



**US ARMY
SIGNAL CENTER AND SCHOOL**
FORT MONMOUTH, N.J.

**SSTS 56000C*
INFORMATION SHEET
1 May 1965**

**INTRODUCTION TO
COMMUNICATIONS CENTER OPERATION**

OBJECTIVES

The objectives of this information sheet are --

- a. To give the general functions and responsibilities of a communications center.
- b. To describe and give examples of tactical echelon (division, corps, etc.) communications centers, and to describe the units responsible for operating them.
- c. To explain how a fixed station communications center is organized.
- d. To provide a list of publications which apply directly to communications center operation.

*This information sheet supersedes SSTS 56000B, Introduction to Communications Center Operation.

TABLE OF CONTENTS

	<u>Paragraph</u>	<u>Page</u>
	OBJECTIVES.	1
Section I.	GENERAL INFORMATION	
	Introduction	1 3
	Definition of terms	2 3
	Responsibilities of a COMMCEN.	3 4
	Items which are not COMMCEN responsibilities	4 5
	Basic requirements of COMMCEN communications systems and facilities.	5 6
II.	TACTICAL COMMCEN ORGANIZATION	
	General.	6 6
	Requirements of a tactical COMMCEN	7 6
	Division COMMCENS.	8 8
	Corps COMMCENS.	9 9
	Field army COMMCENS.	10 9
	Combat area signal center COMMCENS	11 9
	Commcens of large operational organizations	12 11
III.	FIXED STATION COMMCENS	
	General.	13 12
	Organization of fixed station COMMCENS	14 12
	Fixed station COMMCEN personnel and equipment	15 12
APPENDIX I.	REFERENCE PUBLICATIONS.	14
II.	MOS CODES 0221 and 721.	17

Section I. GENERAL INFORMATION

1. INTRODUCTION

When a civilian wishes to communicate with a friend or a business associate, he mails a letter, makes a telephone call, or sends a telegram. The means of communication he selects depends on the content of his message and the speed with which it must be delivered. In the Army, comparable facilities are provided at all echelons of command so that the commander and his staff can transact official business. The agency of communications which is provided to meet the requirements of the commander is called a communications center (COMMCEN). In this information sheet, the agency is referred to as a COMMCEN.

2. DEFINITION OF TERMS

To avoid misunderstandings, the following terms, as they are used in this information sheet, are defined.

a. Communications Center (COMMCEN). An agency charged with the responsibility for the receipt, transmission, and the delivery of messages.

b. Signal Center. A signal center is a groupment of signal communications facilities which are installed, operated, and maintained by Signal Corps units. Each signal center normally provides a COMMCEN and circuit switching, testing, and rerouting facilities.

c. Command Signal Center. A command signal center provides signal support to a specific command headquarters, and to units located in its immediate vicinity.

d. Area Signal Center. An area signal center provides signal support within its geographical area of responsibility. An area signal center supports all units which do not have organic facilities for establishing their own command signal center.

e. Message Center. A message center is an organic section of a COMMCEN. The term message center should not be used to describe a distribution center. To avoid confusion, Signal Corps personnel sometimes refer to the message center as the Signal Message Center (as opposed to the AG Message Center).

f. Message. A message is any thought or idea expressed or prepared in a form suitable for transmission by a means of signal communications. A message may contain instructions, orders, reports, or other information, in plain language or encrypted text. Thus, a message may be a brief report received by messenger from an outpost, a lengthy combat order transmitted by teletypewriter over radio or wire channels, or a diagram transmitted by facsimile.

g. Means of Signal Communications. The means of signal communications, in accordance with Allied communications doctrine, are mail, messengers, trained animals, and telecommunications.

NOTE: Within the US Army, mail is not considered as a means of signal communications and is not covered in this information sheet. Messengers, trained animals, and telecommunications are covered in h, i, and f below, respectively.

h. Messengers. As a means of signal communications, messengers are used by a COMMCEN to carry bulky material such as photographs, overlays, and administrative distribution. Messengers relieve overburdened electrical facilities and are indispensable during radio or listening silence. Messengers may travel by air and ground vehicles or on foot; they may be on a scheduled, non-scheduled, or special basis.

i. Trained Animals. The COMMCEN does not employ trained animals (homing pigeons and dogs) as a means of communication.

- (1) Dogs may be used for short distances with subordinate units at lower echelons.
- (2) Pigeons may be used to carry messages greater distances from forward units, patrols, infiltration elements or agents operating in enemy terrain. Messages received at the pigeon loft are normally hand-carried to the COMMCEN for processing and delivery to the addressee.

j. Telecommunications. The word telecommunications is derived from the Greek combining form tel meaning far; far off; or, broadly, operating at a distance. Thus, the word telegraph originally meant simply communication from afar, and was applied to any method of communicating across distances -- such as the semaphore telegraph of ancient times. Use of the word to denote an electrical method of transmission is of comparatively recent origin. Similarly, the word telecommunications includes but is not limited to electrical means. Sound and visual signals, which may be used to exchange messages across relatively shorter distances, are also classed as telecommunications. Sound and visual means of communication have primarily local application, and are not included in the transmitting and receiving facilities of a communications center.

