FM 11-95

DEPARTMENT OF THE ARMY FIELD MANUAL

ARMY COMMAND SIGNAL OPERATIONS BATTALION

HEADQUARTERS, DEPARTMENT OF THE ARMY
MAY 1968

FIELD MANUAL
FM 11-95

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D. C., *2 May 1968*

ARMY COMMAND SIGNAL OPERATIONS BATTALION

*This manual supersedes FM 11-95, 21 April 1960.

CHAPTER 1
INTRODUCTION

1–1. Purpose and Scope

a. This manual establishes Army doctrine and prescribes guidance for the employment of personnel and equipment of the army command signal operations battalion as organized and equipped under TOE 11–95G.

b. This manual covers the battalion characteristics, concept of operations, organization, and communications operations. The characteristics, missions, capabilities, and operations of the organic companies are covered in more detail. This manual is in consonance with International Standardization Agreement 2043 (Ed No. 3), Principles and Procedures for Establishing Communications, 24 June 1966.

c. Unless otherwise specified, the doctrine presented in this manual is applicable without modification to—

(1) General war, to include a consideration for the employment of, and protection from, nuclear munitions and chemical, biological, and radiological agents.

(2) Limited war.

(3) Cold war, to include stability operations.

1–2. Comments on Publication

Users of this manual are encouraged to submit recommendations to improve its clarity or accuracy. Comments should be keyed to the specific page, paragraph, and line of text in which the change is recommended. Reasons should be provided for each comment in order to insure understanding and complete evaluation. Comments should be forwarded to the Commanding Officer, United States Army Combat Developments Command Communications-Electronics Agency, ATTN: Doctrine Division, Fort Monmouth, N. J. 07703. Originators of proposed changes which would constitute a significant modification of approved Army doctrine may send an information copy, through command channels, to the CG, USACDC, to facilitate review and follow-up.

1–3. References

This manual should be read in conjunction with FM 24–1, Tactical Communications Doctrine; FM 11–75, Army Command Signal Radio and Cable Battalion; and FM 11–86, Army Area Signal Battalion. Refer to the appendix for a list of pertinent publications that include detailed information on subjects included in this manual.

1–4. Definitions

Terms and abbreviations used in this manual are in consonance with those contained in the latest issue of AR 320–5, AR 320–50, JCS Pub 1. Other terms and abbreviations are defined in the text where first used.

CHAPTER 2

COMMUNICATIONS DOCTRINE FOR FIELD ARMY COMMUNICATIONS

2–1. General

The communications systems used for command and control of combat, combat support, and combat service support elements in the field army must be multichannel, multimeans, multiaxis, integrated networks extending from the field army rear boundary to the rear boundaries of the combat divisions of the field army.

2–2. The Army Area and the Army Command Communications Systems

a. The army area communications system (fig. 2–1) normally consists of army area signal centers installed by units of the army area signal battalion, TOE 11–85, throughout a prescribed portion of the field army area. The army area communications system will normally be confined to the region located between the field army rear boundary and the rear boundaries of the combat divisions. At times, however, army area signal centers may be located in the forward area of the communications zone (COMMZ) and in the division rear areas. The area signal centers will be so located as to provide easy access to the users of the system and facilities for alternate routing of traffic. The army area signal centers are interconnected by means of multichannel radio and cable facilities. Each area signal center provides message center, messenger telephone, switchboard, terminal teletypewriter, cryptographic and radio wire integration facilities (RWI) for units in the area. The area signal centers are also connected to their battalion headquarters by radio for control purposes. Unit headquarters are connected to the signal center by means of wire, cable, and multichannel extensions as required. Scheduled and special motor messenger service is also provided between the area signal centers and message distribution points. The U. S. Army Strategic Communications Command (USASTRATCOM) supplies the personnel and equipment at two army area signal centers to establish entrance to two access points in the theater army communications system (TACS).

b. The army command communications system (fig. 2–2) consists of multichannel links that connect the echelons of a field army headquarters with each other and with the headquarters of major subordinate and adjacent commands. The army signal command radio and cable battalion and the army command signal operations battalion connect these headquarters with direct multichannel links for command and control of field army operations. In addition, direct multichannel communications links may be required between other major headquarters when the army area system cannot fulfill the communications requirements. These direct communications links are provided by multichannel radio and/or cable links. Long-range high-frequency (HF) radio links are used to carry a portion of the normal traffic load, and to back up the multichannel means in the event of disruption due to enemy action or displacement of headquarters. The principal function of the army command communications system is to provide rapid, secure, and reliable communications to meet the operational requirements of the field army commander. Some of these requirements are to—

(1) Provide communications support to widely dispersed major units.

(2) Meet changes in field army task organization.

(3) Provide technical control facilities to permit the electrical routing and rerouting, and to permit the physical relocation of circuits with a minimum of system changes.

(4) Provide continuity of communications in nuclear, non-nuclear, chemical, biological,

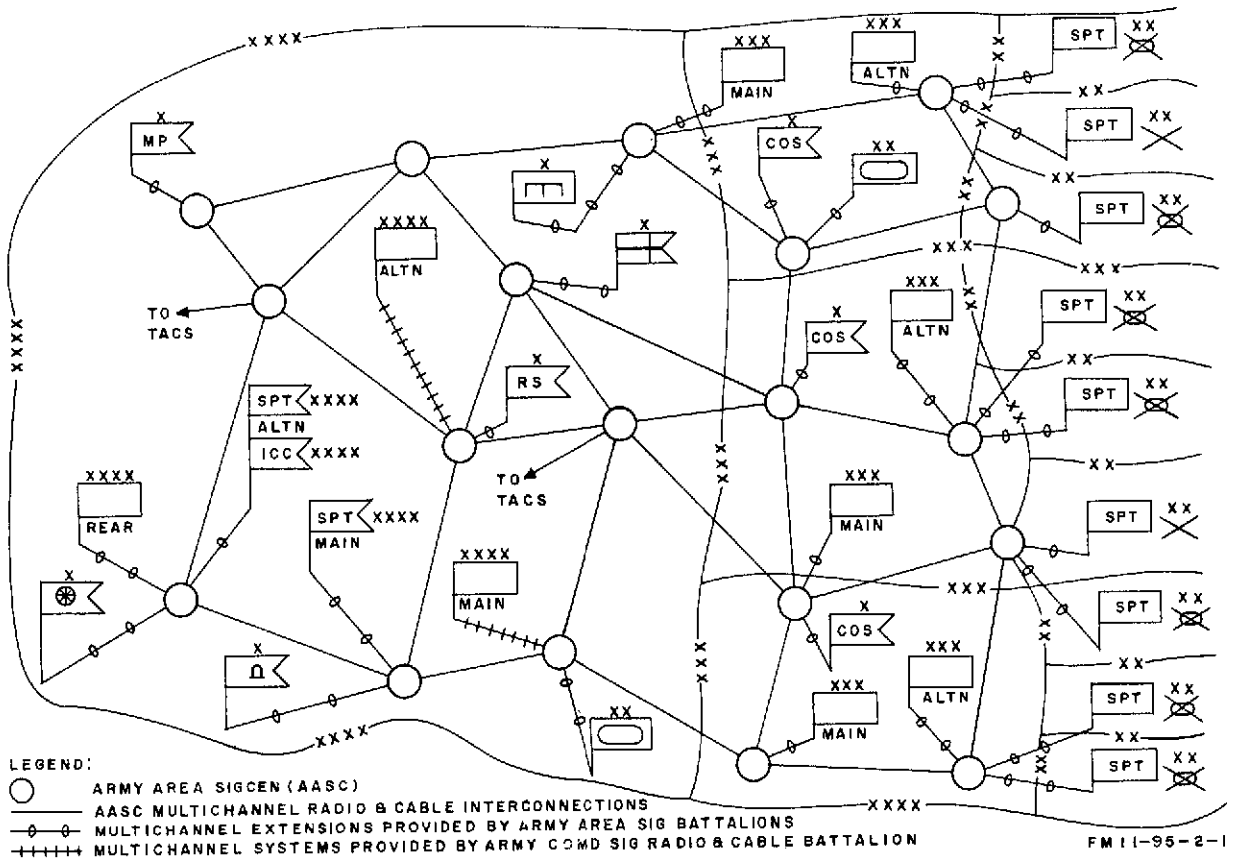


Figure 2–1. Type army area communications system.

and radiological (CBR), and stability operations requirements.

(5) Provide sole-user and through-trunk circuits for weapons systems and for other operations as required.

(6) Provide a high-capacity traffic capability.

(7) Operate over extended distances.

(8) Provide communications of sufficient mobility to support the elements of a rapidly moving field army.

