Japanese forces by American bombers.

You will no doubt be interested in the use which we made of this message in trying to bring the war home to our people as possible.

1. Enlargements of the telegram are being displayed in various parts of our factory.
2. Individual reproductions of the telegram are being given to each of the workers in our department and to the application engineers as a souvenir.
3. The wire was featured in ceremonies on April 22nd which accompanied the opening of the Kossuth Street plant of the Radio and Television Department.
4. The telegram was read by Frazier Hunt on the General Electric Radio News Program on April 21st, as a tribute to the General Electric workers who are building our radio equipment and tubes.
5. Wide coverage is being obtained throughout the company by means of our regular employee newspapers.

We found the reception of your message most heart-

ening to our organization, and I want to thank you again for giving us this opportunity to build morale with an actual story from the front.

Cordially yours,

/s/ W. R. G. Baker

Vice-President

## EFFECTIVE LEADERSHIP

Function of Local Command:

During wartime -- especially in this greatest of all wars, with the Army expanding at an unprecedented rate -- outstanding leadership becomes a vital factor in developing an all-powerful "esprit de corps," without which victory is a forlorn hope.

In peacetime, officers and enlisted men are graduated from the Army's service schools and assigned to units scattered throughout the Continental United States and in foreign possessions. With additional training and association in those units, they are welded into organizations with a unity of purpose and thought which, under stress of battle, results in deeds of valor comparable to those performed on Bataan Peninsula.

With the tremendous speed-up necessary for all-out war, such unity is difficult to develop, yet the maximum in attainment cannot be expected without it. Hence, the need for encouraging, especially among young officer personnel -- only a step removed from civilian life -- a sense of responsibility and leadership so paramount in military tactics.

Peacetime means of instilling and indoctrinating new officers and troops with a team spirit having become virtually impossible because of time limitations, Commanding Officers must sometimes adopt novel means to fulfill this need in their respective units.

As one Commanding Officer recently pointed out in a report to the Chief Signal Officer, executives of successful business enterprises realize that regardless of the quality of their products, there must be dispatched to their branch offices from time to time, an outstanding leader, or group of men, especially selected, to carry an inspirational message to their lesser officials. The object is to instill in those officials a high quality of enthusiasm and teamwork which, in turn, is conveyed to the rank and file of the organization.

Applying this method to officers of his own command, this Commanding Officer declared the results were excellent. Almost on the eve of departure for overseas duty, several new officers from the Officer Candidate School were assigned to his unit

he stated. All of them were intelligent, technically well-trained and ideal for assimilation in the unit. But, they lacked vision, experience and that inner drive so necessary in good officers.

"Realizing," he continued, "that they must be given pep talks to inculcate in them a sense of inspirational leadership and a feeling of responsibility, a series of planned talks was given them enroute. All reacted to this selling plan in varying degrees, but the net result was that these newly commissioned officers are now successfully holding positions that in normal times would be filled by officers of much higher grades.

"They have knowledge, vision and appreciation well beyond their years, and have developed the ability to successfully pass on the message of inspirational leadership to their subordinates."

A similar system was used successfully by this Commander in dealing with enlisted men. Since the time was too short to fit his raw troops for scheduled forthcoming maneuvers, a short cut to team spirit and individual responsibility was employed. He continued:

"An inspirational booklet was prepared, relating to the history of the unit. The idea was sold to them that they were particularly fortunate to have been selected as members of this unit, but such selection carried with it great responsibility. This booklet was handed to the selectees at the reception center after assignment." During the ensuing four-day train trip, he said, selling talks in a like vein were continued by the cadre officer. Upon arrival at their destination, a prepared talk was given to the troops by the unit commander.

The results were more than gratifying. Despite only three weeks' intensive training, he reported, these men rendered outstanding service in the June-to-October maneuvers. Eventually several enlisted men were selected for the Officer Candidate School.

Because of the every-day association between local commanders and their troops, the fostering and developing of effective leadership is a function of local command, and not of staff.

Commanding Officers of Signal Corps units, wherever they may be stationed, are urged to give careful thought to this intangible but highly important matter of "esprit de corps." Methods, of course, will depend upon varying circumstances, but whether by lectures, conferences, pamphlets, or plain high-pressure salesmanship, the objective must be attained.

VI

AC AND EC BOARD

Sound Ranging Equipment:

A member of the Army Communication and Equipment Coordination Board participated in a critique on sound ranging equipment and methods, as a result of which a conference was held with interested users and makers to insure economical development for the needs and requirements of the Army and Navy.

Tank Destroyer Needs:

Exhaustive conferences were held in the analysis of Tank Destroyer needs in Signal communications and a solution submitted to the Tank Destroyer Command and the Armored Force Command for their consideration.

Officers Report for Duty:

The following officers reported for duty with the Board during the past month:

Captain J. V. Murphy, U. S. Navy  
Lt.-Col. F. P. Townsley, Signal Corps  
Major D. A. Kellough, R.C.C.S.



VII

CIVILIAN PERSONNEL

Personnel Shortage:

Due to the rapid expansion of the procurement program and the necessity for setting up Corps Area Repair Shops for the maintenance of Signal Corps equipment, there is at the present time a shortage of 3,000 Radio Engineers, 15,000 mechanic Technicians, 7,000 Inspectors and approximately 1,000 Electrical Draftsmen and other technicians.

In order to prevent undue hardship due to losses to the Selective Service System, the Signal Corps was authorized under War Department Memorandum of April 8, 1942, subject: "Procedure on Deferment from Selective Service" to establish a War Department Deferment Reviewing Board consisting of not less than three members, one of whom will be a civilian employee, in each procurement district, general depot, Port of Embarkation, Corps Area and Laboratory.

Request for deferment will be routed from each originating officer to the War Department Reviewing Board established for the Signal Corps, for consideration in connection with procedure and criteria by the Secretary of War.

## VIII

### CIVILIAN TRAINING

#### Personnel:

First Lieut. Simon A. Stricklen was transferred from the Maintenance Division, Radar and Aircraft Communications Branch, to the Civilian Training Division as executive officer and technical adviser.

#### New Trainees Authorized:

Two thousand seven hundred (2700) trainees were authorized during the past month. Five thousand six hundred two (5602) trainees were receiving instruction in pre-service training courses being conducted throughout the United States as of May 1, 1942.

#### Survey, Report Completed:

A comprehensive statistical survey of the civilian training program and a report of the current training features and authorized expansions have been prepared. The report contains complete graphic representation of the present in-service and pre-service training program, as well as the plans for projected training.

#### Training Memorandum Released:

Civilian Training Memorandum No. 4 regarding the reports to be submitted showing the progress of in-service and pre-service training activities in the field was released to all Corps Areas and Signal Corps field establishments.

## IX

### STORAGE AND ISSUE

#### Supply Letter Distributed:

Supply Letter No. 133, OCSigO, Amended, covering current supply policies and procedure was distributed the past month. Supply Letter No. 133 has received much favorable comment from Headquarters, Services of Supply, and other branches.

This letter implements the general AG letter on the subject as pertaining to the Signal Corps and is intended to cover the subject as completely as possible. As revisions and changes will be necessary from time to time in this Supply Letter, recommendations regarding changes, omissions or additional matter should be addressed to The Chief Signal Officer, attention Storage and Issue Division.

#### Personnel:

Civilian personnel in the Storage and Issue Division reached the 1000 mark during the past month.

Officers allotted to the Division were increased to a total of twenty-two, with eight affiliated.

Industrial Specialists are now being used in several key positions and the majority are making good records.

## CAMP CROWDER

Replacement Training Center:

The Signal Corps Replacement Training Center at Camp Crowder, Missouri, has received from Reception Centers from February 15th to May 15th a total of 18,599 trainees. Of this number 8,649 have been transferred and 9,950 are undergoing instruction in the Specialist Schools.

Those transferred were distributed as follows:

To S.C. School, Fort Monmouth	1,307
To Civilian Schools	1,496
To Field Units	<u>5,846</u>
Total	8,649

In addition, fifty-five (55) officer candidates were sent to Fort Monmouth to attend the Seventh Class.

The Radio School:

The 705 students who recently completed the first 13-week cycle of training in the Radio School of the SCRTC at Camp Crowder averaged 12 words per minute code speed.

Radio School instruction covers a period of ten weeks. For six weeks the men are taught Continental Code and Army Radio procedure. The final four weeks of the course is devoted to instructing the men under actual field conditions, sending and receiving with sets that are most commonly used by Signal Corps units. The art of camouflaging sets in the field is emphasized at all times. Panels and air-ground liaison code also is taught.

The SCRTC public address system, when completed, will consist of over 200 speakers and will have amplifiers capable of furnishing 2,500 watts of audio power over the entire cantonment area. The Radio School will install, operate and maintain the system through a central control room to afford the maximum amount of efficiency.

## XI

### FORT MONMOUTH

#### Fort Monmouth Review:

Students of the Officer Candidate Department at Fort Monmouth, New Jersey, marched in review to honor Governor Charles Edison, of New Jersey, on Friday afternoon, May 15.

The Governor was met at the main gate to the post by Brig.-General George L. Van Deusen, Commanding General of Fort Monmouth, and his staff, and was conducted to the reviewing stand while the official salute of 19 guns was being fired.

Before the review, Governor Edison was conducted on a tour of inspection of training installations at the post and at nearby points. Addressing the prospective officers before they paraded, the governor told them he was "very much impressed" by his visit. He assured the men that they had the solid backing of the citizens of the state.

In the reviewing stand besides the Governor, General Van Deusen and his staff were: Col. Edgar Clewell, Commanding Officer of the Signal Corps Replacement Training Center; William E. Ohland, Assistant Secretary for Defense of the New Jersey State Police; Henry Dowling, Executive Assistant to the Governor; Major John P. Read, Assistant Adjutant of New Jersey, and Lieut. H.E. Timmerman, Public Relations Officer of the post.

#### Chinese Soldier:

The spirit that has enabled his Chinese brothers to offer successful resistance to the armed might of Japan for so long a time, lives on in Donald Lee, who was recently inducted into the Army. He is now on duty at the Replacement Training Center at Fort Monmouth.

While making a sixteen mile hike he was noticed by Col. Edgar L. Clewell, Commander of the Replacement Training Center. Lee was hobbling along with the troops and apparently found it rough going. Col. Clewell spoke to Lee, urging him to hop on a truck and ride the remainder of the distance. To which the Chinese-American soldier made a classic reply:

"You can't lick those Japs sitting down."

## XII

### PROCUREMENT

#### Inspection Section:

The Chief Signal Officer has obtained the services of Mr. George L. Schnable, who will conduct a study of Signal Corps inspection methods over a period of about four months. Mr. Stanley Woolman, of the Inspection Section, OCSigO, has been assigned to assist Mr. Schnable in this work.

This study has so far included visits to the Philadelphia Signal Corps Procurement District, the Signal Corps General Development Laboratory, and the plants of several contractors in the Philadelphia district. Additional visits to other Procurement Districts, Laboratories, and contractors' plants are contemplated.

Mr. Schnable has had long experience with the handling of inspection problems and control of quality in industry. It is expected that the results of this independent survey will be of considerable value to the Signal Corps in its coordinating of the inspection of the wide variety of communication materiel which is being procured under the war program.

#### Production Expediting Section:

A review of statistical data indicates that in August, 1941, at the time of the organization of this section, out of 65 selective critical items only 46% were on schedule or better than schedule. The remaining 54% were, for the most part, behind schedule by large percentages.

A current report of a similarly selected group indicates that 74% are ahead or on schedule, and the 26% behind schedule are lagging only to a small degree. This marked improvement has been accomplished in face of an 800% increase in contract awards during the period concerned.

The problem of parts supply and raw materials was relatively simple in August, 1941, and the prime contractor was not faced with raw material controls, allocations and the multitude of new factors which developed with the increased tempo. The improvement is reflected in the direct and indirect efforts

of the section, as a whole, where 43 qualified production engineers are employed. They are assisted by nine specialists, including a Chief Specialist Engineer. These men act in an advisory capacity on dynamotors, vacuum tubes, meters, ceramics and machine tools in the alleviation of production problems that arise.

## XIII

### PLANT

#### New York Signal Liaison Office:

The New York Office, which has heretofore handled the Plant Department Signal Liaison functions with the North Atlantic and Caribbean Divisions of the Corps of Engineers, is to be moved to Washington on May 25th. This office was established in New York at the time when the engineering for these bases was being handled by the New York Division, Engineers' Offices. As the detailed engineering has now been transferred direct to the bases, it has been found expedient to do as much of the Signal engineering as possible at the bases, and to coordinate the projects for check and procurement in Washington.

#### Conservation of Material:

Many vital materials are used in communication plant and equipment. In order to conserve these items so essential to the war effort, each communication project is to be carefully considered in the light of its military necessity and requirements are to be held to a minimum consistent with the military need.

The determination as to necessity as a rule can best be answered in the Corps Area, and as it is the policy to decentralize authority to whatever extent necessary, the burden proof as to necessity rests largely with the Corps Area Signal Officer.