- (1) Sound. This means of communication utilizes sound waves. Whistles, sirens, bells, bugles, and similar devices are used to transmit short messages consisting of prearranged signals, usually confined to warning or alerting signals and emergency communications.
- (2) Visual. This means of communication uses methods of transmission that can be received by optical means. Visual communications may be provided by flashing lights, hand flags, pyrotechnics, panels, flashlights, and colored lights. The Army uses visual means in the form of panels for vehicular identification and air-ground communications.
- (3) Electrical. The basic electrical means of communications are radio and wire. Either radio or wire, or a combination of the two, may be used to transmit intelligence by any of the following methods: telephony, radiotelegraphy (cw), teletypewriter, facsimile, television, and data transmission.

3. RESPONSIBILITIES OF A COMMCEN

a. A COMMCEN is responsible for receiving, handling, safeguarding, encrypting, decrypting, transmitting and delivering official written-record messages, except local messages within a headquarters and ordinary mail. A COMMCEN also selects the means of transmitting a message and performs all duties incident to its final delivery.

NOTE: The writer assigns a security classification and a precedence to his message, but he does not designate how it will be transmitted.

Examples of the types of messages processed at a COMMCEN are --

- (1) Messages prepared on DD Form 173, Field Message Book, or on any sheet of paper. The message should contain a heading, text, and ending.
- (2) Operations orders and overlays.
- (3) Maps and photographs.
- (4) Signal Operation Instructions (SOI) and Standing Signal Instructions (SSI) items.

- (5) Administrative and technical matter, such as daily bulletins, courts-martial orders, personnel correspondence, etc. Material which is not of written-record nature, such as service newspapers, weapons, deserter's possessions, prisoners-of-war, and bulky supply items are excluded.

b. A COMMCEN is responsible for coordinating its signal communications facilities as listed below.

- (1) Motor and air messengers.
- (2) Radioteletypewriter (RATT) and radiotelegraph (cw).
- (3) Manual (switched) teletypewriter.
- (4) Facsimile, data, and tape relay.

c. A COMMCEN is responsible for the security of its transmissions by providing adequate --

- (1) Motor and air messenger service.
- (2) Cryptographic facilities and netting.
- (3) Message authentication.

d. A COMMCEN is responsible for maintaining the temporary records listed below.

- (1) Circuit status record that applies to the COMMCEN facilities. A circuit status record is sometimes referred to as a Means Chart; it indicates which COMMCEN circuits are IN (operative) or OUT (inoperative).
- (2) Traffic records which include the original outgoing messages, copies of incoming messages, and receipts.
- (3) Logs which include Outgoing Logs, Incoming Logs, and similar records of message activity. Generally, logs are to be discouraged because they serve no useful purpose in expediting communications traffic.
- (4) Miscellaneous records such as Operator's Number Sheets and Delivery Lists which are used to insure continuity of service.

e. A COMMCEN is responsible for providing manual teletypewriter switching at echelons such as Division Main and Division Alternate. Switchboard, Telephone, Manual SB-22(*)/PT is generally used for this purpose.

f. A COMMCEN is responsible for monitoring division warning nets, as required, at Division Alternate and Division Tactical command posts. Radio Set AN/GRR-5 is generally used for this purpose.

4. ITEMS WHICH ARE NOT COMMCEN RESPONSIBILITIES

A COMMCEN is not responsible for performing the clerical work incident to the filing of messages for staff reference, nor for preparing additional copies for use or distribution within a headquarters. It is neither organized nor equipped to perform such tasks. Those functions are normally performed by the Staff Message Control Agency (SMCA), or a Headquarters Distribution Center under the control of the Adjutant General.

5. BASIC REQUIREMENTS OF COMMCEN COMMUNICATIONS SYSTEMS AND FACILITIES

All COMMCEN communications systems and facilities must meet four fundamental requirements: reliability, speed, security, and survivability.

a. Reliability means that the COMMCEN "gets the message through" to all addressees, despite technical and tactical difficulties, accurately and exactly as the message was first written. Reliability reflects the confidence the commander has in his communications. In all situations, reliability is of paramount importance.

b. Speed means that all messages are handled as quickly as possible, and in order of precedence. No message is given preferential handling because of the grade or position of the writer.

c. Security means that the communicator gives adequate protection to the handling, processing, and transmission of each message, in accordance with its security classification.

d. Survivability means that the loss of a communications facility or system will not jeopardize the mission of the command. To the COMMCEN it means full knowledge of the total communications capability within its area of operation.