2–3. Army Signal Brigade

a. General. The army signal brigade commander is also the field army signal officer. A type organization of an army signal brigade is shown in figure 2-3.

b. Mission. The army signal brigade commands assigned and attached units; plans for and supervises the installation, operation, and maintenance of the command and area communications systems of a field army; and provides a ground photographic service for the field army.

c. Organization. To accomplish the overall assigned mission, the army signal brigade has a headquarters and headquarters company, TOE 11–102; one army command signal operations battalion, TOE 11–95; six army area signal battalions, TOE 11–85; and one army command signal radio and cable battalion, TOE 11–75. Additional units may be attached to the army signal brigade dependent upon the military situation.

d. Headquarters and Headquarters Company, Army Signal Brigade. The headquarters and headquarters company of the army signal brigade is organized as shown in figure 2–4. At full strength (level 1), this unit has the capability of accomplishing the mission stated in *b* above.

e. Army Command Signal Operations Bat-

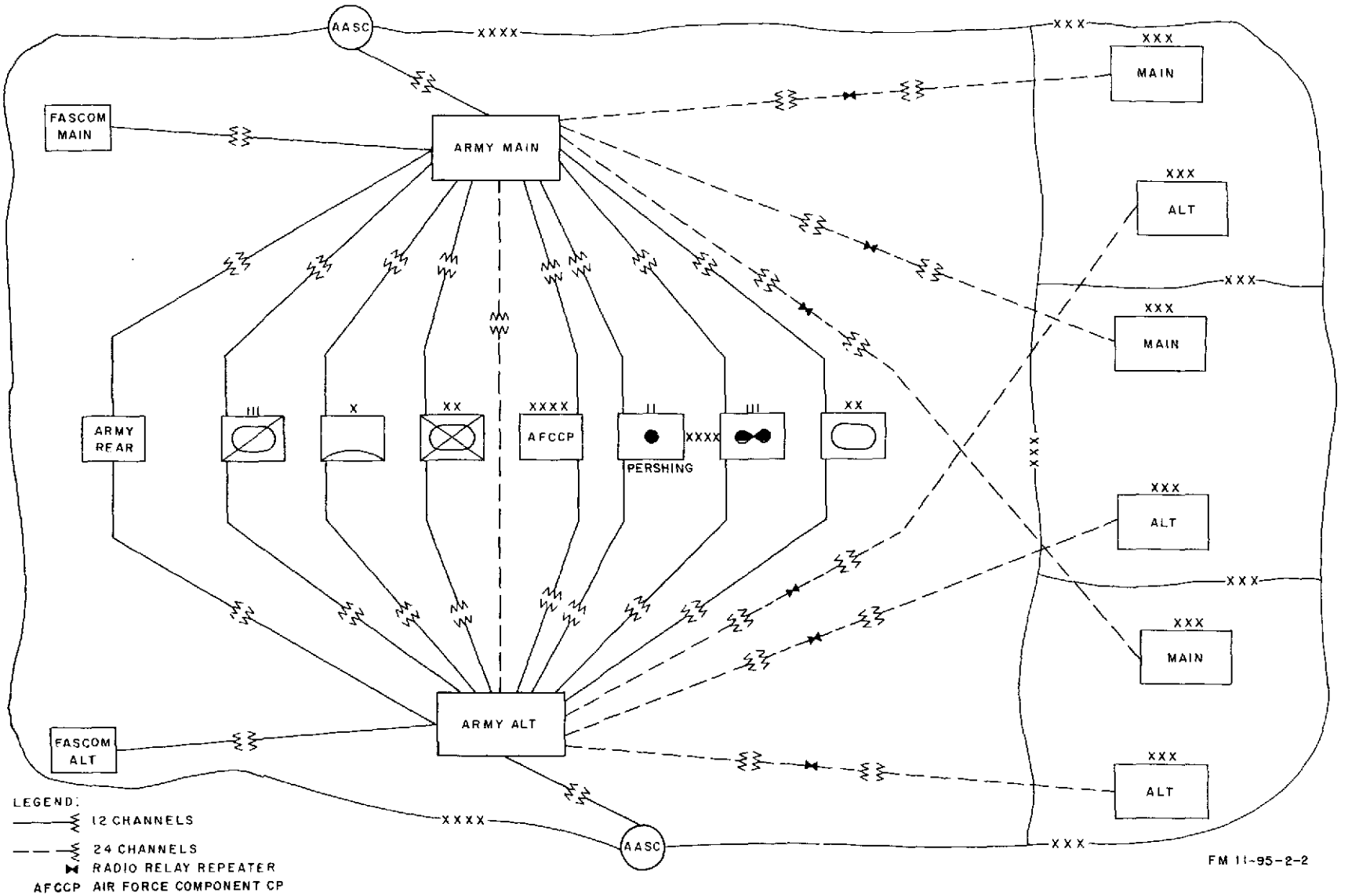


Figure 2–2. Type army command communications system.

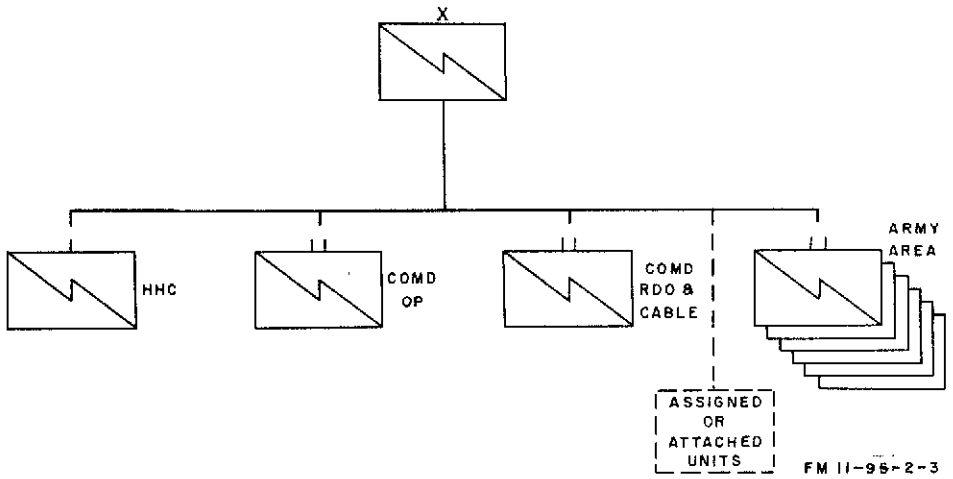


Figure 2–3. Type organization army signal brigade.

talion. The army command signal operations battalion is discussed in detail in chapters 3, 4, 5, and 6.

f. Army Area Signal Battalion. The army area signal battalions (six each) are organic to the army signal brigade. Each battalion consists of a headquarters and headquarters company, TOE 11–86; and four signal companies, TOE 11–87. Each area signal company is capable of installing, operating, and maintaining one army area signal center and up to four outlying distribution points. Refer to FM 11–86 for a detailed description of the army area signal battalion and the army area communications system.

g. Army Command Signal Radio and Cable Battalion. The army command signal radio and cable battalion provides multichannel radio relay, radio teletypewriter, field cable and wire facilities for command communications systems between a field army headquarters and subordinate units, between echelons of a field army headquarters, and to an adjacent field army headquarters. FM 11–75 contains a detailed description of the organization of the army command signal radio and cable battalion and its employment in the army command communications system.

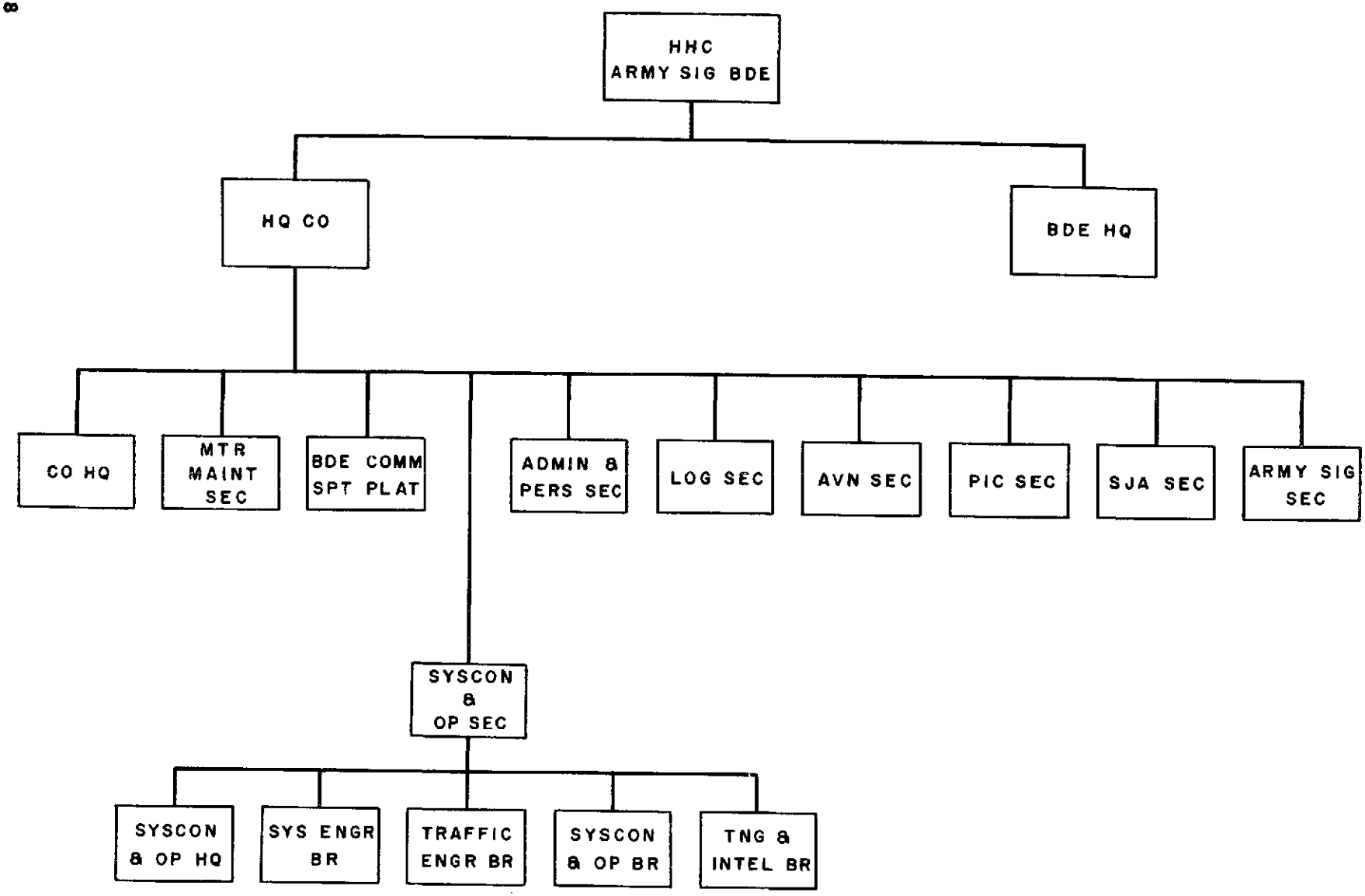


Figure 2–4. Organization headquarters and headquarters company, army signal brigade.