Where communication facilities are to be rented from a commercial telephone company, it is necessary that the plans be developed promptly and priority rating secured, as early as possible, with the War Production Board, by the telephone company on Forms PD-1A or PD-200. Every assistance should be given the telephone company in preparing and security priority rating on military projects. An accompanying letter from the Corps Area Signal Officer outlining the military necessity and reasons for the project are required to be filed with the application.

#### Transmitters:

An order for 25 Globe Wireless 2.5 KW - high frequency radio transmitters having a frequency range from 200



to 22,000 kc has been initiated. This order will give the Signal Corps a third source of supply for radio transmitters for the army administrative radio system. Transmitters are also on order with the Federal Telegraph Company and Press Wireless. A number of 15 KW high frequency transmitters were recently ordered from Press Wireless to supplement existing orders for 10 KW sets from Federal Telegraph.

Rhombic Antennas:

Drawings for rhombic antennas are being revised to provide simple standard designs which will be suitable for use of task forces in the field. A set of characteristic curves has been plotted which give the essential data required for determining the performance for seven (7) standard designs which are suitable for distance ranges from 200 to 3000 miles and above.

STATISTICS AND REFERENCE

Activities:

Office Memorandum No. 120 establishes The Signal Corps Reference Library and designates its use as a depository for all official publications of the Office of the Chief Signal Officer. All branches, divisions, etc., preparing material in print, mimeograph, or other form, are directed to forward to the Library two copies thereof to remain permanently in the Library files. The Statistics and Reference Division of the Communications Coordination Branch is directed to operate and maintain this Library.

Office Memorandum No. 121 established the Signal Corps Reference Library Advisory Board. The purpose of the Board is to assist in the administration of the Library and the orderly development thereof.

A series of charts comprising 252 pages showing frequencies by countries and the maximum power of each frequency used has been completed. These charts are available for use to authorized officers.

A two-volume compilation of military and technical characteristics has been prepared and issued for communications equipment of the United States, Great Britain, Germany and Japan.

A glossary of technical and semi-technical Signal Corps terms is now being prepared in German and French.

A chart showing comparative United States and British radio sets for ground forces has been prepared in conjunction with the British officers serving on the Army Communications and Equipment Coordination Board.

Studies on Information Requests have been completed on the following subjects:

1. Signal communications of tank destroyer forces.
2. Foreign army practices on the location of transmitters at command posts.

3. Wire tapping methods used by various agencies.
4. Comparison of phonetic alphabet used by the armies of the United Nations and commercial organizations.

Personnel:

Major Wooster, formerly in charge of United Nations Section, has been transferred to Florida. The vacancy created by his transfer is being temporarily filled by Captain Vassil, who has been assigned to this Division.

Captain Warner has been assigned to this Division and is in charge of the Neutral Nations Section.

Captain C. T. Baldwin has been temporarily assigned to this Division, and has further been assigned in charge of the Reference Section.

Lieutenant Kingman has been assigned to this Division and is in charge of the German unit of the Axis Section.

## PROCEDURES COORDINATION

Teletypewriter Procedure:

The approval of the Chief Signal Officer, as well as the concurrence of the Commanding General, Army Air Forces, Commanding General, Army Ground Forces, Director of Naval Communications, U. S. Navy and the Administrator, Civil Aeronautics Administration, has been obtained for the recently completed manuscript "Joint Teletypewriter Procedure."

Publication of this tentative procedure has been started and when completed it will be distributed by the Army and Navy for use in all teletypewriter communication between and within their respective services. The Civil Aeronautics Administration will distribute and direct its use when communicating with the Army and the Navy. After a period of trial of several months, it is contemplated that comments and recommendations will be requested. Such criticisms as are received will be reviewed for the purpose of making any necessary revisions in the manuscript, after which it will be distributed in final form. In the Army, it will be designated basic field manual, FM 24-8, Joint Teletypewriter Procedure.

The Joint Teletypewriter Committee, formally appointed by the proper authorities, consists of:

Colonel C. W. Lewis, Signal Corps  
 Colonel J. D. B. Lattin, Signal Corps  
 Lt. Col. E. L. White, Army Air Forces  
 Lt. Commander J. H. Nicholson, U.S.N.R.  
 Major A. A. McCrary, Signal Corps  
 Captain H. R. Pemberton, Army Air Forces  
 Lt. G. W. Good, Signal Corps  
 Mr. J. W. Bayne, Civil Aeronautics Administration

Joint Radio Procedure:

This Division has worked with the Army Communication and Equipment Coordination Board in conducting a study of radio procedure with the view of bringing about successful communication among the U. S. Army, the U. S. Navy and the armed forces of the Allied powers.

The Board has recommended that the U.S. Army adopt the joint radiotelephone and telegraph procedure laid down in FM 24-10 as the standard procedure for all Army communications. Thus far, the concurrence of both the Army Air Forces and the Army Ground Forces has been given to this proposal. Such a changeover will eliminate certain discrepancies between Joint Procedure and that prescribed in FM 24-6.

TM 11-454 - The Radio Operator:

The revision of TM 11-454 has progressed satisfactorily. A conference recently was held with representatives of the Army Air Forces, the Military Training Division and the Department of Training Literature, Fort Monmouth, relative to the contents of the manual. A preliminary agreement was reached on the materiel to be included, pending approval of the proposed outline submitted informally to the Army Air Forces, Army Ground Forces, the Department of Training Literature and the Personnel Procedures Section of The Adjutant General's Office.

Wire Thrower RL-37:

Since Wire Thrower RL-37 has been standardized for issue as a partial replacement for Reel Unit RL-26, this Division has prepared a Signal Corps Board Case requesting information relative to its installation and operation. Specific instructions as to plans for installation in  $1\frac{1}{2}$  and  $2\frac{1}{2}$  ton trucks, loading plan and loading list, operating personnel required, list of associated equipment, and details of operation were requested. Additional information regarding the comparative operating advantages of RL-37, RL-26 and RL-31 is expected to be furnished.

## MILITARY TRAINING

Camp Murphy:

Enlisted trainees are receiving instruction in Aircraft Warning at the Signal Corps School at Camp Murphy, Florida. Sessions are being held temporarily in a warehouse located at Riviera, about 20 miles from the new camp, which is to be formally opened on June 6. The building program will be completed on June 15 -- less than five months' construction time.

Trainees will be sent from the Signal Corps Replacement Training Centers at Fort Monmouth, New Jersey, and Camp Crowder, Missouri; from civilian institutions where Signal Corps enlisted men are being trained, and from Coast Artillery units which install and operate their own radio equipment. After a course of approximately six months (either part or all of which will be at Camp Murphy), the trainees will be attached to Signal Corps units on duty with the Army Air Forces or with Coast Artillery units in technical radio positions.

Photographic Training:

Tentative arrangements have been made for the training of photographic specialists in the Signal Corps Photographic Center at the rate of approximately thirteen per week.

Manuals:

The following Field and Technical Manuals have been distributed by The Adjutant General and will be available through regular channels of distribution:

- FM 21-30 Conventional Signs, Military Symbols, and Abbreviations.
- FM 31-35 Operations in Snow and Extreme Cold.
- TM 6-210 Conduct of Field Artillery Fire Using Air Observation.

TM 12-220 Administration -- The Division and Large Installations.  
FM 30-30 Identification of United States Government Aircraft, February 21, 1942, which supersedes FM 30-30, September 18, 1940.

Air-Ground Liaison Code, Training Edition No. 1, Division Field Code, Training Edition No. 1, and Fire Control Code, Training Edition No. 1, have been superseded by TM 11-461, Air Ground Liaison Code, Training Edition No. 2, TM 11-460, Division Field Code, Training Edition No. 2, and TM 6-230, Fire Control Code, respectively. Copies of these manuals are distributed by The Adjutant General; and may be obtained through regular Adjutant General channels.

R. O. T. C.:

The capacities of the eleven existing Signal Corps Reserve Officers' Training Center Units have been increased substantially in order to provide a larger output of second lieutenants from these units. The distribution of these new units is expected to be as follows:

<u>CORPS AREA</u>	<u>NUMBER OF UNITS</u>
First	2
Second	2
Third	2
Fourth	2
Fifth	2
Sixth	1
Seventh	1
Eighth	3
Ninth	2
Total	17

It is expected that arrangements soon will be completed for the establishment of new units in universities and colleges.

## XVII

## FISCAL

Signal Corps Leases:

The following is a schedule of Signal Corps leases obtained or in process of leasing by the Chief of Engineers as a result of requests prepared by the Fiscal Division:

<u>Location</u>	<u>Size Square Feet</u>	<u>Military Requirement</u>
<u>STORAGE AND ISSUE DIVISION:</u>		
Boston, Mass., 22 Elkins St. (2nd and 3rd floor)	10,486	1st C.A. repair shop
Boston, Mass., 365 "C" St.	75,000	Moving 1st C.A. Signal Depot
Chicago, 2035 W. Pershing Road	161,765	Warehouse
Chicago, 1903 W. Pershing Road (Central Mfg. Dist.)	200,000	Depot
Chicago, International Livestock Amphitheater, 42nd & Halstead Sts.	200,000	Storage
Chicago, 1927 Pershing Rd., West one-third of Bldg.	100,000	Expansion of Signal Section
Vicinity of Chicago	50,000	Defense aid storage space
Clearing, Ill., 5001 W. 65th St., (One half of Bldg.)	102,000	Storage - Vehicles
Dayton, O., Barlow Bldg. 355 S. Main Street	50,000	Storage & Office
Dayton, O., Ripley Bldg. 427-29 N. Main Street	20,000	Storage
Dayton, O., Lot opposite the Barlow Building	6,500	Storage - Vehicles
Dayton, O., Rogers Pontiac Bldg., 300 Blk. S. Main.	36,500	Storage & Office
Dayton, O., Parking Lot		Parking
Dayton, O., 1900 Block East First Street	87,000 7½ acres	Receiving, storing & shipping of heavy ground plant equipment
Dayton, O., Rear of Borchers Building	7,140	Storage - Vehicles



<u>Location</u>	<u>Size Square Feet</u>	<u>Military Requirement</u>
<u>STORAGE AND ISSUE DIVISION:</u>		
Dayton, Ohio, 6 Buildings 25 W. 1st St. (First St. Garage)	380,000	Storage
337 S. Jefferson St. (Wolf)		
24 E. First St. (Omer Garage)		
E. 6th St. (Excelsior Laundry)		
225 S. Main (Stomps)		
Fifth & Pine St. (Waitman)		
Lexington, Ky., 4 Buildings	653,592	Storage
1064 S. Broadway 258,768 Sq.Ft.		
555 S. Broadway 38,000		
810 S. Broadway 188,480		
867-81 S. Bdway 168,344		
Vicinity of Newark, N.J.	250,000	Defense Aid Storage space
Philadelphia, (Pioneer Stock Paper Co. Bldg.)	261,695	Warehouse
(Wheeler Corrugated Co. Building)	75,000	Warehouse
(Quaker Lace Co. Bldg.)	208,000	Warehouse
<u>GENERAL DEVELOPMENT DIVISION:</u>		
Detroit, lot next to 57 Harper Avenue	4,890	Storage - Vehicles
Detroit, 57 Harper Ave.	9,600	Garage
Detroit, (Curtis Building Room 233)	650	Field Office
Detroit, (Curtis Bldg.)	1,500	Inspection
Detroit, (Curtis Bldg.)	5,000	Garage - Testing
Long Branch, N.J. (Jones Motor Bldg.) 4th & Bdway	7,650	Warehouse
Long Branch, N.J. 23 Emmons St.	5,520	Warehouse
<u>RADAR DIVISION:</u>		
Asbury Park, N.J. Borden Bldg. 809 Monroe Avenue	8,000	Storage
Avon, N.J., corner Norwood Ave. & Main Street	7,500	Garage

<u>Location</u>	<u>Size Square Feet</u>	<u>Military Requirement</u>
<u>MILITARY TRAINING DIVISION:</u>		
Camp Murphy, Hobe Sound, Fla. Beach Rights of Jupiter Is.	700	Safeguarding property
Camp Murphy, Pre-cooling Plant Riviera, Fla. Merchants & Miners Warehouse & Ad- joining land	-0- 384,400	Signal Corps School
Sea Girt, N.J.	-0-	Camp Edison
<u>CIVILIAN TRAINING DIVISION:</u>		
Lexington, Ky. Old Johnson School Building	300,000	Civilian Training Sch.
<u>PHOTOGRAPHIC DIVISION:</u>		
Vicinity of Signal Corps Photographic Center, Long Island City, N. Y.	-0-	Garage

XVIII

ALLOWANCES

T/O, T/BA:

The following table of allowances and changes to tables of basic allowances were published by The Adjutant General:

- Table of Allowances No. 11-4, Special Aircraft Warning School, dated April 15, 1942.
- Change 1, dated May 4, 1942, to Table of Basic Allowances No. 11, Signal Corps, dated March 1, 1942.
- Change 1, dated April 20, 1942, to Table of Basic Allowances No. 11-3, Signal Corps Aircraft Warning Service, dated March 1, 1942.

Copies of these tables have been distributed by The Adjutant General.