Section II. TACTICAL COMMCEN ORGANIZATION

6. GENERAL

There is no fixed organization for a COMMCEN; each COMMCEN is tailored to meet the requirements of the headquarters which it serves. However, to perform its basic mission of receiving, transmitting, and delivering messages, a tactical COMMCEN normally includes receiving and transmitting facilities (means section), a cryptographic section (cryptocenter), and a message center section.

7. REQUIREMENTS OF A TACTICAL COMMCEN

a. Officer-in-charge. The officer-in-charge (OIC) supervises all the activities of the COMMCEN. The principal duties of the OIC are to --

- (1) Establish the policy for the control and operation of the COMMCEN and keep it up to date.
- (2) Provide cross-training for COMMCEN personnel.
- (3) Prepare emergency plans for all cryptomaterial contained in the COMMCEN.
- (4) Know the current combat situation and future plans, and to disseminate this information to COMMCEN personnel, as required.
- (5) Have a "jump team" ready in combat. A "jump team" includes the minimum personnel and equipment, required to maintain effective COMMCEN operations, ready to move on momentary notice.
- (6) Operate a "March COMMCEN" in the division tactical echelon. A "March COMMCEN" includes the personnel and equipment required to carry on COMMCEN operations during the fluid situations that occur at the tactical echelon.

b. Message Center Section. The message center section includes clerical personnel and command post or foot messengers. The principal functions of the message center section are to --

- (1) Select the means or method of transmission for each message.
- (2) Select the proper call signs, routing indicators, address groups, and authentication for each electrically transmitted message.
- (3) Check each message for the proper communications terms and language before giving it to the transmitting operator.
- (4) Make sure that messages are handled promptly and according to precedence.
- (5) Make sure that electrically transmitted messages get an "after-transmit" check to guard against transmission errors.
- (6) Maintain an Incoming Log, an Outgoing Log (if desired by the OIC), and a Delivery List.
- (7) Maintain temporary files of logs and traffic. Temporary files are kept no longer than is absolutely necessary, especially in fast-moving combat situations. There is no need for the message center to keep temporary files longer than 24 hours at Division, and 72 hours at Field Army levels, because the COMMCEN does not have the official headquarters file copy.
- (8) Maintain a circuit status chart to show IN (operative) and OUT (inoperative) circuits. The technical control facility determines the exact times of circuit status changes and provides this information to the message center for its circuit status chart.
- (9) Provide foot messengers for delivering incoming traffic to the Staff Message Control Agency.

c. Cryptographic Section. The cryptographic section or cryptocenter includes the COMMCEN's cryptographic equipment and operating personnel. At almost all tactical echelons, cryptographic personnel must be cross-trained as message center clerks and teletypewriter operators. The principal functions of the cryptocenter are to --

- (1) Encrypt and decrypt messages.
- (2) Provide physical security for all cryptomaterial.
- (3) Maintain cryptographic files in accordance with current regulations (AR 345-210).

d. Transmitting and Receiving Facilities. The transmitting and receiving facilities, or means section, includes teletypewriter and facsimile sets, operating personnel, motor messengers, and messenger vehicles. The principal functions of the means section are to --

- (1) Make sure that all electrically transmitted messages are transmitted without errors.
- (2) Make sure that any motor messenger vehicle, used in an area that might contain enemy or guerilla troops, has an assistant driver.

8. DIVISION COMMCENS

a. COMMCEN Allocation within Division. Within the division, COMMCENS are normally employed at the division elements listed below. The COMMCENS are operated by Signal Corps personnel.

- (1) Division Main.
- (2) Division Alternate.
- (3) Division Rear.
- (4) Division Support Command.
- (5) Three forward Area Signal Centers.

NOTE: When Division Main maintains a tactical or mobile command post (Division Tactical), a limited COMMCEN is also required. When they are not required to operate the tactical command post, the personnel and equipment are retained at Division Main for displacement ("jump team") purposes.

b. Personnel and Equipment. The personnel and equipment of the division COMMCENS are from three companies of the division signal battalion as follows.

- (1) The Command Operations Company supports the Division Main. Division Main must allocate COMMCEN personnel and equipment to Division Alternate and Division Tactical, when and as required. The allocation of COMMCEN personnel depends on the existing tactical situation.
- (2) The Signal Support Operations Company supports the Division Rear and the Division Support Command.
- (3) The Forward Communications Company supports the three forward area signal centers.

c. Allocation of COMMCEN Personnel and Equipment.