CHAPTER 3
ARMY COMMAND SIGNAL OPERATIONS BATTALION

3–1. Concept of Operations

The army command signal operations battalion (TOE 11–95), in conjunction with the army command signal radio and cable battalion (TOE 11–75), provides the command communications systems for the fragmented headquarters of a field army. The army command signal radio and cable battalion furnishes the multichannel, cable, and high-frequency radio links for the system. The army command signal operations battalion provides the terminal communications facilities at the command signal centers of the fragmented field army headquarters. In addition, the army command signal operations battalion provides air messenger and limited aircraft for air courier service for the fragmented headquarters and major subordinate headquarters of the field army. Normally, the headquarters and headquarters company (minus the army rear signal operations platoon) is located at the main command post with battalion headquarters. One telephone operations company, one communications center company, and elements of the army command signal radio and cable battalion are located at the field army main and alternate command posts. The army rear signal operations platoon is located at the field army rear echelon.

3–2. Mission

The mission of the army command signal operations battalion is:

a. To provide terminal communications facilities (message center, teletypewriter, telephone, facsimile) for the echelons of a field army headquarters.

b. To provide motor messenger and aircraft for limited air courier service for a field army headquarters.

3–3. Assignment and Allocation

a. Assignment. The army command signal operations battalion is organic to an army signal brigade (TOE 11–102 G).

b. Allocation. The army command signal operations battalion is allocated on the basis of one each to an army signal brigade.

3–4. Capabilities and Limitations

a. Capabilities. At full strength (level 1), this unit is capable of the installation, operation, and maintenance of communications facilities at echelons of a field army headquarters to include—

(1) A communications complex to support the communications requirements of the army main and alternate command posts consisting of—

(*a*) Two manual telephone centrals, each capable of terminating 60 manual or dial trunks and 600 local or common battery subscriber circuits.

(*b*) Two secure teletypewriter relay centrals, each capable of providing eight full-duplex circuits with multiple address and automatic numbering features.

(*c*) Four secure teletypewriter terminals, each providing 4 full-duplex teletypewriter circuits and containing message poking and control features.

(*d*) An off-line crypto facility.

(*e*) A message center facility.

(*f*) A motor messenger and dispatching facility.

(*g*) A technical control center for circuit patching and control of terminal communications facilities.

(2) A communications complex, to support a field army tactical operations center (FATOC) (fig. 6–7) consisting of—

(*a*) A manual telephone central office capable of terminating 20 manual or dial trunks and 200 local or common battery subscriber circuits.

(*b*) Three teletypewriter operations centrals, each capable of providing 4 full-duplex or 8 half-duplex teletypewriter circuits for high-precedence traffic.

(*c*) Three teletypewriter terminals, each capable of providing secure terminal equipment for 3 full-duplex radio teletypewriter circuits.

(*d*) A facsimile terminal capable of providing operation of four facsimile equipments simultaneously.

(*e*) A message center section facility to handle FATOC traffic.

(*f*) A technical control center to control FATOC terminal communications.

(3) Communications facilities at the rear echelon of a field army headquarters (fig. 4–2) to include—

(*a*) A manual telephone central office capable of terminating 20 manual or dial trunks and 200 local or common battery subscriber circuits.

(*b*) A teletypewriter terminal capable of providing secure terminal equipment for three full-duplex teletypewriter circuits.

(*c*) A message center facility capable of providing message handling, off-line crypto, and motor messenger service.

(4) Organic aircraft for air courier and air messenger service for a field army headquarters and organic aircraft for the battalion commander and his staff for command and staff visits and area reconnaissance.

(5) Unit administration, religious services; supply and mess facilities; organizational maintenance of weapons, aircraft, avionics equipment, vehicles, and power generators; and direct support level maintenance of organic communications-electronic and cryptographic equipment assigned to the units of the battalion.

(6) Effective, coordinated defense of the unit's area and installations at a reduction of the mission capability.

b. Limitations. This unit depends upon—

(1) The army command signal radio and cable battalion for long-lines systems to include radio relay terminal and repeater facilities for interconnecting echelons of a field army headquarters, and for connecting the headquarters of major subordinate headquarters. A mobile radio teletypewriter station for use in the army signal brigade systems control net is also provided when such use is required by the signal operations battalion.

(2) The field army area communications system for interconnecting echelons of the field army headquarters to subordinate field army organizations not serviced directly by the long-lines systems provided by the army command signal radio and cable battalion, and for alternate routing facilities to major subordinate organizations as required.

(3) The United States Army Strategic Communications Command (USASTRATCOM) for the entrance facilities into the theater army communications system (TACS).

(4) The army signal brigade headquarters for systems control information and photographic services.

(5) Appropriate service organizations in the area for medical, dental, and finance services, and for supplemental transportation.

(6) Appropriate TOE 11–500 (IB, IE, IF) teams for additional aircraft when the unit is operating in Southeast Asia or in a similar environment.

3–5. Category and Mobility

a. Category. The battalion is designated as a category II unit (AR 320–5) and is habitually found forward of the field army rear boundary.

b. Mobility. For the mobility of the units organic to this battalion, refer to chapters 4, 5, and 6.

c. Tactical Airlift Operations.

(1) Air Force tactical airlift forces increase the battlefield mobility of the Army in land combat operations. Basically, the Air Force will provide the Army with the capability to air land or airdrop combat elements (combat support) and to provide Army elements with sustained logistical support (combat service support).

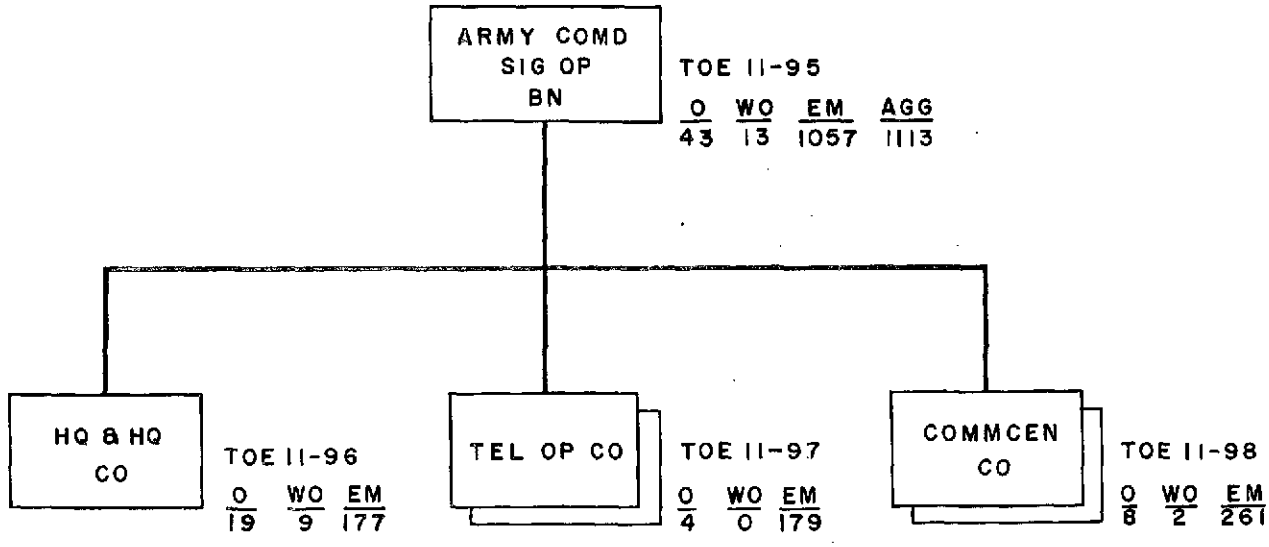


Figure 3–1. Organizational army command signal operations battalion.

(2) Complete details governing joint Army-Air Force doctrine for tactical airlift operations are contained in FM 100–27.

3–6. Organization

The army command signal operations battalion (fig. 3–1) consists of a headquarters and headquarters company, two telephone operations companies, and two communications center companies.

a. The headquarters and headquarters company is organized to effect the control of the organic companies of the battalion; to direct the installation, operation, and maintenance of the field army communications facilities that are furnished by the battalion; to provide air courier and air messenger service for the field army headquarters; and to provide signal communications for the rear echelon of the field army headquarters.

b. The two communications center companies provide communications center services for the main and alternate command posts of the field army headquarters.

c. The two telephone operations companies provide telephone communications, technical control, and electrical power to support the missions of the two communications center companies and the two telephone operations companies that are organic to the battalion.

3–7. Control

In addition to the normal command and control activities engaged in by signal brigade commanders (army signal officer) and the battalion commander, systems control facilities are available to each whereby the overall communications system and portions thereof can be timely installed, supervised, operated, and maintained. The systems control and operations section of the army signal brigade (fig. 2–4) plans, engineers, directs, and coordinates the installation and operation of the overall system. The systems control center located at battalion receives orders and instructions pertaining to its portion of the system and passes these orders and instructions to the technical center which is operated by the telephone operations company of the battalion. Continuous coordination is affected between the systems control facilities of the battalion and those organic to the command signal radio and cable battalion.

3–8. Displacement

a. The battalion TOE provides personnel and equipment for operations during displacement

of army main and army alternate headquarters. Additional personnel and equipment are not provided for concurrent operation at the old and new location during the displacement of the army rear command post.

b. There are several methods of displacing the army main and alternate headquarters. The method selected is a command decision that is based on existing circumstances. Two methods that may be used follow:

(1) Operations close at the old location of army main, and all personnel and equipment are moved as expeditiously as possible to the new command post (CP) location. In this method, army alternate exercises control until army main is ready to assume operations. Army alternate is then closed and moved to its new location, where it again assumes its role of alternate headquarters.

(2) Communications facilities for each element of army headquarters are displaced by echelonment to maintain continuous operations. Minimum facilities are installed in a projected new area to enable the headquarters to begin operations. Facilities are phased out of the old location and built up in the new location as rapidly as movement of elements of the headquarters will allow until the old location is completely closed out.

c. Army rear CP, normally located in the vicinity of FASCOM main CP, is displaced as described in (2) above, but with a reduction in its communication capability. During the displacement of the army rear CP, support from the army area signal centers in the vicinity of the old and the new CP locations may be required. This support will be provided in accordance with the army signal brigade standing operating procedures (SOP).