New tables of organization have been approved for nearly all types of Signal Corps units. Revisions of tables of basic allowances to correspond with these changes in tables of organization are under study and will be published in the near future. Major changes in transportation will be made in the new tables of basic allowances in accordance with War Department directives.

Distribution Channels:

With reference to obtaining additional copies of allowances, tables of basic allowances, and changes thereto, paragraph 2b AR 310-200 outlines the normal channels of distribution of all AG publications. In requesting copies of the Signal Corps tables of allowances and tables of basic allowances it is desired that all conform whenever practicable to AR-310-200. In cases of emergency, however, the Chief Signal Officer will supply copies. If copies of tables of allowances, tables of basic allowances, or changes thereto, for arms or services other than Signal Corps, are desired, the requests should be routed through normal channels.

Depot and Repair Companies:

In Part 6, Signal Company, Depot, and Part 7, Signal Company Repair, Section VIII - Signal Equipment, Table of Basic Allowances No. 11, Signal Corps, dated March 1, 1942, under column 1, "Article", is listed "Standard items of signal equipment which are authorized on tables of basic allowances for all arms." The atten-

tion of depot and repair companies is invited to the fact that the basis of issue for these items is "Quantity as authorized by the requisition approving authority."

Basis for Requisition:

The attention of the signal supply officers is invited to the fact that equipment is authorized to various organizations on the basis set forth in the following:

1. Approved tables of basic allowances applying to that specific organization.
2. Signal Corps equipment lists prepared in the Office of the Chief Signal Officer from the tables of basic allowances applying to that organization.
3. Approved tables of allowances applying to the school or activity requisitioning the equipment.
4. Table of Allowances No. 20, Posts, Camps and Stations.
5. Tables of equipment prepared by the Commanding General, Services of Supply; Commanding General, Army Air Forces; and Commanding General, Army Ground Forces, for special task force units.
6. By special authority from the Chief Signal Officer.
7. (Circular No. 10) - "Allowances of Expendable supplies, Signal Corps", when published.

No other tables or lists should be honored without specific authority from the Chief Signal Officer.

Signal Corps Circular 10-1 and 10-2 Spare Parts, Accessories and Expendable Items:

In the past it has been impossible to keep Appendix "B" Signal Corps General Catalog up to date with the rapid changes being made. Also Appendix "B" was limited in distribution and did not reach all concerned.

In the future, Appendix "B" will be replaced by Signal Corps Circulars 10-1 and 10-2. Circular 10-1 will contain items

authorized for tactical organizations and will be distributed to all tactical units down to and including companies and separate platoons. Circular 10-2 will show additional items issued only to schools, replacement training centers, and posts, camps and stations and will be distributed to these units.

These circulars will show the maximum number or quantity of items authorized to be on hand at any time. Only regular quarterly requisitions will be submitted for these items.

The Allowances Division, Communication Coordination Branch, Office of the Chief Signal Officer, is charged with preparation of these circulars. The first publication of these circulars should be distributed about June 1, 1942.

Transportation:

The electric brake set was deleted from Table of Basic Allowances No. 11, Signal Corps, on the recommendation of the Motor Transport Division, Office of The Quartermaster General.

Since this item is considered a spare part, it is requisitioned on the basis of specific need, rather than authorized on a table of basic allowances.

The proper vehicle to be used for towing Trailer K-37 is Truck 4 ton, 6x6, cargo. An electric brake set should be requisitioned to make this combination possible.

Equipment:

Issue of Chest, gas casualty to air force units has been approved.

XIX

LEGAL

Facility Financing Section:

Within the past year, and more particularly within the past four months, the Signal Corps has sponsored over 50 plant expansion programs involving an estimated expenditure in excess of \$40,000,000, located in fifteen different states from Massachusetts to Oregon. At the present time there are at least twenty more proposed expansions under investigation by the Procurement Planning Section.

Procedure:

The manufacturer who wishes to expand his plant at government expense applies directly to the Signal Corps, where he is advised and guided in making out his application. When the application is approved, negotiations are conducted by the Legal Division with representatives of the Office of the Under-Secretary of War and of the Defense Plant Corporation (D.P.C.), a subsidiary of the Reconstruction Finance Corporation.

With the approval from these two agencies finally obtained the manufacturer conveys to D.P.C. title in any land, building of machinery that may be involved and D.P.C. leases the property back to the manufacturer at a fixed rental on a five year basis with the option to extend the lease for at least two years. Title to any new machinery and equipment provided for in the expansion vests in D.P.C.

Separate Contract:

A separate contract, known as the "Take-Out Letter," is executed by the War Department -- Signal Corps being its designated agent -- and D.P.C. under the terms of which the War Department commits itself to certain firm and contingent obligations to be paid out of Expediting Production Funds.

Under the existing expansion program the War Department has a firm commitment of over \$7,000,000, less than 20 per cent of the total estimated cost.

Some forty or more manufacturers are represented in the current program, including the largest concerns of their kind to-

gether with certain smaller companies owned and operated by individuals. They produce all sorts of related radio, radar and communication equipment and materials such as wire, cable, quartz crystals, tubes, antenna mounts, ceramic and mycalex insulators, generators, dynamotors, glass-working lathes, electrical measuring and testing instruments, and tantalum.

#### Employment Expands:

Hundreds of thousands of men and women are employed as a result of these expansions and hundreds of millions of dollars are represented in the contracts for the manufactured products supplied either directly to the Signal Corps or to other prime contractors.

Several of these expanded facilities are already in full production, many of them in partial production and all of them, with few exceptions, will be in full production in 1942. The management and the workers in all these plants can be depended upon to match "THE WILL TO GET THINGS DONE" with "THE WILL TO WIN" of the troops at the front.

#### Advance Payment Section:

Under the first War Powers Act of 1941 and executive order No. 9001 the Under Secretary of War on December 30, 1941, issued a directive, the purpose and effect of which was to decentralize and thus simplify the procurement of Advance Payments by contractors holding government contracts. It was not the intent of that Directive to place the Government in competition with private financial institutions and that has not been its effect. In numberless cases, however, contractors are capable of manufacturing articles needed by the Government for the War effort, but are not in a position to procure loans through the usual private resources.

#### May Receive up to 50%:

With respect to this ever-growing group of contractors, advance payments form a simple and effective method of expediting Government work. In the ordinary case, any contractor whose ability to perform has been established to the satisfaction of the appropriate Government department, and who needs financing which cannot be supplied through private sources, may procure an advance under reasonable governmental supervision up to 30 per cent of the total amount of the contract price.

Where the contractor agrees to pass on part of the advance to sub-contractors, he may receive up to 50 per cent of the total contract price, and in exceptional circumstances, even where

there are no sub-contractors involved, he may, with the prior consent of the Under Secretary of War, receive advance payments in excess of the 30 per cent of the contract price.

As of the 31st of March, 1942, the Signal Corps has authorized Advance Payments in the amount of \$34,909,310, and \$14,830,262 had actually been advanced in order to assist contractors in expediting deliveries. This amount is ever increasing as familiarity with the simplicity of the requirements becomes **better** known to Signal Corps contractors.

#### Order Permits Loans:

The Advance Payment Section also acts as liaison with Headquarters, Services of Supply, Advance Payment and Loan Section with respect to regulation V Loans issued under the authority of executive order No. 9112 dated March 26, 1942. This order permits loans by commercial financing institutions or the Federal Reserve Bank, which may be guaranteed in whole or in part by the War Department. They are particularly suitable for sub-contractors who require financing not procurable elsewhere.

Applications with respect to regulation V Loans should be made to the Federal Reserve Bank located in the district in which the contractor resides or has his principle place of business. The Legal Division of the Office of the Chief Signal Officer is in a position to give detailed information with respect to financing facilities available to any interested contractor, or contracting officer in the Signal Corps. Both regulation V Loans and Advance Payments carry a reasonable interest charge. The rate with respect to the latter is  $2\frac{1}{2}$  per cent per annum.

In order to expedite the war effort, it is the desire of the Chief Signal Officer that all contracting officers be familiar with the opportunities available for contractor financing. For more detailed information, it is suggested that any officer interested, write to OCSigO, attention Advance Payment Section, Legal Division.



## WAR PLANS

Requests for T/O:

War Plans Division has been receiving requests from officers in the field for tables of organization. Although the Chief Signal Officer maintains a large file of tables of organization, the number is insufficient to fill the demands of all Signal units in the field. While it is the policy of this office to grant such requests in emergencies, such as the imminent activation of new units, it is desired that field units address their requests for necessary tables of organization to the Corps Areas, under the provisions of AR 210-350.

Status of T/O:

Table of Organization 11-18-S has been submitted to the Commanding General, Services of Supply, for approval and publication. This table was drawn up specifically to meet the requirements of the 227th Signal Company, Composite, now stationed at the Army War College.

The table of organization for Signal Company, Motorized Division, (11-67), under date of April 1, 1942, has been approved, published, and distributed, with a strength of 11 officers, 1 warrant officer, and 300 enlisted men. The old table 11-67, Triangular Division, will, when published, be known as Signal Company, Infantry Division, and will bear the number 11-7, since the triangular division will be organized under table of organization 11-7. Tables for square division will not be published.

Table of organization 11-187, Signal Fixed Radio Station, has been approved and published under date of February 12, 1942. This unit is designed to provide a pool of radio station operating detachments for transfer to foreign service as required.

Table of organization 11-57, Armored Signal Company, has been approved, published, and distributed, with a strength of 9 officers and 247 enlisted men.

Table of organization for Signal Photo Mail Company has been published as 11-367. This is an extremely flexible organization, designed to furnish "recordak" or "Microfilm" service for handling mail to and from overseas forces, using the least possible space.

Table of organization 11-200-1 has been approved and printed, and will be distributed within a few days. This table, as recommended by the Chief Signal Officer, authorizes a Brigadier-General as Army Signal Officer.

#### Proposed T/O's:

The Chief Signal Officer has received proposed tables of organization for Armored Signal Battalion, which were prepared by the Chief of the Armored Force. This proposed organization was studied by representatives of the Chief Signal Officer and special recommendations made for certain modifications. Essentially, the organization will consist of an armored headquarters and headquarters company, an armored radio company, a wire operation company, and two construction companies. The wire operation company and the construction companies will be organized under T/O 11-18 and 11-37, respectively, the tables used for the regular signal wire operation company and Signal construction company. The total strength of the proposed armored Signal battalion is 33 officers, 2 warrant officers, and 1038 enlisted men.

#### Distribution:

All other Signal Corps tables of organization were forwarded for publication on May 14 and should be printed and distributed to the Signal Corps organization in the field by June 30. In general, these tables will indicate strengths greater than those which are now authorized. No definite War Department policy has been established so far as to when the expansion of units to new T/O strengths will take place; however, this policy is expected to be published shortly.

In the meanwhile, the tables will serve as a guide to the functional reorganization of the units within their present strengths. The attention of Signal battalion commanders is directed to letter, file AG 221 (1-18-42)EA-A, "Allotments of Grade and Ratings and Authorized Strengths to Tactical Units (less Air Corps and services with Air Corps)," dated 1-21-42, paragraph 6 of which states: "These instructions do not authorize the activation of inactive elements of units." This is interpreted to mean that the second construction company in the Signal battalion will not be activated unless specifically authorized.

#### Reorganization of Units:

In connection with the reorganization of Signal Corps units, all unit commanders again are reminded that tables of organization merely furnish a basis for allotments of personnel, grades and ratings, and indicate a "type" organization. Such

"type" organizations may need to be changed to fit the tactical employment of a unit. The personnel efficiency of a unit commander often may be measured by the manner he adapts the personnel in a table of organization, and the equipment in a table of basic allowances to fit a given tactical requirement or situation.

Signal operation companies (separate), which heretofore have been organized under Table of Organization 11-18, will use Table of Organization 11-97 as a basis for their reorganization inasmuch as Table of Organization 11-18 now applies only to the Wire Operation Company of a Signal Battalion and does not provide radio and message center personnel.

A headquarters and headquarters company of the X Armored Corps has been constituted on the inactive list, effective May 1.

Activations:

The following Signal Corps units will be activated in July:

<u>Unit</u>	<u>Station</u>
1114th Signal Radio Intelligence Company	Camp Crowder, Mo.
1155th Signal Radio Intelligence Company	Camp Crowder, Mo.
261st Signal Construction Company	Camp Butner, N.C. (Col. enl. pers.)
233d Signal Operation Company	Camp Crowder, Mo.

Air Corps Signal Units:

Reorganization plans for Signal Corps units with the Army Air Forces have been changed to provide Signal companies, Aviation, for the Air Force and Bomber Command headquarters. In addition, the Signal Company, Aviation, will be used as the Operations company of a Signal Battalion, Air Support Command. Former plans called for separate companies for the Air Force and Bomber Command Headquarters, and the Signal Battalion, Air Support Command. The construction units for the Signal Battalion, Air Support Command, will be two Signal companies, Light Construction, Aviation.

Revised tables of organization for the Signal company, Aviation, Signal company, Light Construction, Aviation, and Signal Battalion, Air Support Command, are now being processed in the War Department. Early approval and publication is expected.