<u>Personnel</u>	<u>Division Command Sig Cens</u>	<u>Fwd Area Sig Cens (3 each)</u>	<u>Division Support Command</u>	<u>Division Rear</u>
COMMCEN Officer, Lt	1	-	-	-
Crypto Tech, WO	1	-	-	-
COMMCEN Supvr	3	2	1	1
COMMCEN Clerk	5	-	1	-
Cryptographer	4	-	2	2
Teletypewriter Opr	10	2	3	2
Facsimile Opr	2	-	-	-
Messenger	12	2	-	-
Total	38	6	7	5

<u>Equipment (major items):</u>	<u>Division Command Sig Cens</u>	<u>Fwd Area Sig Cens (3 each)</u>	<u>Division Support Command</u>	<u>Division Rear</u>
Radio Set AN/GRR-5	3	1	1	1
Facsimile Set, AN/TXC-1	1	-	-	-
Tt Terminal AN/MSC-29	3	-	-	-
Cen Ofc, Tt, AN/MGC-17	-	1	1	1
Elec Equip Shelter S-144	-	1	1	1
Truck, 1/4-ton	6	1	-	-
Trailer, 1/4-ton	3	-	-	-
Truck, 3/4-ton	-	2	2	2
Trailer, 3/4-ton	-	-	1	-
Truck 2-1/2-ton	6	-	-	-
Trailer, 1-1/2-ton	2	-	-	-
Generator, PU-322, mtd on 3/4-ton trailer	-	-	-	1
Tent, GP, Small	2	1	1	1
Tent, GP, Medium	3	-	-	-

9. CORPS COMMCENS

10. FIELD ARMY COMMCENS

Information is not included for paragraphs 9 and 10 due to anticipated changes to TOE's which are not available at this time.

11. COMBAT AREA SIGNAL CENTER COMMCENS

a. General. Combat area signal center COMMCENS are operated by --

- (1) The Messenger and Distribution, Telephone, and Message Center Sections, Headquarters and Headquarters Company, Signal Combat Area Battalion, Army. The Headquarters and Headquarters Company provides a distribution and motor messenger service for pickup and delivery of pouched distribution among the four signal centers of the battalion, and laterally, to adjacent (right) battalion distribution centers.
- (2) The Message Center and the Wire Operations Sections, Signal Center Platoon, Signal Combat Area Company, Signal Combat Area Battalion, Army. There are four companies in each battalion. Each company provides terminal teletypewriter, message center, and cryptographic service for units served by the signal center operated by the company.

b. Personnel and Equipment. The employment of the personnel and equipment of the Signal Combat Area Battalion, Army is according to doctrine in FM 11-86.

(1) Messenger and Distribution Section, Hq & Hq Co (TOE 11-86E).

<u>Personnel</u>	<u>Major Equipment Items</u>
Comm Cen O, 0221, Lt 1	Truck, 1/4-ton 6
Section Chief 1	Trailer, 1/4-ton 6
Comm Cen Sp 1	Truck, cargo, 2-1/2-ton
Comm Clerk 1	w/Shelter, S-56/G, & Tlr,
Messenger 7	1-1/2-ton 1
Asst messenger 4	Tent, wall, small 1
Total 15	

(2) Telephone and Message Center Section, Hq & Hq Co (TOE 11-86E)

<u>Personnel</u>	<u>Major Equipment Items</u>
Crypto Tech O, 721A, WO 1	Truck, 3/4-ton, w/Cen O, Tt
Section Chief 1	AN/MGC-17 1
Tt Supervisor 1	Truck, 2-1/2-ton w/Cen O, Tp,
Tt Opr 6	Man, AN/MTC-3 1
Cryptographer 1	Truck, 2-1/2-ton, w/Tt Opns
Senior Swbd Op 1	Cen, AN/MGC-19 2
Swbd Opr 4	Truck, 2-1/2-ton, w/Panel,
Comm Cen Sp 1	Patch, Comm, SB-675/MSC,
Comm Clerk 1	& Tlr, 1-1/2-ton 1
Total 17	

(3) Message Center Section, Sig Cen Plat (TOE 11-87E).

<u>Personnel</u>	<u>Major Equipment Items</u>
Comm Cen O, 0221, Lt 1	Truck, 1/4-ton 1
Msg Shift Supv 1	Trailer, 1/4-ton 1
Comm Cen Spec 1	Truck, 2-1/2-ton, w/Terminal,
Cryptographer 3	Tg, AN/MSC-29 1
Tt Opr 2	Truck, 2-1/2-ton, w/S-141,
Comm Clerk 4	& Trailer, 1-1/2-ton 1
Total 12	

(4) Wire Operations Section, Sig Cen Plat (TOE 11-87E).