3–9. Messenger Service

a. The army command signal operations battalion provides scheduled and special motor messenger service, scheduled and special air messenger service, and aircraft for limited aircourier service within the field army headquarters complex and to its major subordinate headquarters. The scheduled messengers depart and return at specified times, making regular stops along a predetermined route. The special messengers augment the scheduled messenger service, provide messenger service to units that are not located on a scheduled messenger route, or deliver high-precedence or bulk traffic in order to relieve the traffic load on electrical means of communication. A courier, usually a warrant officer or commissioned officer furnished by the adjutant general, is responsible for the secure physical transmission and delivery of documents and material. Couriers must be employed for the transmission of TOP SECRET information when it is sent in the clear.

b. The two communications center companies, each having message-handling and message-dispatching facilities provide motor messenger service between the echelons of a field army headquarters and between these headquarters and the headquarters of major subordinate units. Each of the two communications center companies coordinates air-messenger service with the aviation section of headquarters and headquarters company. Motor messenger service to the main CPs of major subordinate units is provided by the communications center company at army main, while service to the alternate CP's of major subordinate units is provided by the communications center company at army alternate. Each communications center company is authorized 19 motor messenger teams. The army rear signal operations platoon of headquarters and headquarters company is authorized two motor messenger teams for motor messenger service for the field army rear CP. Each motor messenger team is assigned one messenger and one assistant messenger. Each team is provided with one ¼-ton light vehicle and one ¼-ton trailer. The motor messengers provide a secure and reliable means of communication, and they deliver and pick up low-precedence traffic and charts, maps, overlay, diagrams, photographs, and packages which are too bulky to be sent by other means. Unencrypted classified traffic other than TOP SECRET, may be sent by messenger when the addressee does not have the required cryptographic equipment or when the time required to encrypt and decrypt the message would greatly exceed the messenger delivery time.

c. Air messenger service is provided by the

aviation section of headquarters and headquarters company. The aviation section is equipped with fixed-wing aircraft, helicopters, and crews. Additional aircraft and crews are authorized when the battalion is operating in Southeast Asia or in a similar environment. Air messenger service is a swift and additional means of message delivery when motor messengers are delayed by congested road conditions; when trafficability is reduced because of climatic or topographic conditions; when vehicles are vulnerable to ambush, mines, or interdiction fire, or when the distances between headquarters are too excessive for delivery of messages by motor messenger. Normally, air messengers will pick up and deliver messages or packages at airfields located in the vicinity of the headquarters served. The vertical landing and takeoff capability of the helicopters and the drop and pickup message techniques used by the fixed wing aircraft may eliminate the use of prepared landing strips in many situations. The battalion aviation officer coordinates the operations of his section with the army signal brigade aviation officer, the communications center company commanders, the Air Weather Service, and the air traffic control facility serving the field army area of operations.

d. The army signal brigade systems control center coordinates the schedules of the air and motor messengers with the various staff sections requiring timely reports. The air and motor messenger schedules are also coordinated with the signal officers of the corps and divisions assigned or attached to the field army, with the commanders of subordinate or adjacent headquarters, and with the battalion commanders of the army area signal centers where messengers pick up or deliver pouched traffic to the designated message distribution points. Messenger schedules are also published in the messenger section of all unit SOIs concerned wtih messenger communications. Figure 3–2 shows a type signal motor and air messenger service for a field army. Following are type motor and air messenger schedules:

(1) Type motor messenger schedule (type field army).

From	To	Team runs Scheduled	Special
Army Main	Army Rear	2	0
Army Main	Army ALTN	2	1
Army Main	Corps Main (3)	12	6
Army Main	Airstrips (4)	2	0
Army Main	Misc Hq (8)	2	0
Army Main	Adjacent Hq	2	0
		22	7

(2) Type air messenger schedule (type field army).

From	To	Airplane-Helicopter Runs Scheduled	Special
Army Main	Rear and ALTN	2	0
Army Main	Corps (3)	12	3
Army Main	Message Distribution Point	2	0
Army Main	Adjacent Field Army	2	2
Army Main	Miscellaneous Hq	2	2
		20	7

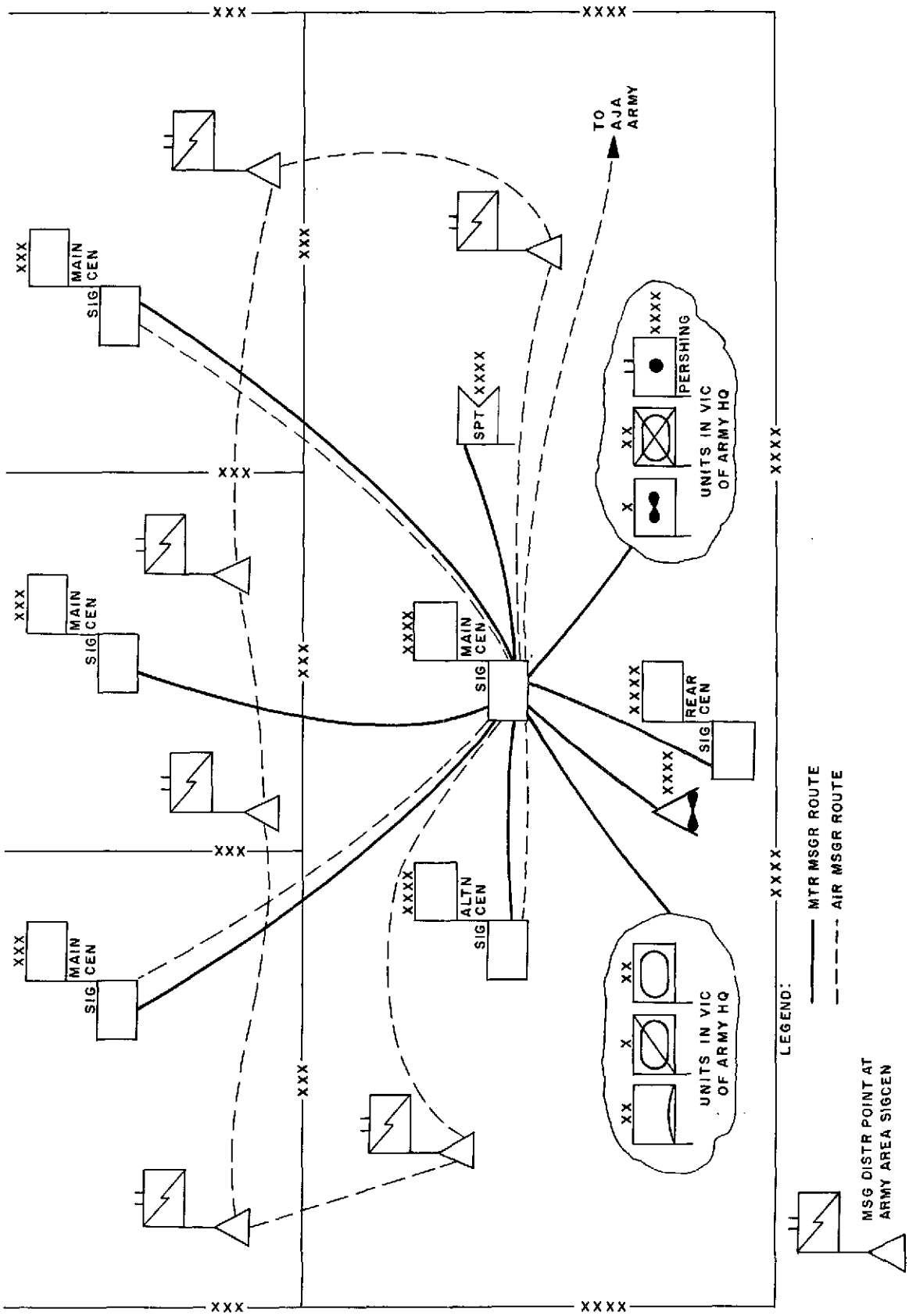


Figure 3–2. Type motor and air messenger service field army.

CHAPTER 4
HEADQUARTERS AND HEADQUARTERS COMPANY

Section I. INTRODUCTION

4–1. General

The headquarters and headquarters company (TOE 11–96) provides the means by which the battalion commander maintains command, administrative, operational, and logistical control over the companies assigned to the battalion (fig. 3–1).

4–2. Assignment and Allocation

a. Assignment. The headquarters and headquarters company is organic to an army command signal operations battalion (TOE 11–95).

b. Allocation. The headquarters and headquarters company is allocated on the basis of one each to an army command signal operations battalion (TOE 11–95).

4–3. Mission

The mission of the headquarters and headquarters company is to—

a. Direct and coordinate operations of the army command signal operations battalion and to furnish the facilities with which the battalion commander controls the battalion.

b. Provide signal communications for the rear echelon of a field army headquarters.

c. Provide air messenger service and limited aircraft for air courier service for a field army headquarters.

4–4. Capabilities

a. Full Stength (Level 1). At full strength, the headquarters and headquarters company is approximately 80 percent mobile and is capable of providing—

(1) Command and control, staff planning, and supervision of the battalion.

(2) Religious services for the battalion.

(3) Battalion level organizational maintenance of vehicles and power generators organic to the battalion, to include organizational maintenance of weapons, aircraft, avionics equipment, vehicles, and power generators organic to the headquarters company.

(4) Battalion level administrative, personnel, and supply service.

(5) Mobile direct support level communications-electronics and cryptographic maintenance facilities to supplement the direct support level maintenance provided by the companies organic to the battalion.

(6) Installation, operation, and maintenance of communications facilities required at the rear echelon of a field army headquarters, to include—

(*a*) A manual telephone central office with facilities for interconnecting 200 local telephone subscriber lines and 20 manual or dial trunks.

(*b*) Installation and maintenance of local telephone distribution circuits and local telephones normally required at a rear echelon of a field army headquarters.

(*c*) A secure teletypewriter terminal facility which provides termination for three full-duplex teletypewriter circuits.

(*d*) A message center facility which provides mesage handling, motor messenger, and off-line cryptographic services.