## GENERAL DEVELOPMENT

Truck K-51 - Trailer K-52:

Observers attending the Army Maneuvers some two years ago included in their reports many references as to the need for mobile long-range radio transmitting and receiving equipment for use by Divisions, Corps and Armies. Recognizing the need for equipment of this nature, the Signal Corps General Development Laboratory undertook the development of a vehicular radio set with a voice range, while in motion, of 100 miles under all normal conditions. Ensuing development centered around commercially available high-powered transmitting equipment manufactured by a prominent commercial company. Various components were tested, modified and finally assembled into a complete unit.

In an attempt to obtain a Standard Vehicle adaptable to the use of this radio set, the standard  $1\frac{1}{2}$ -Ton Panel which was used at that time for ambulances, was used in the original mock-ups. Early in the development and assembly of the radio components, it was believed necessary that changes be made in this vehicle, but as it became apparent that any changes from standard design would mean production delay, the Signal Corps standardized around the Quartermaster  $1\frac{1}{2}$ -Ton 4 x 4 Panel Body Truck.

The limited space in this truck available for the installation of the radio equipment, however, made it necessary that the power unit be external to the truck. To accommodate this power equipment the Standard Quartermaster Trailer 1 Ton (2 wheel) was adopted. The first completed model of this Division, Corps and Army set was submitted to the Signal Corps Board for service test in March 1941. The equipment performed satisfactorily, but it was considered necessary to continue developments with the idea of creating certain refinements on the equipment as a whole before standardization should be recommended. Further developments, therefore, ensued and a second service test was held in the fall, when standardization and procurement were recommended.

Radio Equipment:

At that time the subject radio equipment was designated as Radio Set SCR-299, and included the Truck  $1\frac{1}{2}$ -Ton 4 x 4 Panel Body then designated as K-51, and the 1-Ton Trailer (2 wheel) designated as K-52.

The radio equipment installed in the K-51 Truck consisted generally of:

Radio Transmitter BC-610  
Radio Receivers BC-312 and BC-342  
Field Telephone  
Typewriter  
One Transmitting and two Receiving Antennas.

The equipment installed in the K-52 Trailer consisted of a 24 H.P. 5 KW power unit designated as PE-95.

Upon completion of standardization and procurement clearance of the SCR-299, a contract was let with the Hallicrafters Corporation for these sets, calling for delivery early in 1942. A second contract has since been awarded to the Hallicrafters Corporation for a large number of additional sets.

At the present time units are being delivered to field organizations, and an extended program is under way to train men of the using arms at the Hallicrafters factory as specialists on this equipment.

#### Carrier Telephone & Telegraph System:

Equipment has been developed and is being recommended for standardization by the Signal Corps Technical Committee which makes use of carrier current to improve and extend the telephone and telegraph facilities of the Army. Equipment has been developed by SCGDL in close cooperation with the Bell Telephone Laboratories which is a modification of commercial carrier equipment in successful operation for several years. The equipment consists of:

1. Telephone Terminal CF-1 (Carrier)
2. Voice Frequency Ringing Equipment EE-100
3. Telegraph Terminal CF-2 (Carrier)
4. Repeater CF-3 (Carrier)

The equipments have been designed to be used primarily with Cable Assembly CC-358 (Spiral Four) and to give commercial service for a distance of at least 150 miles with Repeater CF-3 (Carrier) located at approximately 25 mile intervals.

#### Four Telephone Channels Provided:

When used with Cable Assembly CC-358 (Spiral Four), the Telephone Terminal CF-1 (Carrier) provides four telephone channels utilizing a range up to 12,000 cycles per second, each channel transmitting over a band from 300 to 2700 cycles, one of these

channels using the natural voice range. It is anticipated that one of the carrier channels will ordinarily be used for voice frequency telegraph service in lieu of telephone service, using Telegraph Terminal CF-2 (Carrier). Under this application, three telephone circuits and four teletype circuits can be obtained. Added provisions have been made for maintenance by means of simplex circuits. One voice channel is equipped to permit its use for either monitoring or maintenance purpose when not otherwise used. The carrier telegraph channels are capable of handling teletype printer transmission at word speeds of at least 60 per minute.

The equipments are operated primarily from 100-125 or 200-250 volt 50-60 cycle a.c. source of power. Provision is made on all equipments except Telegraph Terminal CF-2 for automatic emergency operation from 12-volt storage batteries.

The equipments may also be used for the economical and rapid expansion of communication channels over open wire lines of suitable transmission characteristics.

The development is an improvement over existing facilities inasmuch as it makes possible more rapid installation and extension of telephone and telegraph facilities at lower cost and with less weight of material.

Further studies by the SCGDL are in progress to further improve and extend the application of carrier equipment. Procurement is being initiated and deliveries expedited.

#### Sound Ranging Service Test:

The service tests on the Triangle System of Sound Ranging were held by the Field Artillery Board at Fort Bragg, N.C. and Camp Blanding, Fla., the latter part of April, and a critique was held at Fort Bragg, May 1st and 2nd. Representatives from this office attending part of this service test and critique were: Lieutenant W. R. Hewlett, Lieutenant Harvey Cash, Jr., Lieutenant Ivan F. Dodd, and Mr. A. T. Ireland. Formal report by the Field Artillery Board has not yet been received, but indications point to a request for development of light-weight sound ranging equipment which can be carried in 3/4-ton trucks or "jeeps" and can be installed and ready for operation in  $\frac{1}{2}$  hour.

The following meteorological kits were standardized on May 4, 1942, for use by the Army Air Forces: SCM-14 Wind-Aloft Kit; SCM-15 Surface Observation Kit; and SCM-16 Forecasting Kit.

## EQUIPMENT COORDINATION

Flow Chart Revised:

The "Signal Corps Item Flow Chart," showing the progress of a request for standardization through the various agencies of the Chief Signal Officer's Office, until final standardization, was completely revised, and five hundred copies were distributed. This chart shows the steps taken under appropriate Army Regulations to develop and standardize new items of Signal Corps equipment. (See Section XXIII, Page 50)

Telephone and Telegraph Equipment:

The Telephone and Telegraph Section of the Equipment Coordination Division has been directing its efforts towards three principle objectives:

1. Reducing the number of types of equipment;
2. Reducing the size and weight of equipment;
3. Simplifying present equipment.

In this connection, a study is in progress on various types of switchboards and their associated equipment with the object of cutting down the size and weight of the switchboard itself, and simplifying the trunk circuits by decreasing the number of relays and condensers. It is the aim of this study to eventually have but three different types of switchboards for all tactical organizations.

Circuit Breakers:

The use of small capacity trip circuit-breakers for the protection (electrical) of common battery loads has been suggested. This system would replace the conventional "alarm-type" fuse, which is susceptible to mechanical injury and requires frequent replacement. The testing agencies are now determining whether or not this is feasible.

Sound Recording Equipment:

The Chief Signal Officer, under the authority of Paragraph 5 C., Section 1, AR 5-300, approved action recommending his assumption of responsibility for all sound recording equipment for

strictly communication purposes, i.e., recording of high speed radio telegraph signals, wire telegraph and telephone messages. Military Characteristics for four types of recording equipments which are believed to cover all known applications have been arrived at after careful study, and it is hoped that the adoption of these military characteristics and standardization of necessary equipment will shortly be completed.

#### Camouflage:

A study was made with the cooperation of the Engineer Board, and the Signal Corps Board to determine suitable camouflage for Signal Corps equipment and installations.

#### SCR-551 Investigation:

An investigation was made of the problem of communication between the operator on the tower of the SCR-551 (Direction Finder) and the intercept plotter; recommendations were made to provide the telephone line directly between the operator on the tower and the interceptor plotter.

#### Gasoline Storage:

Action was taken to have a 55-gallon fuel drum standardized by the Quartermaster Corps for use by Aircraft Warning Service to provide a barrel suitable for storing gasoline.

#### Panoramic Adaptor:

An inspection was made of the Panoramic Spectroscope Adaptor at the offices of the Panoramic Spectroscope Company in New York. This equipment has so many possible applications that a brief description is given here.

The device consists of an oscilloscope and associated sweep circuits and amplifiers with facilities for connection to a communication receiver. When so connected, a display of all signals fifty kc above and fifty kc below the frequency to which the receiver is tuned is shown on the oscilloscope screen. This 100 kc band may be diminished to 25 kc to spread the display.

Use of this adaptor does not affect the receiver and sometimes signals may be identified on the screen of the oscilloscope which are too weak to be heard in the receivers. An entire band may be scanned by simply tuning the receiver through the band. Another adaptor has been developed which gives a display of all signals one megacycle above and one megacycle below the frequency to which the receiver is tuned.



Various Studies:

The results of an allocation study of the United States' use of the radio spectrum was prepared for the guidance of the A. C. & E.C. Board in their study of the allocations of radio facilities throughout the Army.

Studies were made and reports submitted to the S.C.T.C. for the standardization of radio Direction Finder SCR-504 and Rectifier RA-56. The S.C.T.C. subsequently approved standardization of these articles.

A study was initiated to determine whether or not frequency meter SCR-211 may not be procured with relaxed tolerance specifications in view of the difficulty of procurement.

Captured Equipment:

The Section took part in conferences and submitted recommendations on the methods of handling the problem of captured enemy radio equipment. Similar conferences and recommendations were made on the subject of destruction for secret radio equipment.

PRINCIPAL STEPS INVOLVED IN  
DEVELOPMENT AND STANDARDIZATION

PHASES		OFFICE OF THE CHIEF SIGNAL OFFICER	
INDUSTRY	PAR. 7C AR. 850-25	PROCUREMENT PLANNING SECTION	
		PROCUREMENT DIVISION	
		STORAGE AND ISSUE DIVISION	
		SCHEDULING DIVISION	
LABORATORIES		GENERAL DEVELOPMENT OR RADAR DIVISION	
		PAR. 10 AR. 850-25	
		GENERAL DEVELOPMENT DIVISION, OR RADAR DIVISION	
		PAR. 10 AR. 850-25	
		EQUIPMENT COORDINATION DIVISION	PAR. 6 AR. 880-25
		ALLOWANCES DIVISION	PAR. 8 AR. 850-25
		TECHNICAL COMMITTEE	PAR. 6 AR. 850-25
		ARMY COMMUNICATION AND EQUIPMENT COORDINATION BOARD	
		CHIEF SIGNAL OFFICER	PAR. 4 AND 47 AR. 880-25
		COMMANDING GENERAL, SERVICES OF SUPPLY	
		REQUIREMENTS DIVISION, DEVELOPMENT BRANCH	
		AND/OR, FOR AIR FORCES	
		COMMANDING GENERAL, ARMY AIR FORCES	
		DIRECTOR OF MILITARY REQUIREMENTS	
		CIRC. 59 3-2-42	
		COMMANDING GENERAL, SERVICES OF SUPPLY	
		RESOURCES DIVISION, STANDARDS BRANCH	
		AND/OR FOR AIR FORCES	
		COMMANDING GENERAL, ARMY AIR FORCES	
		DIRECTOR OF MILITARY REQUIREMENTS	
		CIRC. 59 3-2-42	
		COMMANDING GENERAL, ARMY OF GROUND FORCES	(12E) FOR INF, FA, CAC, CAV, AND SP TRS
		REQUIREMENTS DIVISION, DEVELOPMENT BRANCH	
		AND/OR FOR AIR FORCES	
		COMMANDING GENERAL, ARMY AIR FORCES	
		DIRECTOR OF MILITARY REQUIREMENTS	
		CIRC. 59 3-2-42	
		COMMANDING GENERAL, ARMY AIR FORCES	(1A) FORWARDS OR REJECTS
		DIRECTOR OF MILITARY REQUIREMENTS	
		CIRC. 59 3-2-42	
		USING ARM	PAR. 5 AR. 850-25