<u>Personnel</u>	<u>Major Equipment Items</u>
Section Chief 1	Truck, 2-1/2-ton, w/Man
Ckt Con Sgt 1	Cen O, Tp, AN/MTC-1 1
Ckt Con Spec 1	Truck, 2-1/2-ton, w/Cen O,
Sr Man Cen O Rpmn 1	Tt, AN/MGC-9 1
Man Cen O Rpmn 1	Truck, 2-1/2-ton, w/Panel,
Sr Swbd Op 3	Patch, Comm, SB-675/
Swbd Opr 6	MSC, & Trailer, 1-1/2-ton 1
Tt Opr 3	Truck, 2-1/2-ton, w/Trailer
Total 17	1-1/2-ton 2

12. COMMCENS OF LARGE OPERATIONAL ORGANIZATIONS

a. General. The Signal Communications Center Operation Company (TOE 11-137E) provides internal communications for operational headquarters within the field army or COMMZ, as required. The company consists of a company headquarters and five COMMCEN operation platoons, each of which includes the personnel and major items listed below. The company is capable of installing and operating the internal signal communications facilities for a maximum of five operational headquarters such as logistics coordination centers. Facilities provided include telephone, teletypewriter, radioteletypewriter, FM radio-wire integration, switching, and message center service.

b. Personnel and Equipment.

(1) Company Headquarters.

<u>Personnel</u>	<u>Major Equipment Items</u>
Company Cmdr, 0220, Capt 1	Charger Radiac Detector
1st Sgt 1	PP-1578/PD 2
Motor Sgt 1	Generator Set Gas Eng 1-5 kw
Mess Steward 1	60 cy, 1-ph, 2-wire, ac
Supply Sgt 1	120V skid mtd 1
Facsimile Rpmn 1	Generator Set Gas Eng Tlr
First Cook 3	Mtd PU-290/MR 2
Pers Mgt Sp 1	Modification Kit Electronic
Sr Radio Rpmn 1	Equipment MK-345/GR 1
Sr Wheel Veh Mech 2	Panel Marker Aerial Liaison 20
Sig Sup Parts Sp 1	Radiacmeter IM-93/UD 2
Armorer 1	Radiacmeter IM-174/PD 2
Company Clerk 1	Radio Set AN/VRC-47 mtd in
Cook 3	Truck, 1/4-ton 1
Pay Sp 1	Trailer, amphibious cargo,
Pers Rec Clerk 1	1/4-ton 2-wheel 1
Radio Rpmn 1	Trailer, cargo, 1-1/2-ton,
Wheel Veh Mech 5	2-wheel 2
Cooks Helper 1	Truck, cargo, 2-1/2-ton, 6x6,
Lt Truck Driver 1	LWB 2
Supply Clerk 1	Truck, utility, 1/4-ton, 4 x 4 1
Wheel Veh Mech Hlpr 4	
Total 34	

(2) Platoon Headquarters.

<u>Personnel</u>	<u>Major Equipment Items</u>
Platoon Leader, 0220, Lt 1	Charger Radiac Detector, PP-
Platoon Sgt 1	1578/PD 1
Powerman 1	Radiacmeter IM-93/UD 2
Sig Sup Parts Sp 1	Trailer, cargo, 3/4-ton, 2-wheel 1
Total 4	Truck, cargo, 3/4-ton, 4x4 1
	Truck, utility, 1/4-ton, 4x4 1

(3) Communication Center Operation Section.

<u>Personnel</u>		<u>Major Equipment Items</u>	
Section Leader, 0721A, WO	1	Cryptographic Equipment	
Comm Cen Supv	1	Converter Signal Data CV-2/TX	1
Shift Supv	2	Distribution Box J-1077/U	1
Gen Crypto Rpmn	1	Facsimile Set AN/TXC-1	1
Comm Cen Sp	1	Generator Set Gas Eng, Tlr	
Cryptographer	2	mtd PU-294/G	1
Tt Equip Rpmn	1	Terminal, Telegraph AN/MSC-29	1
Teletypewriter Op	9	Trailer, amphibious cargo,	
Facsimile Op	1	1/4-ton, 2-wheel	6
Comm Clerk	4	Truck, Cargo, 2-1/2-ton, 6x6, LWB	2
Messenger	6	Truck, Utility, 1/4-ton, 4x4	6
Asst Messenger	6		
Total	35		

(4) Telephone and Switching Section.

<u>Personnel</u>		<u>Major Equipment Items</u>	
Section Chief	1	Central Office Telephone	
Circuit Con Sgt	1	Manual, AN/MTC-3	1
Circuit Con Sp	1	Distribution Box J-1077/U	1
Sr Swbd Op	1	Panel Patching Communication	
Telephone Instl-Rpmn	3	SB-611/MRC	1
Switchboard Op	4	Switchboard Telephone Manual	
Total	11	SB-22/PT	1
		Telephone Set TA-312/PT	100
		Trailer, Cargo, 3/4-ton, 2-wheel	2
		Truck, Cargo, 3/4-ton, 4x4	2
		Truck, Cargo, 2-1/2-ton, 6x6, LWB	1

(5) Radio Section.