(*e*) A radio wire integration (RWI) facility to establish signal communications between mobile frequency-modulated (FM) stations and the telephone operations facilities at

the rear echelon of a field army headquarters.

(7) Organic aircraft to provide air courier and messenger service for a field army headquarters, and for staff visits and area reconnaissance by the battalion commander and his staff.

b. Reduced Strength. Reduced strength levels 2 and 3 adapt the table of organization and equipment for reduced operational capabilities in digressive 10 percent increments, from approximately 90 percent for level 2 and 80 percent for level 3. Levels 1 through 3 are designed to relate to the categories established by AR 220–1 and AR 135–8.

4–5. Limitations

This unit depends on—

a. Designated combat service support units for medical and dental services, supplemental transportation, direct suport maintenance for avionics and nonsignal items of equipment and supplemental direct support maintenance for communications-electronic equipment.

b. TOE 29–500 (IB, IE, IF) for additional aircraft when operating in Southeast Asia or similar environment.

c. The army command signal radio and cable battalion for high-frequency radio communications support.

d. The army support brigade of the Field Army Support Command (FASCOM) for additional direct and general support maintenance, as required.

Section II. ORGANIZATION AND EMPLOYMENT

4–6. General

The headquarters and headquarters company (fig. 4–1) is organized and equipped under TOE 11–96. The company is normally employed in one echelon and is located at the main CP of a field army headquarters. Certain staff members, however, may operate at specific echelons. The S2 may be located at the alternate CP, the army rear signal operations platoon will be located at the army rear CP.

4–7. Organization and Employment

The headquarters and headquarters company (fig. 4–1) is designated a category II unit (AR 320–5). The organization consists of a battalion headquarters and a headquarters company.

4–8. Battalion Headquarters

The battalion headquarters includes the battalion commander, the executive officer, and the staff. The executive officer and the staff assist the commander in exercising command, control, and staff supervision over the operational units of the battalion and insure dissemination and accomplishment of the orders and instructions received from the signal brigade commander. Refer to FM 101–5 for further information concerning the duties and responsibilities of the commander and his staff.

4–9. Headquarters Company

The headquarters company includes a company headquarters and seven operating elements.

a. Company Headquarters. The company headquarters contains the personnel and facilities for command and coordination of the training and operational mission. The company headquarters provides technical supervision and overhead personnel for the operation of mess, unit supply, motor maintenance, and weapons maintenance. It also furnishes internal radio and wire communications for the company.

b. Administration and Personnel Section. The administration and personnel section contains the necessary personnel and equipment to provide consolidated administrative and clerical assistance for the battalion to include battalion headquarters, headquarters and headquarters company, and the companies organic to the battalion. This section, under the staff supervision of the SI who is also the adjutant, conducts its operations in accordance with the policies and procedures established by the SI of the army signal brigade.

c. Battalion Signal Maintenance Section. The battalion signal maintenance section operates under the staff supervision of the battalion S4. The section is responsible for direct support

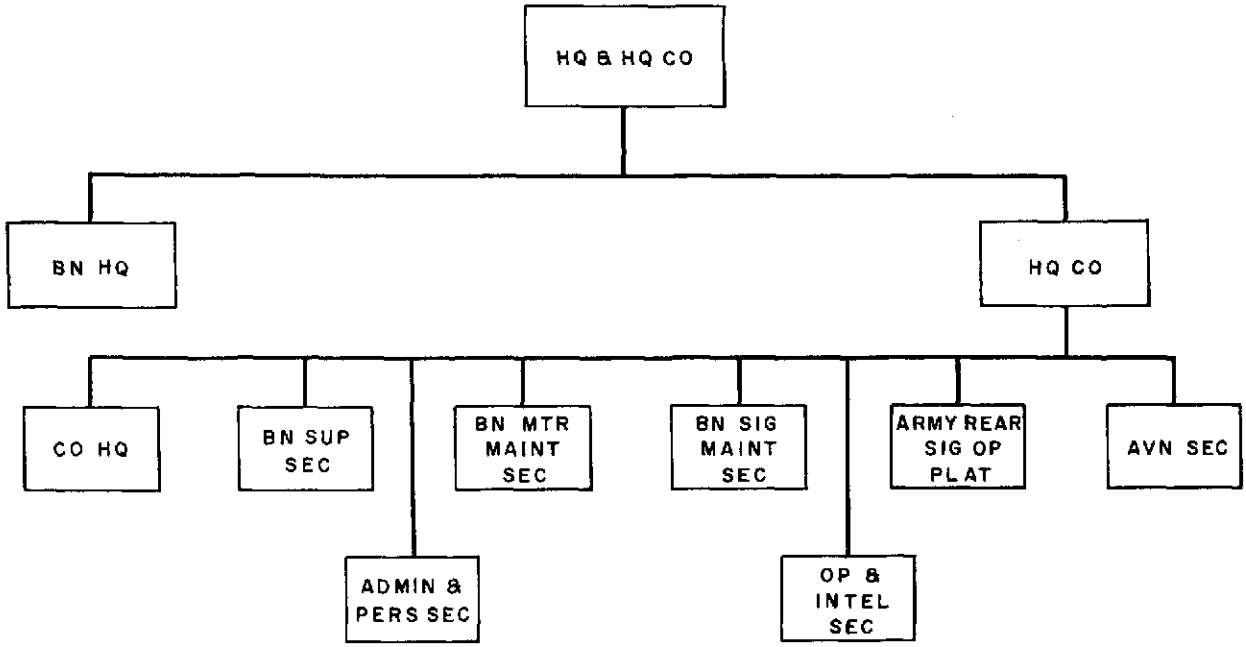


Figure 4-1. Headquarters company.

level maintenance of communications-electronic equipment organic to the battalion. The section is normally divided into two repair facilities for the support of one telephone operations company and one communications center company located at the main and alternate CP of the field army headquarters, respectively. Further information on battalion maintenance procedures is contained in chapter 8.

d. Battalion Motor Maintenance Section. The battalion motor maintenance section operates under the staff supervision of the battalion motor officer. This section supervises the organizational maintenance of motor vehicles and power generating equipment used throughout the battalion, and supplements, at battalion level, the organizational capabilities of the companies. When feasible, equipments that require repair are brought to battalion motor maintenance facility to take advantage of the centralized shop capability. Disabled vehicles may be recovered by use of the section's 5-ton wrecker or a wrecker of one of the organic companies. This section performs onsite maintenance of vehicles and power equipments.

e. Operations and Intelligence Section. The operations and intelligence section, under the supervision of the S3, provides the commander with the necessary personnel and equipment to support the battalion's operational and training mission. The assistant S3 also performs the additional duties of the battalion S2. In addition to his other duties, the assistant S3 may be located at the army alternate CP where he may be responsible for the supervision and operation of the command signal center. The operations and intelligence section is responsible for the operation of the battalion systems control center. This center processes orders and instructions received from the systems control center at brigade and passes them on to the battalion alternate systems control center, to the technical control center of the collocated organic telephone company, and to the collocated systems control facility of the command signal radio and cable battalion. Refer to figure 5–3 for a systems control diagram.

f. Battalion Supply Section. The battalion supply section operates under the staff supervision of the battalion S4 and under the direct supervisory control of the unit supply technician. The section is responsible for battalion supply activities: provides supply support for organic companies and any units assigned or attached to the battalion; coordinates logistical support channels for equipment requiring main-

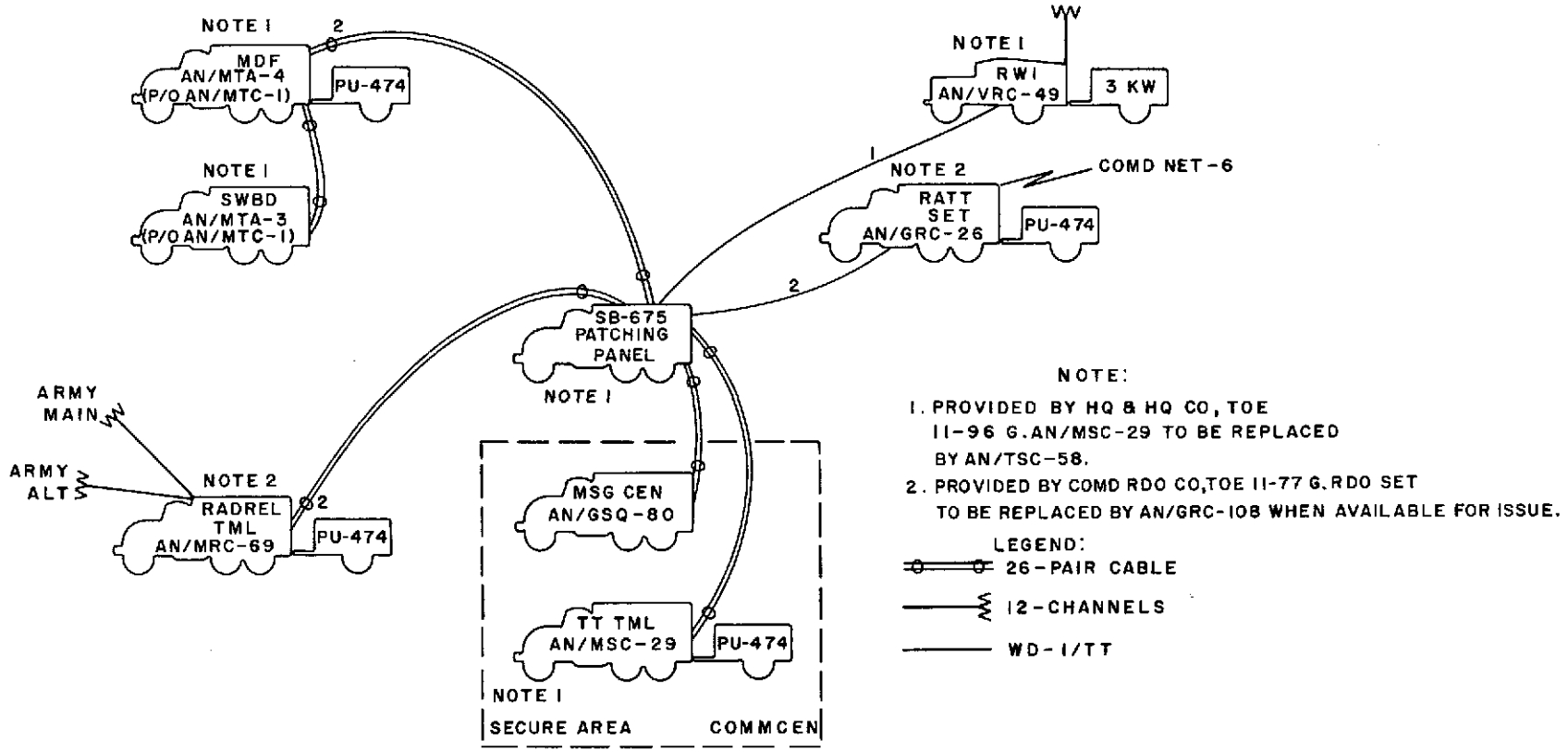


Figure 4-2. Type configuration of communications equipment at a field army rear CP.