W. D. STANDARD	PHASES	DESCRIPTION
(1A)	(1)	THE IDEA (ASSUMED TO BE USING ARM) GENERAL MILITARY CHARACTERISTICS.
(2B)	(2)	STATES MILITARY CHARACTERISTICS AND NECESSITY FOR DEVELOPMENT. (2B) ASSIGNS NOMENCLATURE.
(3B)	(3)	RECOMMENDS AS TO FEASIBILITY OF DEVELOPMENT AND NECESSITY THEREFORE.
(3A)	(4)	APPROVES ACTION OF COMMITTEE.
(5)	(5)	TRANSMITS LETTER RECOMMENDING APPROVAL OF MILITARY CHARACTERISTICS.
(6)	(6)	APPROVES MILITARY CHARACTERISTICS PAR. 9, AR. 850-25. (CIRC. 59 3-2-42)
(7)	(7)	INCLUSION IN DEVELOPMENT PROGRAM RECOMMENDED PRIORITY. PAR. 10 AR. 850-25
(7A)	(8)	APPROVES OR DISAPPROVES DEVELOPMENT PROGRAM AND PRIORITY.
(7B)	(9)	DESIGNATES LABORATORY TO CONDUCT DEVELOPMENT AND PRIORITY.
(7C)	(10)	DEVELOPMENT OF TECHNICAL CHARACTERISTICS TO MEET MILITARY CHARACTERISTICS. PRODUCES SERVICE TEST MODELS AND REPORTS.
(7D)	(11)	INDICATES READINESS WITH MODELS FOR SERVICE TEST. PAR. 11A AND 12A (1), AR. 850-25.
(7E)	(12)	COORDINATES SERVICE TEST. PAR. 12C AND 53 AR. 850-25. (CIRC. 59 3-2-42)
(13A)	(13)	CONDUCTS SERVICE TEST AND MAKES RECOMMENDATION AS TO FURTHER ACTION. PAR. 11B AND 12, AR. 850-25.
(14)	(14)	REVIEWS RESULTS OF SERVICE TEST AND USING ARMS RECOMMENDATION.
(15)	(15)	DETERMINES IF FURTHER SERVICE TESTS ARE NECESSARY. PAR. 11C, AR. 850-25
(15C)	(16)	RECOMMENDS STANDARDIZATION OF ITEM, PAR. 13, 15, AND 17, AR. 850-25. CLASSIFICATION, BASIS OF ISSUE, MAINTENANCE FACTORS, Z OF I AND T OF O, AND FEASIBILITY OF PROCUREMENT.
(15B)	(17)	APPROVES OR DISAPPROVES PRECEDING ACTION.
(15D)	(18)	APPROVES THE ITEM FOR PROCUREMENT AS TO TYPE. DESIGNATES PROCURING BRANCH.
(15E)	(19)	APPROVES CLASSIFICATION, BASIS OF ISSUE, MAINTENANCE FACTORS AND STANDARDIZATION OF ITEM.
(20)	(20)	
(21)	(21)	
(22)	(22)	

PRINCIPAL ACTION

LEGEND

- RESPONSIBLE ACTION ———
- COORDINATING ACTION - - - - -
- AGENCY AND STEP NO. (1)

NOTE: MAJOR ACTIONS ONLY ARE SHOWN. EQ. C. DIVISION COORDINATES EACH ACTION WITH ALL DIVISIONS OR AGENCIES CONCERNED.

## XXIV

### PHOTOGRAPHIC

#### New Sub-Section:

A new sub-section has been set up in the Special Projects Section of the Photographic Division. This section, known as War Films Sub-section, is headed by Captain Richard W. Maibaum. It was organized upon completion of the first War Film entitled THE ARM BEHIND THE ARMY. The film was made at the direction of The Honorable Robert P. Patterson, Under Secretary of War, and the Industrial Section, Public Relations Branch, Services of Supply. War films will be used by the Industrial Section in morale programs which are being given in industrial plants throughout the country.

Upon completion of the first film, the Under Secretary directed that a series of War Films be produced at the rate of one a month. The War Films Sub-section immediately started production on WE FLY TOGETHER for workers in aircraft industries. The third in the series will be for Ordnance workers under the title FIRE POWER. Other films scheduled are tentatively entitled THE GIRL BEHIND THE GUN, WAR OF GADGETS, SINEWS OF WAR, and THE TANKS ARE COMING.

Lieut. John Houston is collaborating with Captain Maibaum and will direct WE FLY TOGETHER, which will be produced in cooperation with the motion picture industry in Hollywood.

#### Still Picture Section:

Under supervision of the Still Picture Section, Corps Area Photographic Officers now are being assigned to duty to supervise the Corps Area Laboratories, and to coordinate the sub-libraries which have just been authorized for posts, camps and stations. These laboratories and sub-laboratories will be activated as soon as equipment is available. The laboratories will be operated by enlisted personnel under direct supervision of the Corps Area Photographic Officer. This officer also will cooperate with Public Relations officers at posts, and confer with them regarding Signal Corps Photographic activities.

#### Visual Aid Section:

Under direction of Captain C. F. Hoban, Jr., the Visual

Aid Section, during the last month, has conducted extensive tests and demonstrations in the use of training films, film strips, and other visual aids at Fort Monmouth, Fort Meade, Fort Belvoir, Fort Washington, and Camp Lee. Results were extremely gratifying. It was clearly shown that troops whose training was supplemented by proper use of visual aids received higher grades and completed their courses in much less time.

This Section also has prepared a catalog of all available training films, with a full description of each. Also contained in this catalog is a series of questions recommended to assist in driving home the lessons learned by enlisted men. In addition, this section has set up a system of booking and projection records for the Corps and sub-libraries in an effort to coordinate the training film program.

#### Foreign Liaison Section:

The Foreign Liaison Section, headed by Captain William A. Ulman, Jr., has completed the first official War Department Training Film to be scored in a foreign language. The finished picture RF 1-436, IDENTIFICATION OF AIRCRAFT, JAPANESE MEDIUM BOMBERS 96 and 97, was left intact, but the sound track was recorded in Chinese by Mr. Nelson Ho. This project was under the technical supervision of Lieut. Frank Chilton, Signal Corps Photographic Laboratory, Army War College. It is anticipated that approximately 150 official War Department Training Films will be rescored in the Chinese language. The universal Mandarin dialect will be utilized.

With the cooperation of the Co-ordinator of Inter-American Affairs, the State Department, and G-2, this section also has undertaken the translation and rescoring of approximately 175 War Department Training Films for release throughout Central and South America. Release will be made through Military Attaches on missions in these Latin-American countries. Production will be under the direction of Colonel M. E. Gillette, Commanding Officer, Signal Corps Photographic Center, Astoria, New York. A staff of linguists and technicians is being assembled. The type of Spanish utilized in these recordings is known as "universal," or neutral Spanish, which is acceptable in all Latin-American countries.

#### Signal Corps Photographic Center:

The entire personnel of the Signal Corps Photographic Laboratory at Fort Monmouth is now located in the old Paramount Studios in Astoria, L. I. The rear end of the studio has been re-

constructed and now houses modern barracks and a mess hall. The dressing rooms on the second and third floors are being converted into officers' quarters and offices.

New Training Films Released:

- TF 1-159 Aircraft Machine Gun Sights - Harmonization
- TF 1-162 Airplane Hydraulic Brakes - Principles of Operation
- TF 1-163 Synchronization, Aircraft - Principles of Synchronization
- TF 1-204 Celestial Navigation - Part II -- Position Finding on the Earth
- TF 1-208 Installation and Maintenance of Telegraph Printers - Mechanical and Electrical Principle of Transmitter
- TF 1-209 Installation and Maintenance of Telegraph Printers - Mechanical and Electrical Principle of the Printer
- TF 1-210 Installation and Maintenance of Telegraph Printer Maintenance, Service and Adjustments
- TF 2-254 Light Machine Gun Platoon, Cavalry Rifle, Troop Employment

~~TF 1-210~~

~~Explosives and Demolitions - Part III,~~

~~TF 1-210 Explosives and Demolitions - Part III~~

TF 1-292 Airplane Antennas - Part I - Types and Typical Installations

TF 1-305 Airplane Brakes - Part II - Types, Construction and Action

TF 1-311 Aircraft Machine Guns and Cannon - Part V The 37 mm Automatic Cannon

TF 17-314 Half-Track Diving, Advanced

TF 1-316 1820 Wright Engines, Preparation for Tear-Down

TF 1-317 1820 Wright Engines, Preliminary Disassembly

TF 1-323 Airplane Structures - Part VI - Manufacturing Methods

TF 1-328 Aerial Navigation - Airways Flying

TF 1-331 The Automatic Pilot - The Directional Gyro Type A-2

TF 1-332 The Automatic Pilot - The Gyro Horizon

TF 1-373 Identification of Aircraft - Focke - Wulfe Kurrier FW 200

TF 10-376 Trouble Shooting, Motor Maintenance.- Part II - Cranking System

TF 5-379 Construction of the Abutment

TF 5-391 Floor System for Timber Bridge.- The Stringer

TF 25-394 Detection of Booby Traps

TF 1-419 Identification of Aircraft - The Bristol Beaufighter

TF 1-420 Identification of Aircraft - British - The Manchester Bomber

TF 1-423 Identification of Aircraft - German FW 187

TF 1-424 Identification of Aircraft - The Hurricane

TF 1-425 Identification of Aircraft - Japanese Bi-planes - Navy Fighter 95 and Navy Torpedo Bomber 96.

TF 1-426 Identification of Aircraft - British - The Hampden Bomber.

TF 1-427 Identification of Aircraft - Japanese Fighter Bombers, Serversky, Makajima 98

TF 1-428 Identification of Aircraft - The Heinkel 115

TF 1-429 Identification of Aircraft - British - The Whitley

TF 1-430 Identification of Aircraft - The Bristol-Blenheim and the Bristol Beaufort

TF 1-431 Identification of Aircraft - Part XXIX - Japanese Medium Army Bomber 98

TF 1-432 Identification of Aircraft - German Pursuit Types - HE - 112, HE - 113

TF 1-434 Identification of Aircraft - German Bombers - JU 87 and JU 88

TF 1-435 Identification of Aircraft - Heinkle IIIK MK VA

TF 1-436 Identification of Aircraft - Japanese Medium Bombers 96 and 97

TF 1-437 Identification of Aircraft - Japanese Light Bomber

TF 1-438 Identification of Aircraft - The Spitfire

TF 1-439 Identification of Aircraft - Japanese Fighters 96 & 97

TF 1-440 Identification of Aircraft - Messerschmitt ME-110

TF 1-441 Identification of Aircraft - Dornier DO 215

TF 1-442 Identification of Aircraft - Macchi 200

TF 1-443 Identification of Aircraft - German JU 52

TF 1-445 1820 Wright Engines - Removing Cylinders and Nose Section

TF 1-447 1820 Wright Engines - Disassembling the Supercharger Section

TF 1-449 1820 Wright Engines - Disassembling the Crankshaft

TF 11-555 The Motor Vehicle Driver - Traction Aids and the Winch

TF 11-557 The Motor Vehicle Driver - Marching and Night Driving

TF 11-558 The Motor Vehicle Driver - First Echelon Maintenance

New Film Strips Released:

FS 2-8 Horsemanship - Instruction mounted - Jumping and Cross-Country Riding

FS 2-9 Horsemastership Instruction - Shoeing Animals

FS 3-11 Hand Decontaminating Apparatus, M1 and M2

FS 5-13 Military Water Supply - Purification

FS 7-33 The Browning Automatic Rifle, Calibre .30-M1918 - M1918A1, Part 1, General Description, Disassemb. & Assemb.

FS 7-53A Browning Machine Guns, Caliber .30 M1917, Part Nine - Section 1, Training for Placing the Gun in Action - Gun Drill

FS 7-69 Browning Machine Gun, Caliber .50, HB (Flexible) M2, Gd, Part 1 - Mech. Trng, Desc. & Char.

FS 9-24 The Browning Machine Gun, Caliber .50, M2 Part I - Disassembly and Assembly (3rd and 4th Echelon)

FS 10-65 Engine Tune-up Part III



- FS 10-73 The Ford Six Cylinder Engine Disassembly
- FS 10-74 The Ford Six Cylinder Engine Reassembly
- FS 10-75 Factors of Wheel Alignment
- FS 10-76 Replacing Glass on the Ford V-8 Passenger Car
- FS 10-77 Adjusting the Hydraulic Brake Ford V-8 Passenger Car and Clutch
- FS 10-78 Reconditioning the Ford V-8 Passenger Car, Transmission and Clutch
- FS 17-11 Tank Maintenance - The Twenty-five Hour Inspection - Light Tank, M3.

## MILITARY PERSONNEL

Increase in WDOH Allotment:

As of May 5, approval was secured on an increased allotment of officers for the WDOH, Office of the Chief Signal Officer. Although this allotment was not as large as requested, a substantial increase of roughly 100% was granted. Most of the Divisions and field installations were granted a proportionate increase based on present needs. Included in the allotment were 86 affiliated officers, a class not heretofore shown.

Procurement of Officers:

In the month of April, 1942 a gain to the number of officers with the Signal Corps was substantially above that of any previous month. During this period the Officer Candidate School at Fort Monmouth graduated over 350 students who received their commissions as Second Lieutenants. Appointment of electrical engineers to the Electronics Group and appointment of civilian technicians were also in record number. Appointments to affiliated units, while not so high as other groups, were greater than all preceding months.

With an increase of affiliated units approved, it is expected that there will be considerable activity in this field for the rest of the year. In June it is anticipated that the Military Academy will graduate 30 Signal Corps officers; and the ROTC units, 175. Request for assignment of additional ROTC officers during this month is pending.

-Pre-Service Training Program:

Authorization was secured in March for the enlistment of personnel qualified to pursue instructions in certain technical courses such as radio repair and operation, telegraph, teletype, and telephone.

This plan is now in operation and Corps Areas are being informed of the status of the program and are being supplied information to aid recruitment of qualified personnel.

It is proposed in this connection to take steps to enlist

in the Enlisted Reserve Corps all personnel now enrolled in training schools. The personnel consist of civilians being trained with Signal Corps funds, part of whom at the present time are being lost to the Signal Corps due to recruiting by other branches of the armed forces and those called to military duty under selective service.