<u>Personnel</u>		<u>Major Equipment Items</u>	
Radio Team Chief	1	Generator Set Gas Eng, 3kw, dc	
RATT Op	2	28v skid shock mtd	2
Sr Radio Op	1	Radio Set AN/MRC-49 mtd in	
Radio Op	1	Truck, 3/4-ton	1
Total	5	Radio Set Control Group	
		OA-1754/GRC	1
		Radio Teletypewriter Set	
		AN/GRC-46	1
		Radio Set Control Group AN/GRA-39	1
		Trailer, Cargo, 3/4-ton, 2-wheel	2
		Truck, Cargo, 3/4-ton, 4x4	2

Section III. FIXED STATION COMMCENS

13. GENERAL

Fixed station COMMCENS can best be described as those which are not subject to frequent moves and do not have a TOE. Fixed station COMMCENS are located throughout the world; examples are --

- a. Post COMMCEN, for example, Fort Carson, Colorado, operated by the Post Signal Officer.
- b. Joint COMMCEN, for example, STRICOM, MacDill AFB, Florida, operated by the communications support element.

14. ORGANIZATION OF FIXED STATION COMMCENS

Most fixed station COMMCENS include a far greater variety of facilities, or sections, than the COMMCENS described at the tactical echelons (section II). There is, however, no "typical fixed station COMMCEN"; each fixed station COMMCEN includes the facilities it requires and is engineered to fit the general characteristics listed below. The organizational chart for a COMMCEN which might be used in a Theater Army is shown in figure 3.

- a. The mission of the headquarters which it serves.
- b. The character of its commander, if it serves a unified or specified command.
- c. The needs of transient organizations attached for communications guard or support.
- d. The geographic nature of the operation involved, such as island-hopping and peninsula war, operations on large land masses, or brush-fire warfare.

15. FIXED STATION COMMCEN PERSONNEL AND EQUIPMENT

Each fixed station COMMCEN prepares its own Table of Distribution (TD) for personnel and Table of Allowances (TA) for equipment. The number and the MOS's of personnel required to operate the COMMCEN determine the TD; the quantities and types of equipment required, determine the TA. Any change of mission, expansion of operations, or other requirements that change the work load, is justification for a change in the TD, TA, or both.

STUDENT NOTES:

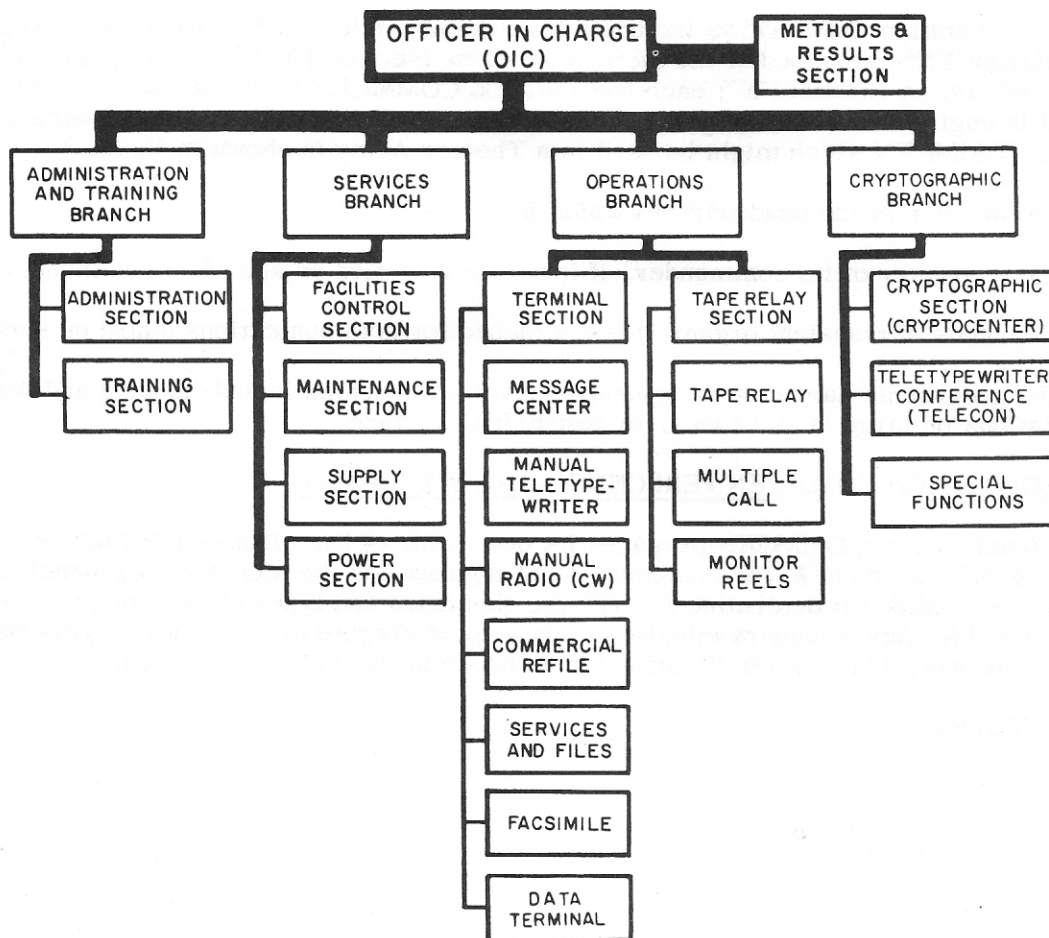


Figure 3. One type of fixed station COMM-CEN used at Theater Army.