tenance beyond the capability of the company and the battalion's signal maintenance section; and prepares all logistical reports required by the battalion or higher headquarters.

g. Army Rear Signal Operations Platoon. The army rear signal operations platoon is located at and is specifically organized and equipped to install, operate, and maintain the communications center and radio wire integration facilities for the rear echelon of a field army headquarters (fig. 4–2). This platoon (fig. 4–3) has a platoon headquarters, a communications center section, a telephone section, and a radio wire integration section ((1) through (4) below).

(1) *Platoon headquarters.* The platoon headquarters provides the personnel and facilities to command and coordinate the operating elements of the platoon. The platoon leader, assisted by the platoon sergeant, commands the platoon and coordinates the platoon activities with the battalion S3. He is also responsible for the installation, operation, and maintenance of the communications center, telephone switchboard, and radio wire integration facilities at the army rear headquarters. A light-vehicle driver operates the vehicle and radio assigned to the platoon headquarters and, when required, performs the duties of a wireman.

(2) *Communications center section.* The communications center section provides communications center facilities to include message center, cryptographic, and teletypewriter terminal facilities, and motor messenger service for army rear headquarters.

(3) *Telephone section.* The telephone section installs, operates, and maintains the local telephone distribution circuits and locals associated with army rear headquarters operations. Telephone switchboard operators and manual central office repairmen are organized in shifts for installation and 24-hour operation and maintenance of the manual central office. Technical control personnel similarly operate and maintain the communications patching central, as a technical control facility, on a 24-hour basis. A wire team installs and maintains the wire and cable circuits and local telephones provided by the platoon. The telephone officer serves as the section chief and coordinates the technical control activities with representatives from the command signal radio and cable battalion.

(4) *Radio wire integration section.* The radio wire integration section is responsible for the installation and operation of a communications system between mobile FM radio stations and telephone subscribers connected to the communications of field army rear headquarters.

h. Aviation Section. The section leader also serves as the battalion aviation officer. He assists and advises the commander on all aviation matters pertaining to the battalion; coordinates tactical airlift requirements with the brigade S3; and pilots one of the fixed wing aircraft assigned to the battalion. Three fixed wing aircraft, one utility helicopter, and two observation helicopters are assigned to the aviation section. These aircraft are utilized for

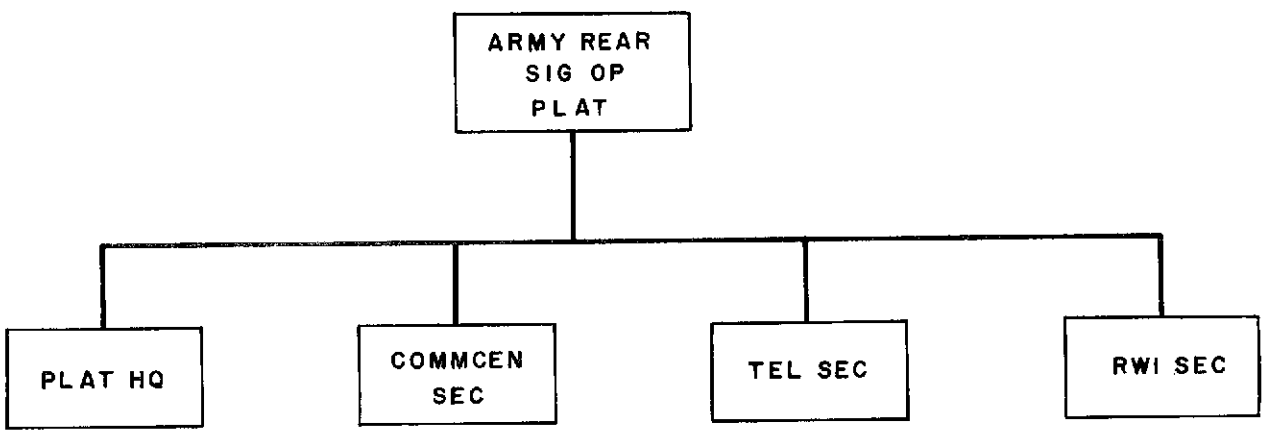


Figure 4–3. Army rear signal operations platoon.

command and staff visits by the battalion commander and his staff, for reconnaissance, for field army air courier and messenger service, and as required by the battalion commander. A total of 10 aviators are authorized for this section—6 fixed-wing and 4 rotary wing. Necessary personnel and equipment to perform organizational maintenance and avionics repair on assigned equipment are also authorized.

4–10. Communications

a. Wire Communications. Internal wire communications for the headquarters and headquarters company (fig. 4–4) are provided by the company headquarters. Two switchboards, sufficient cable, and sufficient telephones are authorized for the internal wire net. The command signal radio and cable battalion furnishes support for the laying of long local or trunk circuits.

b. Radio Communications. The headquarters and headquarters company is authorized seven voice radios for internal radio communication. A type battalion command radio net is shown in figure 4–5. The two telephone operations companies and the two communications center companies have one radio set each for communicating in this net. In addition, one HF radio teletypewriter set is furnished by the command signal radio and cable battalion for communicating in the army signal brigade SYSCON net. A radio receiver is installed in each of the two operations centrals to monitor the emergency warning broadcast net of the field army.

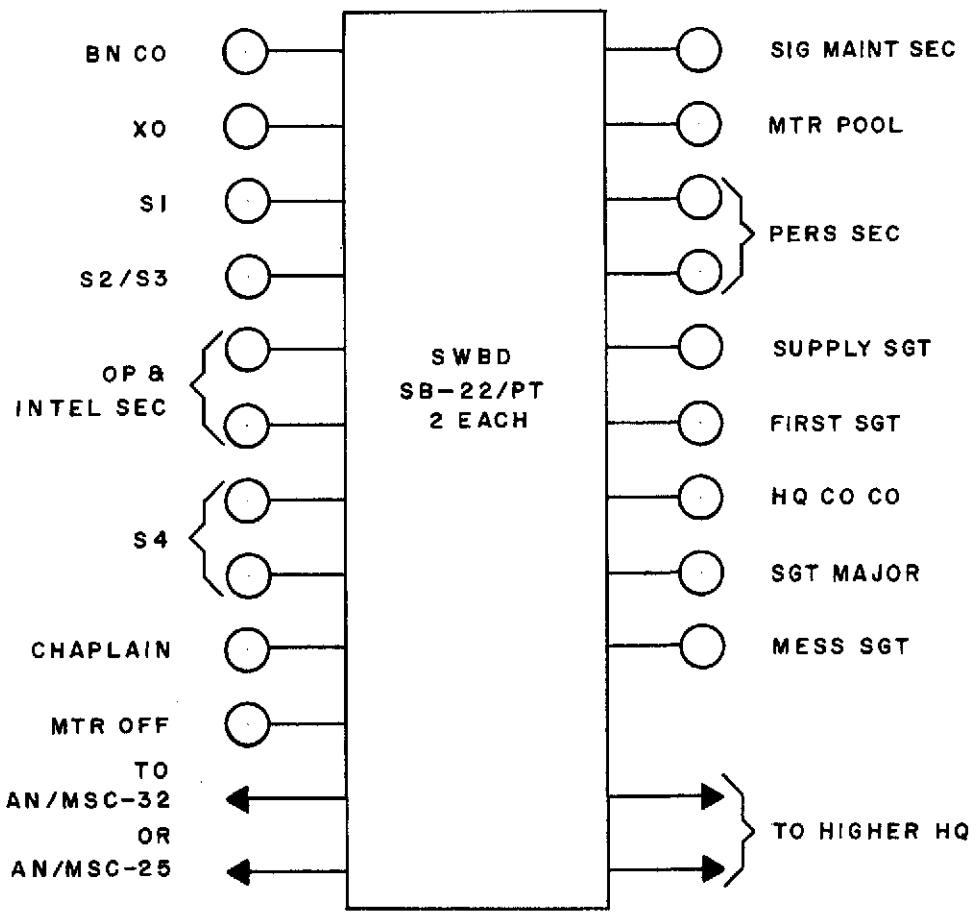


Figure 4–4. Type army command signal operations battalion internal wire net.