It has been requested, also, that the same action be taken on civilians hired in the future and that that plan be used as an inducement to those who wish to enlist in the Enlisted Reserve Corps and attend a pre-service training school but due to financial reasons are unable to do so.

The plan would be that an applicant for enlistment in the Enlisted Reserve Corps who meets the mental and physical requirements for military service with the Signal Corps may be hired as a civilian, enrolled in a civilian school, paid a monthly salary, and enlisted in the Enlisted Reserve Corps. At the end of his training he would be sent to a Signal Corps Replacement Training Center.

#### Electronics Training Group:

Universities throughout the United States are being contacted to effect an interview of all juniors and seniors in electrical engineering and physics with a view to enlisting them in the Enlisted Reserve Corps, Electronics Section, Office of the Chief Signal Officer. This program of enlistment is being handled by the nine Corps Areas.

The plan allows the immediate enlistment in the ERC of qualified junior and senior students, other than ROTC students. Upon satisfactory completion of their college work, they will then be called to active duty, commissioned in the grade of Second Lieutenant and sent to Electronics Training Service Schools for further training.

#### Transfers to Signal Corps:

To further accelerate the procurement of technically-qualified enlisted men for the Signal Corps, and to facilitate the transfer of enlisted men in other arms and services, the American Telephone and Telegraph Company is now reporting men inducted into service by giving name, unit, and serial number. By requesting transfers from these lists direct to The Adjutant General, little difficulty is being encountered in securing them for the Signal Corps. Lists of men about to be or already inducted into the service are now being received from large radio concerns. These lists are being used in the same manner as those from the telephone

company to enable radio specialists in other arms and services to be transferred to the Signal Corps.

Direct Enlistment:

Authority was given in the month of April to enlist directly into the Signal Corps radio mechanics whose qualifications include membership either in the Radio Manufacturers Service Association or the Radio Service Men of America.

In order to meet prevailing Navy and Marine Corps inducements with respect to immediate promotion upon enlistment of certain specialists, a recommendation has been submitted to the Director of Military Personnel Division, Services of Supply, which will allow immediate promotion to technician fifth grade to those specialists so enlisted. Such promotion is to be provisional during the entire period they are assigned to school. It was further recommended that men who successfully complete training at the Signal Corps Replacement Training Centers and are assigned to advanced courses of instruction at Camp Murphy, Hobo Sound, Florida, to be promoted to technician fourth grade.

Auxiliary Corps Section:

The Auxiliary Corps Section of the Military Personnel Division was activated May 11, 1942, with Captain J. S. Vaughan in charge. This section will do the planning and organization of Signal Corps activities with the Army Specialist Corps and the WAAC

Promotions:

The following promotions have occurred among Signal Corps personnel in the period from April 18 to May 22, 1942, inclusive:

Col. (Temp) to Col. (Perm):      Lt. Col. to Col. (Temp):

Sawyer, Chas. N.

Schlosberg, R. T.  
Shearer, Alfred M.  
Stern, B.

Lt. Col. to Col. (Temp):

Back, Geo. I.  
Ballard, John A.  
Dutcher, Harold W.  
Edwards, Paul S.  
Lattin, Jay D. B.  
Maude, R. C. (A.C.)  
Parker, Will V.

Stickney, Louis S.  
Stowell, Allen L.  
Vickers, Robert C.  
Zanuck, Darryl

Major to Lt. Col. (Temp):

Allsopp, Clinton B.

Major to Lt. Col. (Temp):

Hayes, Harold G.  
Koepp, Clarence E.  
Lynch, Harry  
MacDonald, W. H.  
McIntyre, C. J.  
Meeds, Robert E.  
Messer, Herbert G.  
Rogers, W. J.  
Rooks, W. A.  
Shoemaker, J. J.  
Thomas, Samuel M.  
Willey, Ralph E.  
Williams, Earle B.

Captain to Major (Temp):

Anderson, Lewis K.  
Baer, Chas. M.  
Bartling, Carl W.  
Bean, Richard B.  
Bess, Walter B.  
Buchak, Kirk  
Charles, Orman G.  
Crittenden, Frank M.  
Custer, George A.  
Fister, Fred M.  
Gaither, L. E.  
Griffin, Robert W.  
Halliday, Otis T.  
Hankins, Stanley H.  
Harris, John D.  
Harris, Robert L.  
Harrison, Chas. J.  
Hill, Nicholas W.  
Hornung, Herbert K.  
Hughes, Harley D.  
Hyde, John B.  
Joyce, Martin W.  
Kenny, Eugene A.  
Letley, W. H.  
Maxwell, Huston E.  
McKinney, Ralph D.  
Meyer, Richard J.  
Miller, Robert B.  
Quick, C. E.  
Rice, James E.  
Sayer, Albert L.

Major to Lt. Col. (Temp):

Shrader, Kenneth C.  
Soules, W. F.  
Tetley, Wilfred B.  
Weeks, John S.  
Wehnert, C. A.  
Whitmore, John B.  
Willey, W. D.

1st Lt. to Capt. (Temp):

Allia, Dominico  
Andrus, D. C.  
Armstrong, Chas.  
Ballinger, L. H.  
Banks, C. T.  
Banton, J. A.  
Barbee, James E.  
Berryman, John H.  
Blythe, L. H.  
Boggus, Hubert H.  
Bond, T. S., Jr.  
Bortgis, James E.  
Bostwick, E. H.  
Boykin, Edw. M.  
Broner, Maurice  
Brown, James Jr.  
Brown, Robert A. J.  
Burch, Charles H.  
Burgess, Emory D.  
Burrell, W. Hilton  
Burruss, J. H.  
Caddess, John H.  
Chappins, Cyril P.  
Chinlund, D. K.  
Clark, Harry L.  
Clark, Lester H.  
Clapp, Harvey R.  
Cleveland, Allen E.  
Cole, Kenneth P.  
Collins, C. H.  
Collins, Earle O.  
Cowan, James H.  
Crisman, Sewell W.  
Dahl, Robert G.  
Dewey, Charles C.  
Diefendorf, J. E.  
Eastmond, L. E.

1st Lt. to Capt. (Temp):

Ellis, W. B. M.  
Emery, Guy C.  
Evans, Robert F.  
Feyerlesen, Paul A.  
Fitchie, Robert G.  
Fortune, Wm. B.  
Fuller, Wm. A.  
Garber, Thos.  
Gazdik, Ivan M.  
Gerken, Wm. F.  
Gersoni, Henry B.  
Goodwin, John M.  
Grover, Philip D.  
Heron, Wm. E., Jr.  
Hicock, Russell  
Higginson, George M.  
Huff, Patrick D.  
Jay, C. H., Jr.  
Johanning, A. G.  
Johnson, John P.  
Jones, C. V.  
Jones, Robert S.  
Kaliker, Alva B.  
Kauffman, Christian  
Keisler, Lloyd A.  
Keller, Lyndon M.  
King, Richard M.  
Konkel, Artic M.  
Kravutshe, Richard E.  
La Baw, E. M.  
Lahr, Ross V.  
LaPlant, Kenneth A.  
Leech, John V.  
Lennix, George  
Lester, Chas. J.  
Lewis, Taylor D.  
Lord, Reginald B.  
Lutz, Frederick H.  
Mautz, Matthew Chas.  
McLoughlin, Robert E.  
Meling, M. J.  
Moddispaw, E. E.  
Mullican, John A.  
Parker, J. D.  
Parrish, E. A.  
Perez, Reinardo R.  
Prince, Cary

1st Lt. to Capt. (Temp):

Randolph, Earl J.  
Reeves, George A., Jr.  
Riggert, Marvin C.  
Riley, Albert S.  
Roderick, H. E.  
Salt, Samuel D.  
Schaich, Wilbur A.  
Schenck, Herbert H.  
Scott, P. P.  
Scurlock, J. P.  
Sellon, D. W.  
Sherman, LaForest B.  
Sneider, Robert H.  
Sterling, C. Bush  
Suggs, R. L.  
Sunderland, P. M.  
Tamanian, Leo  
Taylor, David F.  
Thomas, Herbert C.  
Thomas, James K.  
Todd, Arden Kuhn  
Urban, John G.  
Vieweger, Arthur L.  
Wade, Lloyd H.  
Walker, Leonard E.  
Watson, L. A.  
Weyrick, Paul M.  
Williams, Harold C.  
Williams, Harry D.  
Yard, Louis D.  
Youngren, Earl L.  
Zimmerman, Carl P.

2nd Lt. to 1st Lt. (Temp):

Abramovitz, Reuben  
Altman, F. J.  
Andermann, R. J.  
Anderson, Richard J.  
Arnold, Robert H.  
Ashton, William  
Astrom, Herbert N.  
Bauman, Clem C.  
Bean, W. S., Jr.  
Beaubion, R. P.  
Benjamin, D. C.  
Bias, Henry

2nd Lt. to 1st Lt. (Temp):    2nd Lt. to 1st Lt.

Bird, G. T.  
Blackstock, J.  
Blanchard, Henry N.  
Blanton, A. J.  
Bray, Huly E.  
Brown, A. M.  
Brown, Gordon W.  
Burwell, William S.  
Caceres, Ralph K.  
Callahan, Eugene J.  
Carpenter, Jesse L.  
Carroll, Bernard J.  
Carroll, W. B.  
Cavanaugh, David E.  
Chandler, W. E.  
Chaput, Clayton L.  
Chisholm, J. H.  
Cleary, John A.  
Cooley, Herbert  
Copeland, Jack E.  
Cotter, John G.  
Crank, James R.  
Couch, Richard W.  
Coulson, Walter H.  
Darden, Wade H.  
Davis, Duane D.  
Davis, Griffin L.  
de Cristoforo, Walter  
De Laune, Donald C.  
Denniston, Edw. E.  
Dickinson, William Jr.  
Dohrman, C. W.  
Duce, Thomas E.  
Dudley, Robert B.  
Dunbar, Oliver C.  
Dyvad, L. H.  
Egger, Samuel L.  
Egloff, Robert F.  
Evans, Eldon E.  
Farmer, D. E.  
Feibel, R. L.  
Fisher, Eugene H.  
Flint, Charles W.  
Foltz, Ermald  
Foss, Jack C.  
Gardner, Felix  
Getchell, Wilmah M.

Glass, William A., Jr.  
Gosnell, E.  
Gregory, George L.  
Graham, R. A.  
Hall, H. P.  
Hammerly, Clarence E.  
Harrington, Arthur, D.  
Harrington, A. W.  
Harris, John T.  
Harrison, Albert E.  
Hartnett, Phillip S.  
Hausen, Boyd S.  
Heatwole, J. W.  
Helfer, A. P.  
Hobson, Chas. R., Jr.  
Hofacker, R. A.  
Hunter, James H.  
Hutchinson, Edw. S.  
Jolly, Harry V.  
Joslin, Will Dan  
Kee, John  
Keeton, E. R., Jr.  
Kennedy, D. D.  
Kenison, Alan R.  
Kimball, Robert E.  
Kolman, Albert J.  
Koroly, Joseph E.  
Kridel, Norman T.  
LaPointe, J. T.  
Lenhard, Algernon N.  
Lindner, G.  
Livermore, Everett W.  
Lyons, Roger L.  
MacMillan, L. W.  
Mattison, William R.  
McAdam, F. A.  
McCarley, J. W. J.  
McCaslin, Maurice  
McClung, James A.  
McDaniel, Ralph E.  
McGaillard, Alex  
McKenzie, Timothy H.  
McMillan, John W.  
Meyer, Jack P.  
Meyers, Max F.  
Miller, Dudley D.  
Miller, Gordon A.

2nd Lt. to 1st Lt. (Temp):      2nd Lt. to 1st Lt. (Temp):

Molalla, I.  
Monderer, B. Allen  
Monney, Glen A.  
Moore, H. C.  
Morgan, Lester S.  
Moseley, Fred N.  
Mousted, Edward H.  
Neason, G. T.  
Newsome, Richard N.  
Opie, Sidney P.  
Osborn, Fred H.  
Picciotti, E. A.  
Plummer, H. B.  
Powell, Lamar B.  
Ragland, Sidney L.  
Ramm, E. H.  
Richards, Harris L.  
Richmond, M. K.  
Roche, Lester  
Rogers, Charles R.  
Sample, Wesley A.  
Scala, L. F.  
Scott, Roy John  
Setright, J.  
Shackelford, Robert E.

Shivers, Gerald  
Skinner, Frederick J.  
Slagle, Halbert J.  
Sowell, Thomas M.  
Spahr, W. H.  
Steward, Jack  
Stier, P. G.  
Swift, W. B., Jr.  
Taylor, C. E.  
Travis, Harrison G.  
Tryon, John G.  
Tyler, Harold A.  
Van Winkle, Wilson W.  
Wagner, Harold H.  
Wallender, Kenneth C. B.  
Ward, Walter R.  
Wayham, C. F.  
Wells, Paul I.  
Whitcomb, J. L.  
Williamson, James B.  
Winfield, E. Little  
Wrigley, Victor K.  
Young, J. E.  
Zeigler, C. F.

Casualty List:

The following Signal Corps casualties of officer personnel have been reported:

2nd Lt. William A. Adams (O-389776) -- Died on May 1, 1942 as a result of gun shot wounds.