APPENDIX I.

REFERENCE PUBLICATIONS

1. CATEGORIES OF PUBLICATIONS

To insure efficient operation, a COMMCEN should have the publications relating to its field of work. The required publications are categorized as follows.

- a. Army Regulations (AR) and Special Regulations (SR).
- b. Field Manuals (FM).
- c. Technical Manuals (TM).
- d. Technical Bulletins (TB).
- e. Allied Communications Publications (ACP).
- f. Joint Army-Navy-Air Force Publications (JANAP).
- g. Communications Security Publications.

2. INDEXES TO PUBLICATIONS

To insure that all publications on hand are up to date and include required Changes, the COMMCEN officer must refer to several indexes to publications, especially those that relate specifically to the categories in 1 above.

- a. DA Pamphlet 310-1 (AR's, SR's, Pamphlets).
- b. DA Pamphlet 310-3 (FM's).
- c. DA Pamphlet 310-4 (TM's, TB's).
- d. ACP 201 (Index to Noncryptographic JANAP's and ACP's -- classified publication).
- e. COMLOG-1 (COMSEC Logistics Guide -- classified publication).

3. PUBLICATIONS LIST

A list of publications is provided below. Defense Communications Agency (DCA) Circulars, Notices, and Instructions are not included on the list because they are issued automatically by the DCA to all communications stations which are connected with, or are a part of, the Defense Communications System.

PUBLICATIONS OF INTEREST TO COMMUNICATIONS CENTERS

ACP 100	Allied Call Sign & Address Group System - Instructions and Assignments (classified publication)
ACP 100 (US SUPP-1)	Allied Call Sign & Address Group System - Instructions and Assignments (US Supplement No 1) (classified publication)
ACP 110	Tactical Call Sign Book (classified publication)
ACP 112	Task Organization Call Sign Book (classified publication)
ACP 117 (Series)	Allied Routing Indicator Book

ACP 121 Communications Instructions, General (classified publication)

ACP 122 Communications Instructions, Security (classified publication)

ACP 124 Communications Instructions, Radiotelegraph Procedure
(classified publication)

ACP 125 Communications Instructions, Radiotelephone Procedure

ACP 126 Communications Instructions, Teletypewriter Procedure
(classified publication)

ACP 127 Communications Instructions, Tape Relay Procedure
(classified publication)

JANAP 128 Autodin Procedures

ACP 129 Communications Instructions, Visual Signaling Procedure

ACP 131 Communications Instructions, Operating Signals

ACP 168 Pyrotechnic Signals

ACP 199 US Distribution Manual for Noncryptographic JANAP's and ACP's
(classified publication)

ACP 201 Index to Noncryptographic JANAP's and ACP's (classified publication)

AR 66-5 Courier Service - General Provisions

AR 66-7 Courier Service - Administrative and Operational Procedures

AR 66-10 Courier Service - Instructions for Designated Couriers

AR 105-10 Communications Economy

AR 105-25 Operation of Fixed Networks and Communications Centers

AR 105-31 Message Preparation

AR 105-32 Authorized Addresses for Electrically Transmitted Messages

AR 105-40 Teletypewriter and Telephone Conferences

AR 320-50 Authorized Abbreviations and Brevity Codes

AR 345-210 Records Administration; Files Systems and Standards

AR 380-5 Safeguarding Defense Information

AR 380-6 Security, Automatic, Time-Phased Downgrading and Declassification System

AR 380-20 Restricted Areas

AR 380-40 Safeguarding Crypto-information

AR 380-41 Control of Cryptomaterial

AR 380-42 Clandestine Surveillance and Listing Devices (classified)

AR 380-46 Restrictions on the Use of Information Processing Equipments (classified)

AR 380-105 Policy and Procedure Governing Use of Code Words, Nicknames, Short Titles, and Similar Devices

FM 24-16 Signal Orders, Records and Reports

FM 24-17 Tactical Communications Center Operations

FM 21-60 Visual Signals

TM 11-490-1 Strategic Army Communication (STARCOM) Facilities: Operating Procedures

TM 11-490-5 Strategic Army Communication (STARCOM) Facilities

APPENDIX II. MOS CODES 0220, 0221, AND 721A

MOS CODE 0220, AREA SIGNAL CENTER OFFICER (Extracted from AR 611-101)

SUMMARY: Commands signal unit that establishes, operates, maintains, and relocates command or area signal center. Directs technical and tactical installation and operation of all communication facilities within signal complex.