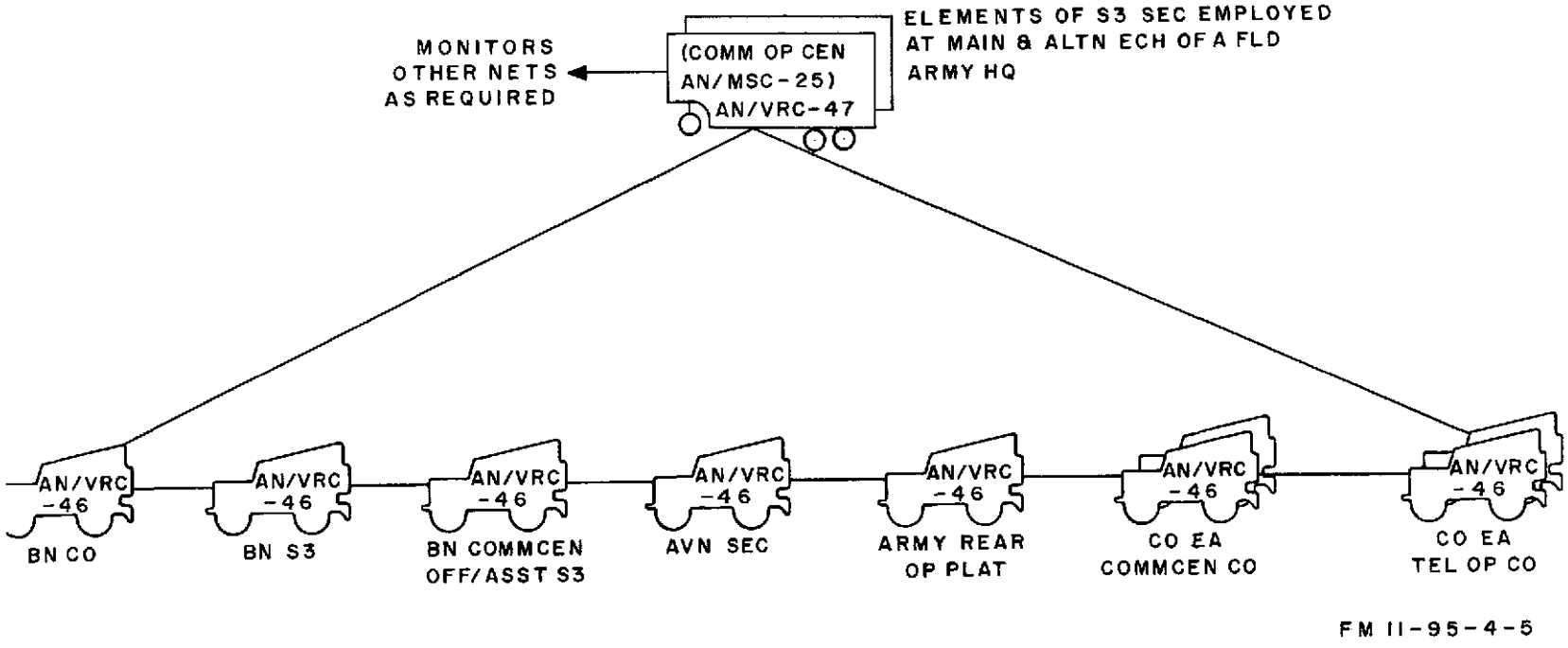


Figure 4–5. Type internal FM radio net, army command signal operations battalion.

CHAPTER 5
TELEPHONE OPERATIONS COMPANY

Section I. INTRODUCTION

5–1. General

The telephone operations company, TOE 11–97, is organized and equipped to establish, operate, and maintain telephone communications at the main or alternate echelon of a field army headquarters. The company is designated as a category II unit (AR 320–5), is 85 percent mobile, and is allocated and assigned on the basis of *two* each to an army command signal operations battalion, TOE 11–95.

5–2. Location

The telephone operations company is normally employed in one echelon. One company is located at the main echelon, and one company is located at the alternate echelon of a field army headquarters.

5–3. Communications

a. Wire. Each telephone operations company has a local battery switchboard and sufficient wire and telephones to establish internal wire communications for the company (fig. 5–1). One trunk circuit is installed from the company headquarters to army main or alternate CP, and one trunk may be installed to battalion headquarters when feasible.

b. Radio. Each telephone operations company is authorized one FM voice radio set to be used by the company commander in the battalion command radio net (fig. 4–5).

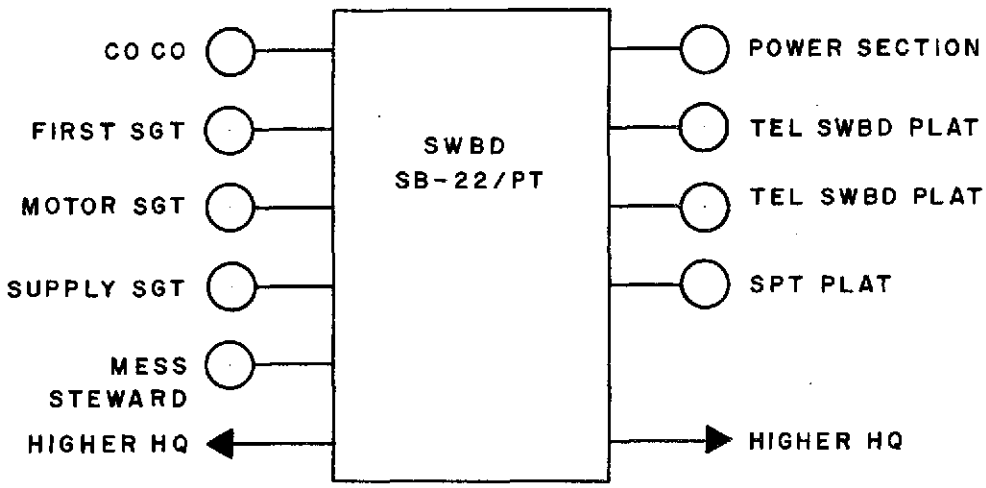


Figure 5–1. Type internal wire communications net, telephone operations company.

Section II. EMPLOYMENT AND ORGANIZATION

5–4. General

Each telephone operations company includes the technical control facilities, telephone communications facilities, and power generating units to support the missions of one telephone operations company and one communications

center company employed at either the main or alternate CP of a field army.

5–5. Capabilities and Limitations

a. At full strength, the telephone operations company provides the following capabilities:

(1) Installs, operates, and maintains the following at the army main or alternate echelon of a field army headquarters:

(*a*) Two manual telephone central offices, each providing facilities for interconnecting 600 local telephone subscriber lines and 60 manual or dial trunks to be employed as required.

(*b*) One manual telephone central office with facilities for interconnecting *200 local telephone subscriber and 20 manual or dial trunks* to be employed at a field army tactical operations center.

(*c*) Two communication patching panels, each providing circuit patching and control of terminal communication facilities.

(*d*) Fourteen 45 KW power generators to support communication facilities established by a telephone operations company and a communications center company organic to an army command signal operations battalion.

(2) Installs and maintains local telephone circuits and local telephones normally required at an army main or alternate echelon of a field army headquarters.

(3) Performs direct support level maintenance on organic signal equipment.

(4) Performs organizational maintenance on organic weapons, power generators, and vehicles.

b. At reduced strength level 2 or 3, the operational capabilities digress in 10 percent increments, from approximately 90 percent for level 2 to 80 percent for level 3.

c. This unit depends upon—

(1) The army command signal radio and cable battalion (TOE 11–75) for trunking facilities (both multichannel and field wire and cable) from the echelons of a field army headquarters (main or alternate) to designated major subordinate units, and for installation of long local wire circuits to units in the vicinity of a field army headquarters.

(2) The headquarters and headquarters company for consolidated personnel administration; supplemental organizational maintenance of power generators and motor vehicles; supplemental direct support level maintenance of communications-electronics equipment; and for religious services.

(3) Designated combat service support units for medical and dental services; supplemental transportation; direct support maintenance for motor vehicles, power generators, and other nonsignal items of equipment.

5–6. Organization

Each telephone operations company is organized into a company headquarters, a technical control section, two telephone switchboard platoons, and a support platoon (fig. 5–2).

a. Company Headquarters. The company headquarters includes the command element along with administrative, supply, mess, and motor personnel which the company commander needs to be able to command and control his unit effectively. Organizational maintenance of organic weapons and vehicles is also provided by the company headquarters.