2nd Lt. Russell Alonson Betts (O-41-692) -- Died on April 29, 1942, at Kodiak, Alaska, as a result of an airplane accident.

2nd Lt. Daniel W. Smith (O-414420) -- Died on April 10, 1942 as result of railroad locomotive accident at Little Silver, New Jersey.

Missing or Captured:

Following is a list of Signal Corps officers missing or captured in action in the Philippines. It is the War Department policy to consider personnel as mission in action until official



word to the contrary is received.

Col. Stanley L. James (O-2270)  
Col. Joshua A. Stansell (O8599)  
Col. Allen L. Stowell (O-10310)  
Col. Theo. T. Teague (O-11678)  
Lt. Col. Harry Akers Mills (O-110053)  
Maj. Stanley H. Hankins (O-278283)  
Maj. LeRoy W. Herrick (O-204537)  
Maj. Jn Kenneth Hillemeier (O-259353)  
Maj. Robt. W. Jackson (O-255320)  
Maj. James N. Vaughn (O-18074)  
Maj. Paul R. Wing (O-5878)  
Capt. Robert H. Arnold (O-358092)  
Capt. John S. Coleman, Jr. (O-243526)  
Capt. Geo. B. Hart (O-357956)  
Capt. Walter J. Hewitt (O-338977)  
Capt. Jos. V. Iacobucci (O-22910)  
Capt. James D. Kelley (O-319159)  
Capt. Lassiter A. Mason (O-19060)  
Capt. Robert S. Sauer (O-237051)  
Capt. Chas. D. Tinley (O-258044)  
Capt. Frank H. Todd (O-22636)  
1st Lt. H. L. Blizzard (O-355479)  
1st Lt. Howard W. Brown (O-403607)  
1st Lt. Gerald J. Brown (O-386036)  
1st Lt. Chas. N. Cairns (O-315350)  
1st Lt. Walter N. Forester (O-380139)  
1st Lt. Frank J. Grady (O-398741)  
1st Lt. Laurence E. Hendrickson (O-297548)  
1st Lt. John M. Kerrey (O-392311)  
1st Lt. James K. Levie (O-382883)  
1st Lt. John D. Mullaney (O-359308)  
1st Lt. Frank Placko (O-372230)  
1st Lt. Reg. M. Polk (O-402890)  
1st Lt. Rich. O. Riegler (O-375530)  
1st Lt. Carl F. Rhodes (O-364779)  
1st Lt. Jack Rogers (O-364009)  
1st Lt. Robt. W. Studer (O-21786)  
1st Lt. Petronilo C. Taracatac (O-281146)  
1st Lt. William D. Thompson (O-331140)  
1st Lt. Wm. E. Walter (O-393366)  
1st Lt. Charlton J. Wimer (O-401624)  
2nd Lt. Bruce L. Cormack (O-375707)  
2nd Lt. Boyd S. Hansen (O-375668)  
2nd Lt. Mark T. Muller (O-375668)  
2nd Lt. Willard E. Weden (O-410865)  
2nd Lt. James B. Whitley (O-385216)

## FACILITIES AND MATERIALS

Safeguarding Industrial Production:

The Plant Protection Inspection Service, established in the Office of the Under Secretary of War early in 1941, has continued to develop in importance as the character of the war effort has changed from one of defense mobilization to that of arming for offensive action against aggressive enemy nations.

The designation of this country as an "Arsenal of Democracy," and the subsequent establishment of international supply lines, definitely placed our industrial resources in the field of actual warfare, and included them among the combatant forces for which protective war measures had to be planned and executed. Accordingly, the organized protection of industrial facilities engaged in the "battle of production" is today a major activity of the War Department within the Zone of the Interior.

The Division of Internal Security, through which the Plant Protection operations are administered by the Provost Marshal General, is an integral unit of the Services of Supply. A directive issued by The Adjutant General under date of March 30, 1942, subject: "Internal Security," restates the responsibility of the Chief of Supply Arms and Services for the protection of industrial installations vital to their respective procurement programs.

Purpose:

The primary purpose of Plant Protection is to insure the continuous production of war materials. Both in principle and in practice the protective policy extends to the sources of critical raw materials and to subcontractor facilities engaged in the fabrication of component parts for vitally important communications equipments.

Inspections are made to determine what security measures exist and what additional ones are necessary to reduce production hazards from such causes as faulty building structure, damage by fire, acts of subversion which would result in disruption to raw material sources, equipment, or working personnel, or from other sources. It is further the intent of the Plant Protection policy that both the War Department inspectors and facility management

should be continuously alert to keep abreast of all changes or occurrences affecting the factors of war supply.

Problems:

The problems of internal security for which management responsibility has been assigned can be described generally as follows:

a. Control of personnel having access to war production plants.

- (1) Guard force
- (2) Employees,  
engaged in classified contracts  
engaged in un-classified contracts
- (3) Fingerprinting of all personnel
- (4) Investigation of guard force
- (5) Investigation of personnel employed on  
classified work
- (6) Complete identification of all working  
personnel having access to plant.

b. Control of visitors.

- (1) Labor representatives
- (2) Foreign Nationals
- (3) All representatives of government agencies
- (4) Representatives of publicity bureaus
- (5) Tradesmen
- (6) All others

c. Safeguarding of Secret and Confidential material.

- (1) Responsibility for secrecy agreements  
extended to subcontractors.

d. Maintenance of adequate fire-prevention measures.

e. Installation of black-out methods in accordance with directions issued by government agencies.

f. Cooperation with governmental counter-espionage activities for the detection of any possible act of sabotage which might result in damage to the plant, equipment, raw materials, semi-finished or finished products, or to its personnel

g. The reporting of specific problems or occurrences to the interested bureau or agency of the government.

### Protective Features:

Among the principal protective features that have been given special attention in the past few weeks are: the strengthening of all liaisons among government agencies, to create a thoroughly coordinated and highly responsive protective mechanism; detailed instructions regarding black-out provisions and responsibility for aid raid warnings; and protective concealment (camouflage) techniques to be worked out in cooperation with the Corps Area Commanders as an external security measure.

Inspections of electric power utilities serving the plants on the Signal Corps Responsibility List are also coordinated with the external security procedures of the Corps Area Commanders.

### Poison Gas:

Recently there has been some public discussion of the use by enemy forces of poison gas as a weapon of warfare. In order to keep this factor in its proper perspective, and to regulate such alerting of industry as may be consistent with an over-all policy for production security, a brief reference to the subject is considered pertinent at this time.

The possibility of poison gas attack on this continent probably can be regarded as fairly remote. However, it may be noted that the problem has been included in the protective procedures which have been studied by the various government agencies. The Plant Protection Inspectors are prepared to make whatever recommendations are indicated to provide for any possible contingency involving hazards of manufacturing establishments or personnel as a result of poison gas offensives.

### Signal Corps Contracts:

Signal Corps contracts which currently are being processed in American factories amount to over two billion dollars. Included in these commitments is materiel being fabricated for foreign army destinations. A recent report by the U. S. Department of Commerce states that the Russian Government alone has received about \$1,000,000,000 of American war supplies under lend-lease arrangements. The percentage of communications parts or equipments represented in this figure has not been publicly announced.

### Reporting Danger in Plants:

In the light of the continually increasing tempo of the

war production effort, and the growing criticality of industrial participation in the military program, it seems of timely importance to call to the attention of all Signal Corps representatives in the field that the Plant Protection Inspection mission is not wholly a circumscribed one. It is possible that instances of inadequate protection may come to the attention of Signal Corps personnel which properly should be reported to Plant Protection officials for investigation and correction. Cooperation of this type is urgently invited. The Plant Protection offices established in the Procurement Districts are the most direct channels for reporting any unsatisfactory circumstances to the Chief Signal Officer.

Disruptive occurrences in manufacturing facilities such as employee accidents, damage to equipment, fires, explosions, or other casualties due to acts of subversion or some unrecognized defect in the production routines, are the most potent threat against the effective accomplishment of industry's war mission. These possible hazards, therefore, must be anticipated, and counteractive measures taken in advance. This can only be accomplished if management and all persons coming in contact with the supply effort will continue to practice the same degree of alertness that is exercised for the protection of troops in the field.

Security at the source of production means victory at the military objective.

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#### Contacts with Industry:

Representatives of approximately seventy-five industrial facilities are interviewed each week in the Facilities and Materials Division. The purposes of these visits fall into the following general categories:

1. Prime contractors interested in maintaining peak production loads.
2. Small businessmen seeking information as to whether the Signal Corps can use their normally manufactured products.
3. Firms requesting advice relative to converting their normal production activity from the manufacture of peace-time goods to the fabrication of military items for Signal Corps use.

The utilization by the Signal Corps of its prime producers of communications equipments is thoroughly coordinated with the Chief Signal Officer's war supply program.

The businessmen falling into the second classification above present a variety of factors calling for research and analysis in connection with the procurement objective. It is estimated that approximately twenty-five percent of the firms interviewed can be utilized as prime contractors. The remaining seventy-five percent must be considered from the standpoint of potential subcontractors or sub-subcontractors. In the discussions with representatives of these companies a record is made of the products they can make, equipment with which they operate, experience in making communications material or parts, and all other pertinent manufacturing data.

The information obtained relative to potential capacity for the respective items are coordinated with the existing records in the Division. The follow-up procedures include referring the facility to the Procurement District display rooms, requesting that formal survey of capacity be made if this appears to be advisable, recording the formal survey in the Division, and coordinating the data on productive capacity for individual items with existing surveyed capacity for that item. These records of survey covering subcontract items are becoming increasingly important to the supply program.

#### Engineers Analyze Data:

Analysis of the recorded data is made by Engineers of the Division to determine any shortages that may occur in the fields of raw materials, pre-fabricated materials, or component parts which will interfere with the continuous optimum production of communications equipments. These so-called "special studies" form the basis for recommendations for increased production capacity for specific items which constitute actual or potential choke points in production processes, and for the accumulation of stock piles of certain critical raw materials.

The established records of productive capacity are utilized within the Division in the preparation of Purchase Plans for items of Signal Corps materiel which, in turn, are coordinated with the Resources Division of the Services of Supply.

#### Conversion:

The problems of conversion from peace-time to war manufacture has been the subject of investigation by the Signal Corps for some time past. Several conversions for Signal Corps pro-

duction have already been effected. Recently manufacturers of such commercial items as hair pins, fly swatters, and steel and electrical toys have been given interviews. The equipment available in these plants is recorded for study, classification, and possible future utilization. It is recommended to these facility representatives that they visit the Signal Corps Procurement District nearest their plant for the purpose of studying the drawings, specifications, and finished parts of equipments to determine whether their industrial techniques can be converted to the production of communication materiel.

The above general procedures resolve themselves into innumerable problems of war supply varying from those of highest criticality to ones that are comparatively routine in character but still are highly important cogs in the procurement mechanism. In reporting on these problems through the medium of the Monthly Information Letter, it is the intent of the Division to keep the officers in the field currently informed of the policies, procedures, and progress made in carrying out the supply mission of the Chief Signal Officer.

#### Purchase Plans Section:

The Purchase Plans Section, which originally was established as the Current Purchase Planning Committee has been made a part of the new Division organization.

The purpose of the group, as stated at its beginning, was to advise on current procurements, to furnish specific information for use in preparing defenses for the procurement of new items, and to offer such technical and other advice as might be required to carry out the procurement program.

#### Duties:

The duties of the Working Members were set up in general as follows:

1. Preparation of the general plan for procurement for each program at the time the money is appropriated therefor.
2. Keep the plan up-to-date during the period that actual procurement is taking place.
3. Preparation of all l c plans for submission to the OUSW in accordance with Directive dated Sept. 13, 1941, subject "Plans for Cur-

rent Procurement." These are now forwarded to the Resources Division, Services of Supply.

4. Preparation of information relative to distribution of contracts, to be submitted as in c above.
5. Maintenance of close liaison with the Scheduling Division to keep currently informed of procurements at hand.
6. Maintenance of liaison with the Procurement Districts so that 4 c plans can be prepared expeditiously.
7. Study of the production load on contractors in order that procurement plans may be prepared in accordance therewith.

Data required for the 4 c plan include the following:

1. Correct designation of item or component, quantity to be procured, and date by which delivery must be completed.
2. Method of procurement (negotiated).
3. Proposed division of quantities, including the minimum quantity to be awarded to any one contractor, and the minimum number of contractors to whom awards will be made.
4. The proposed regional allotment for procurement, if any.
5. Approximate date of award of contract.
6. Other pertinent information.

Recommendations as to available facilities qualified to manufacture the items being considered for contract awards are furnished to the Section by the Facilities Resources Subsection of the Division for use in preparing purchase plans for procurements currently being negotiated.

A long-range planning project recently has been set up for the purpose of maintaining continuous production by qualified Signal Corps facilities. Plans are being prepared not only for keeping production lines open but for the creation of stock piles of items subject to unpredictable and uneven demands.