DUTIES: Commands, organizes, establishes, operates, maintains, and relocates command or area signal center.

Directs technical and tactical operations of communication facilities to include radio, wire, message center, messenger, data processing and surveillance links, and special communications facilities as required.

Directs organizational maintenance procedures within signal center complex.

Prescribes and supervises signal center operating procedures.

Maintains or arranges for close continuous coordination with supported units and activities.

Coordinates with adjacent signal center commanders to insure adequate communications between centers.

Directs appropriate physical and communications security measures within area signal center complex.

Performs related technical, administrative, and operational duties as required.

QUALIFICATIONS:

Must understand command relationships, command control requirements, and principal staff officer functions at brigade, corps and field army levels.

Must have working knowledge of organization, tactical employment, and communications requirements of principal supported units, and systems required for their support.

Must have working knowledge of major operational functions comprising tactical operations and communications requirements of each.

Must have thorough knowledge of installation, operation, and maintenance of signal center.

Must have thorough functional knowledge of all types of signal communications equipment normally used within typical signal center complex, and understand its tactical employment.

Must have thorough knowledge of Army organization and area communications system concept.

EXAMPLES OF DUTY POSITIONS FOR WHICH QUALIFIED:

Area Signal Center Officer

Company Commander: Command Operations Company, Field Operations Company,

Support Operations Company or Forward Communications Company

Signal Combat Area Company Commander

Signal Combat Platoon Leader

MOS CODE 0221, COMMUNICATIONS CENTER OFFICER (Extracted from AR 611-101)

SUMMARY: Commands field or fixed communications center.

DUTIES: Establishes, enforces, and revises operational procedures.

Selects most appropriate method of transmitting messages to meet existing conditions, including employment of messengers, wire, radio, or subsidiary communications.

Directs operations of communications center, including analysis and regulation of traffic, receipt and transmission of messages, encrypting and decrypting of communications, and accurate and prompt delivery of messages.

Determines final disposition of communications violating security regulations.

Advises commanding officer on communications center functions, including location and capacity of available means of transmitting messages.

Directs preparation of reports, records, and supply requisitions.

Conducts inspections and directs maintenance of equipment.

Directs communications center training program for communication positions, such as messengers and operators of telephone, radio, teletype, facsimile, and other communication equipment.

Coordinates activities of communications center with appropriate public utilities and commercial communication organizations.

QUALIFICATIONS:

Must be able to perform duties described above, and possess following special qualifications.

Must have thorough knowledge of army organization.

Must have thorough knowledge of security measures applicable to cryptographic activities.

Must know capabilities and limitations of cryptographic and communication equipment.

Must know civilian communication practices and rates.

Must be able to read maps and aerial photographs.

Must have had appropriate formal training, including military training in cryptography, equivalent military communication experience, or civilian supervisory experience in communication traffic analysis and handling of correspondence and messages.

Must be cleared for cryptologic duties in accordance with AR 604-5.

EXAMPLES OF DUTY POSITIONS FOR WHICH QUALIFIED:

Communications Center Officer
Cryptographic Officer
Field Communications Center Officer
Fixed Station Communications Center Officer

MOS CODE 721A, CRYPTOGRAPHIC TECHNICIAN-WARRANT OFFICER

(Extracted from AR 611-112).

SUMMARY: Supervises encrypting and decoding of messages processed in signal center, including routing of traffic and operation and maintenance of cryptographic equipment. Develops procedures and instructions for filing of messages, preparation of messages for transmission, and security precautions. Organizes activities and establishes working shifts to accommodate traffic. Plans, supervises, and conducts training in preparation, processing, and handling of classified messages. Supervises procurement, receipt, storage, issue and stock control of cryptomaterial equipment.

QUALIFICATIONS:

Must know security regulations and principles applicable to cryptographic devices and activities. Must know rules for use of codes and ciphers and principles and regulations pertaining to stereotyped words and paraphrasing. Must know capabilities and limitations of cryptographic devices employed in encrypting and decrypting classified messages. Must be able to instruct and demonstrate proper cryptographic procedures and techniques.

Must have near vision, eye-hand coordination, and manual dexterity. Must be cleared for cryptographic duties under provisions of AR 604-5.

Equipment designation
within military
occupation

Military occupational specialty (MOS)

None

Code
721A

Title
Cryptographic Technician

Units, positions, and code in which authorized

<u>Type unit</u>	<u>Position</u>	<u>Code</u>
Signal message center	Cryptographic Technician	721A
Cryptomaterial unit	Unit Chief	721A
US Army Signal Schools	Cryptographic Technician Instructor	721A8