XXVII

TECHNICAL COMMITTEE

Recommendations to CG, SOS:

The Signal Corps Technical Committee made recommendations to The Commanding General, Services of Supply, as follows during the month ending May 15, 1942:

That Military Characteristics be adopted for items as follows:

Radio Receiver BG-779 (Weather):

This item was erroneously placed in the Table of Basic Allowances without standardization. Procurement of the item has been initiated and partially completed. This item is a commercial type radio receiver (Hammarlun "Super Pro," Model SP-200-LX or equal") to be used by the Military Forces to receive stations transmitting weather information. The frequency coverage is obtained by a band changing switch. The coils are an integral part of the set. The speaker will not be issued with the set. If a loud speaker is required the type LS-3 or equal can be used. This commercial receiver is so constructed that it will be satisfactory for "Tropical" as well as "Alaskan" weather conditions.

Screen PH-358:

This item is a shatter proof beaded fabric screen, 52" x 72," manufactured commercially by Da-Lite Screen Company, Chicago, Ill., or equal and is known as Screen, Standard Challenger. This item is housed in a metal case pivotally attached to a tripod. There are three fixed positions of adjustable height to meet audience requirements. Change of position is made by releasing spring lock and lifting extension rod. The screen folds for portability, with leather handle attached to metal bracket for carrying. There is slotted square tubing to reduce twisting out of focus, and a tubular slot used in the screen pocket at the top of the screen and a strong spring roller in metal case mounting to provide even tension for avoiding wrinkles.

Rectifier RA-56-( ):

This item is a rectifier used to charge the storage

batteries for Radio Set SCR-504 but is not part of Radio Set SCR-504. The storage batteries for this set consist of an "A" battery and two "B" batteries and require changing after about one day's use of the set in normal type operation, or about four hours of continuous use. This rectifier will satisfactorily change the batteries of two radio sets simultaneously.

Contactor Equipment RC-96-( ):

The main component part of this item is contactor Unit BC-608-( ) which is a standard article. This item is a composite equipment for controlling the radio transmitter in aircraft so that the transmitter will automatically transmit a predetermined type of signal on a predetermined carrier frequency for a definite portion of each minute. The purpose of this item is so keep the aircraft in contact with the air base for identification and location. It is accomplished by an automatic clock-switching mechanism which keys the aircraft communication equipment at predetermined intervals. This equipment is issued to include all necessary plugs and relays to adapt it to any installation.

Microphone T-34-( ):

This item is a microphone assembly consisting of medium size, comparatively light weight, electro-magnetic unit complete with cord, plug and jack. This microphone has been regularly issued as part of Radio Sets SCR-522 and SCR-542. This action was necessary in order to issue this item separately to the Army Air Forces for use in pilots oxygen mask A-8 B. This item is being classified as Substitute Standard pending the standardization of a new type microphone T-44.

Telephone Terminal CF-1 (Carrier):

A carrier telephone system utilized higher than voice frequency bands to carry voice frequencies, and by superimposing several carrier bands on the same physical wire line, the line may be used to provide several voice channels. The Telephone Terminal CF-1 (Carrier) is for use on a four wire circuit of Cable Assembly CC-358 or other wire facility of suitable transmission characteristics. It provides for a total of four voice channels in each direction over the four wire physical circuit. The terminal includes the equipment for converting voice bands to carrier bands and vice versa as well as testing equipment and power supply. This item does not include a primary power source.

Telegraph Terminal (Carrier) CF-2:

This item converts four telegraph channels into one

voice frequency telephone channel which is fed into Telephone Terminal CF-1 (Carrier) for transmission as one of the four telephone channels in the carrier system for which this equipment is designed.

Telephone Repeater (Carrier) CF-3:

This item consists of two amplifiers with associated equipment for use along the line of the four wire carrier telephone system using Telephone Terminal CF-1, and related equipment of that system. The amplifier has sufficient gain to overcome the loss of about 25 miles of Cable Assembly CC-358 or equivalent and has manual adjustments of gain which allow compensation for the effect of variation in line temperature. This unit is designed to operate from a.c. power line, with 12 volts of storage battery with automatic switchover in event of power line failure.

Ringin g Equipment EE-100:

This item is for ringing and signalling purposes in the carrier telephone system which uses Telephone Terminal CF-1 (Carrier) and may be used with other systems in which repeaters are used. One unit is required for each voice frequency channel used in the system, or eight units for each carrier system.

Public Address Set PA-5-( ):

This item is a complete 30 watt combination record player and audio amplifier built into one case. Furnished with this amplifier are two 25 watt directional loud speakers, two dynamic microphones and stands, and necessary storage batteries and cables. All items are fully portable and of such design and construction to permit their transportation in or mounting on a standard quartermaster truck. The system operates from either 115 volt a.c. or 6 volt d.c. power source.

Radio Set SCR-607:

This item is a commercial receiver manufactured by The Hallicrafters, Inc., Chicago, Ill., Model S-27 "or equal." This receiver covers three frequency bands from 27 mc to 1145 mc. All coils are self contained in the receivers and bands are changed by a single switch operated from the front panel of the receiver. Both frequency modulated and amplitude modulated reception is available. This receiver is capable of CW, tone and voice reception. Operation of this receiver can be had from either 110 volts a.c. or 6 volts d.c. and standard dry batteries. This item is being classified as Substitute Standard to be used as stop-gap equipment until the receiver being developed by the Signal Corps Laboratories is available.

That items be standardized as follows:

Radio Receiver BC-779:

As above described.

Screen PH-358:

As above described.

Rectifier RA-56:

As above described.

Contactor Equipment RC-96-( ):

As above described.

Telephone Terminal CF-1 (Carrier):

As above described.

Telegraph Terminal CF-2 (Carrier):

As above described.

Repeater CF-3 (Carrier):

As above described.

Ringling Equipment EE-100 (Voice Frequency):

As above described.

Lens Assembly PH-277 (Telescopic):

This item is a 10 inch F 4.85 lens in a barrel mount with an iris diaphragm. It is furnished complete with two infinity stops, a finder mask, and a protective case. This item is commercially manufactured by Folmer Craflex Corporation, Rochester, New York, or equal. The lens will give an image approximately four times the size of the one obtained by the present  $5\frac{1}{4}$  inch lens for distant objects.

Radio Set SCR-504:

This item is a direction finding receiving set, suitcase mounted, of the "Snooper Set" type, frequency range 100

kc-65 kc. The set is carried by one man and has a directional antenna which enables the operator to orient the set and thereby determine the general direction of the transmitter. By making periodic tests while cooing in, the transmitter itself may be located.

Meteorological Observation Kit (Wind Aloft SCM-14):

This item consists of a kit of meteorological items, expandable and non-expandable, to be issued as a kit rather than as individual items. This action is taken because of the demand for meteorological equipment for weather sections, airways detachments of Air Force Task Forces. This action will facilitate handling and save time in delivery.

Meteorological Observation Kit (Surface Observation)  
SCM-15:

The description of this item is the same as that for SCM-14 above.

Meteorological Observation Kit (Forecasting) SCM-16:

The description for this item is the same as that for SCM-14 above.

Message Holder PG-67:

This item is for use on carrier pigeons. Each item consists of two parts which screw together to form a capsule which is fastened to the birds' leg by means of a cloth strap with a snap. The item is constructed of plastic material, or suitable substitute, clear or colorless. This item has three times the capacity of Message Holder PG-14 and will carry a standard sheet from a Message Book M-210 and a map overlay about 11 inches square.

Headset HS-30:

This item is a hearing aid type receiver with a universal type plug for the ear. This item will consist of 2 receivers with a connecting cord, a clip to clip on to the coat or shirt to relieve strain on the receivers when in place, and a means of connecting to a second cord which will contain matching apparatus and will be a part of the equipment with which this item is to be used.

That items be classified as Substitute Standard:

Microphone T-34-( ):

As above described.

Radio Set SCR-607:

As above described.

That items be reclassified from Standard to Limited Standard:

Holder PH-215:

This item is a portrait film holder used with Camera PH-120-A (Grown 8 x 10 enlarging, reducing and copying camera). Due to the modification of related equipment, the issue of this item is unnecessary.

Tank PH-123:

This item is a large vitreous or porcelain tank which has been issued to Signal Corps Replacing Training Centers. This item is no longer being manufactured and cannot be procured.

Message Holder PG-14:

This item is an aluminum capsule for holding messages carried by pigeons. It has one third the capacity of PG-67.

Actions Approved by CG, SOS:

The Commanding General, Services of Supply, approved recommended actions as follows:

That Military Characteristics be adopted for items as follows:

Aerometerograph ML-175:

This item is an instrument which will automatically record several meteorologic elements at one time. It is constructed so as to measure temperature, pressure and humidity while carried over a wide area. The readings recorded will be used by weather prognosticators in determining weather conditions over a wide area. The instrument will be mounted outside of an airplane and it is understood that a continuous record can be made up to 7 hours.

Container PG-66 and PG-72:

These items are containers for use by airplanes in getting birds safely to paratroops and airborne infantry. This nec-

essitates a container for 15 birds and for 4 birds. These containers will be suitable for holding the pigeons while they are being carried in the plane and will be equipped with parachutes to cut down the falling speed of the container when released. These parachutes will be readily disconnected from the container once it has reached the ground.

#### Container RC-11:

This item is a container suitable for holding pigeons when being carried in an airplane. Its purpose is to hold pigeons required to provide communications from the airplane to a ground base.

#### Facsimile Equipment RC-120 (Wire):

This item is commercial equipment manufactured by Times Telephoto Equipment Co., (Wide World) or equal, and is used for transmitting and receiving photographs or U.S.G.S. maps in colors or maps in black and white. The transmission is over wire line and is received by similar equipment which is capable of receiving copy in black and white and shades of gray. This equipment is fully portable in carrying cases and utilizes a power supply of either 110-volt a.c. or volt d.c. This equipment is flexible in that reception can be had in either positive or negative form receiving on photographic film or photographic paper or by stylus process on direct recording paper. The transmitter operates under daylight conditions and the received photograph does not necessitate stringent darkroom requirements for development. The speed of transmission is such that a 7" x 9" picture can be transmitted in approximately 7 minutes.

#### Projector Equipment PH-131:

This item is a commercial 16 mm Film Sound Projector. It is fully portable in that the projector, complete with the amplifier, is mounted in one sound-proof carrying case. A second carrying case is used to house the 12 inch dynamic speaker used for sound reproduction. The projector is equipped to carry double track film for picture projection without sound and single track film for sound motion picture projection. The projector also employs stop and reverse motion of the film. This item now appears in Appendix C of the Signal Corps General Catalog but adoption of Military Characteristics and standardization were never completed.

#### Radio Set SCR-522-( ):

This item was standardized by 2nd Indorsement of The Adjutant General, dated August 5, 1941. The purpose of this action

was to adopt military characteristics to complete the record. The item is an airborne set suitable for command and liaison use in U. S. Army Aircraft. It is similar to the prototype British Set TR-1143. The power supply operates from a 24 volt d.c. source furnished in the aircraft. Operation of this set is on line of sight between aircraft and ground installations, which is to be a minimum of 130 miles for aircraft at 10,000 feet altitude. Four pre-set crystal control channels are employed and operation is controlled from a single remote position in the plane. The transmitter is amplitude modulated for voice only. Four pre-set frequencies are readily available by push button selection.

That items be standardized as follows:

Converter L-222:

This item is a small vibrator type power unit used for producing ringing current for telephone switchboards. To obtain the maximum capacity of a given switchboard it was considered advisable to supply a means of ringing current to supplement the hand ringer. This item will furnish ringing current up to distances of 5 miles.

Switchboard BD-91:

This item is a 20 line local battery operated switchboard developed by the Signal Corps Laboratories. The size of this switchboard is approximately one-half the size of the Switchboard BD-96. All necessary equipment is incorporated in one unit which makes this unit more compact than the TC-4. This development was made to meet the needs of the Army Air Forces for such a telephone central equipment.

Jug PH-297:

This item is a battery filler type jug made of molded hard rubber composition, or a suitable substitute. All exposed metal surfaces are to be corrosive resistant to photographic chemicals. A rubber hose, 3/8 inches diameter and 18 inches long, is permanently attached near the bottom of the jug. This item is furnished complete with hose clamp and special rubber stopper.

Lens Assembly PH-277 (Telescopic):

As above described.

Projector Equipment PH-131:

As above described.



Facsimile Equipment RC-120 (Wire):

As above described.

Headset HS-30:

As above described.

Standard: That items be reclassified from Limited Standard to

Signal Lamp Equipment EE-80:

This item is a 12 inch portable searchlight with a tripod mount. At the present time it is the only suitable lamp for use by the Coast Artillery. It is to be used for signalling ships from the shore installations of harbor defenses or Fort Signal Stations.

Standard: That items be reclassified from Standard to Limited

Holder PH-215:

As above described.

Standard: That items be reclassified from Standard to Obsolete:

Cover PG-31:

This item was erroneously listed in the Signal Corps Catalog as a cover for pigeon baskets for protection against bad weather. The intended purpose of this item was the protection of pigeons from the effects of war gases. This item should be a Chemical Warfare item. The item is therefore not usable for the purpose intended.