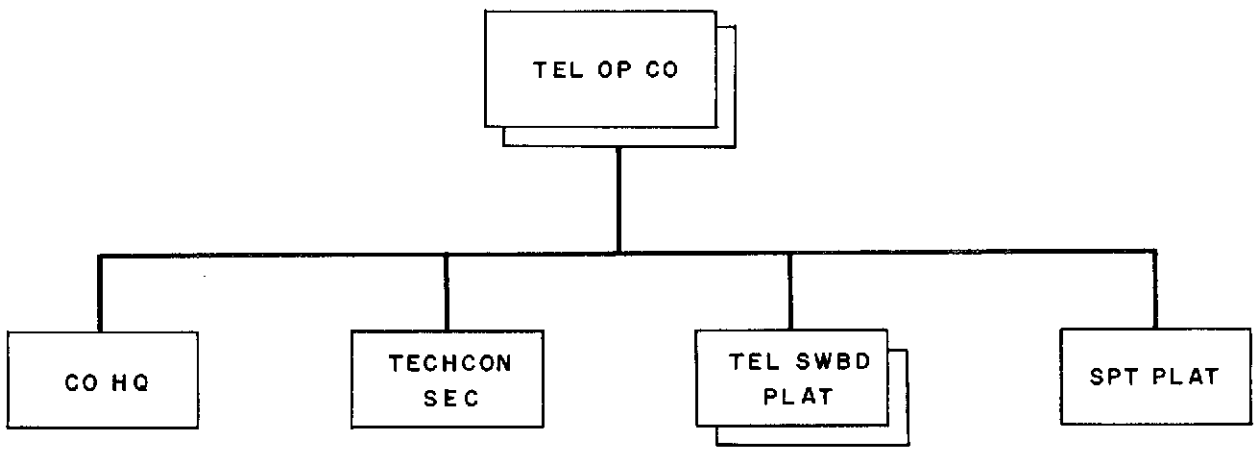
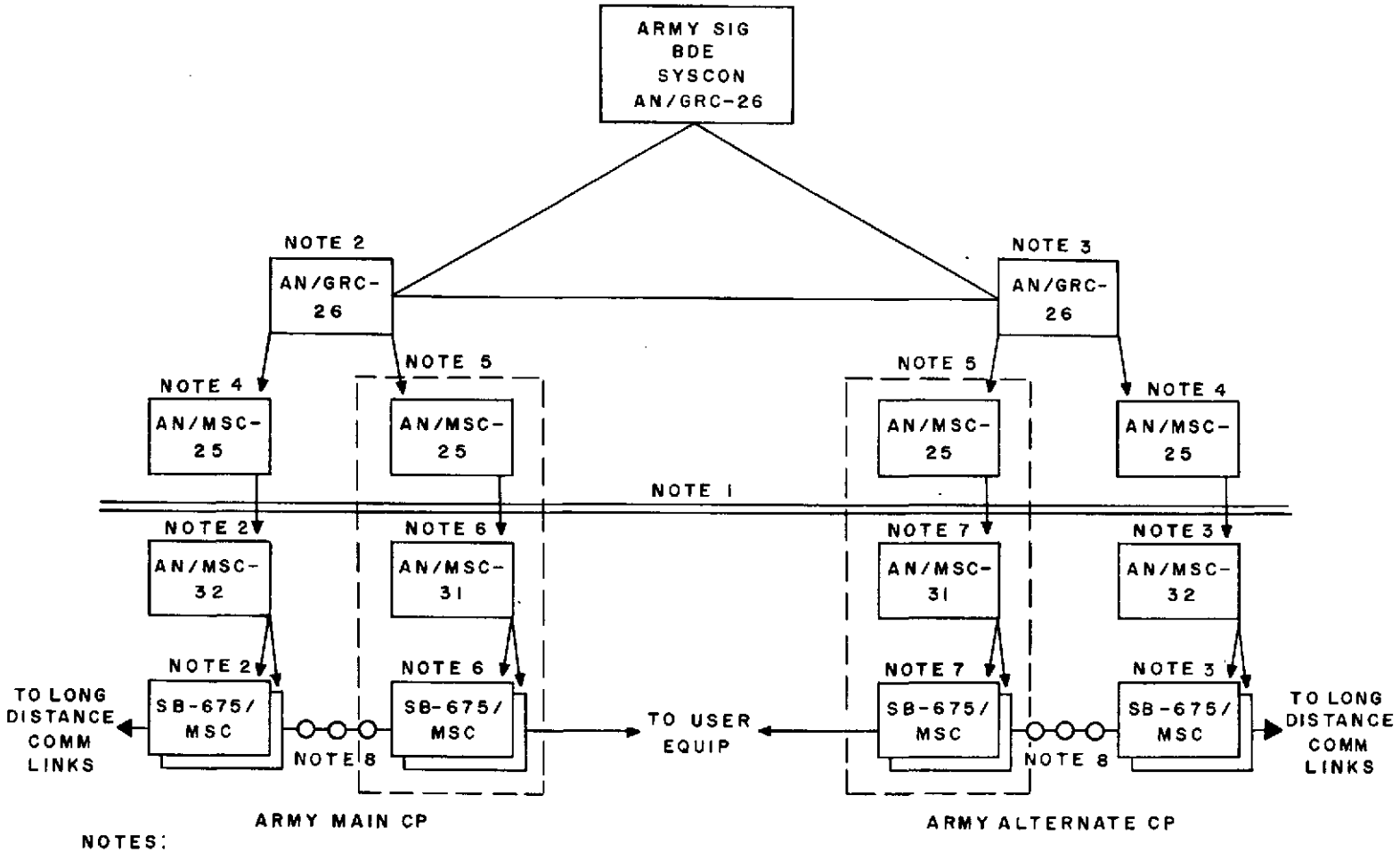


Figure 5–2. Telephone operations company.



NOTES:

1-EQUIPMENT ABOVE DOUBLE LINE USED FOR SYSCON.
EQUIPMENT BELOW DOUBLE LINE USED FOR TECHCON
2-PROVIDED BY RDO CO-1 TOE 11-77( ).
3-PROVIDED BY RDO CO-2 TOE 11-77( ).
4-PROVIDED BY HHC TOE 11-76( ).
5-PROVIDED BY HHC TOE 11-96( ).
6-PROVIDED BY TEL OP CO-1 TOE 11-97 ( ).
7-PROVIDED BY TEL OP CO-2 TOE 11-97( ).
8-PROVIDED BY CABLE & WIRE CO TOE 11-78( ).

Figure 5-3. Type configuration of systems and technical control facilities.

b. Technical Control Section. The technical control section is under the operational control of the battalion S3. This section provides the personnel and equipment for the installation, operation, and maintenance of two communications patching panels (SB 675), and is responsible for implementing operational directives received from the battalion systems control as pertains to the communications facilities controlled by these patching panels. Technical control operations are directed from the section's communications operation central. A typical representation of the employment of patching centrals appears in figure 5–3.

c. Telephone Switchboard Platoon. There are *two* telephone switchboard platoons (fig. 5–4) in each telephone operations company. Each platoon is organized into a platoon headquarters, a telephone switchboard section, and a wire and telephone installation section. Each platoon installs, operates, and maintains one manual telephone central office and installs and maintains the local telephone distribution circuits and local subscriber telephones required at the main or alternate echelon of a field army headquarters.

(1) *Platoon headquarters.* The platoon headquarters includes the platoon leader, the platoon sergeant, and a light vehicle driver. The platoon sergeant assists the platoon leader and coordinates the platoon's activities with the technical control section of the command radio company by furnishing feeder data for traffic diagrams, trunk circuit numbering charts, and trunk availability information.

(2) *Telephone switchboard section.* The telephone switchboard section installs, operates, and maintains the Manual Telephone Central Office AN/MTC–9 which consists of two major components; one Telephone Terminal Group AN/MTA–5 containing the telephone main distribution frame and associated equipment; and one telephone switching group AN/MTA–7. Each supervisor works an 8-hour shift with the switchboard operators on duty. The supervisors provide the operators with traffic diagrams to assist them in routing and rerouting calls. They also assist the operators in handling difficult calls, and furnish information to subscribers who are authorized to receive it.

(3) *Wire and telephone installation section.* The telephone installation section installs and maintains the local telephone distribution circuits and local telephones normally required at the army main or alternate echelon or fragmented portions of these echelons of a field army headquarters.

(*a*) *Section chief.* The section chief supervises the overall mission of the section and is responsible to the telephone switchboard platoon leader for installation and repair assignments performed by the section. He organizes and coordinates all wire team assignments in accordance with instructions received from the platoon headquarters.

(*b*) *Wire teams.* There are 3 wire teams to each platoon. Each team consists of 1 wire team chief, 1 senior wireman, 2 wiremen, and 2 telephone installers. These teams install and maintain the local telephone distribution circuits and local telephones at an army main or alternate echelon and fragmented portions of these echelons.

d. Support Platoon. The support platoon installs, operates, and maintains the Manual Telephone Central Office (AN/MTC–1) required at a field army tactical operations center, and in-

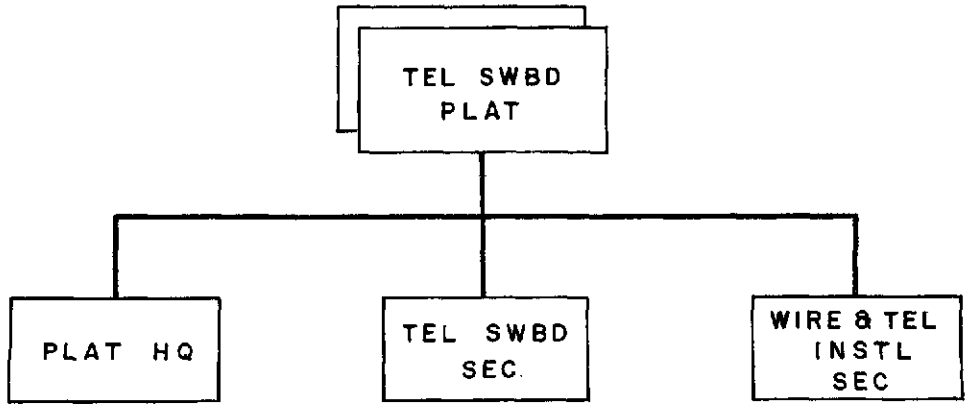


Figure 5–4. Telephone switchboard platoon.

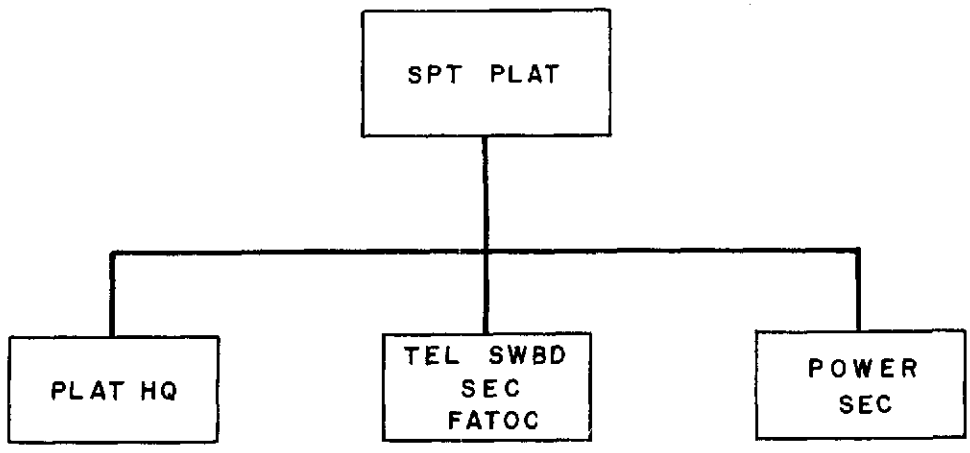


Figure 5–5. Support platoon.

stalls and maintains the local telephone distribution circuits and local telephones associated with FATOC operations. In addition, this platoon provides electrical power for terminal communication facilities established by the telephone operations company and the communications center company. The platoon is organized into a platoon headquarters, a telephone switchboard section (FATOC), and a power section (fig. 5–5).

(1) *Support platoon headquarters.* The platoon headquarters contains personnel and equipment for command and control of the platoon activities. The platoon leader insures that communications equipment organic to the platoon is operational and is manned on a 24-hour basis. The platoon leader is assisted by the platoon sergeant, and a light vehicle operator is assigned to operate the ¼-ton vehicle assigned to the platoon headquarters and to perform the duties of wireman when required.

(2) *Telephone switchboard section (FATOC).* The telephone switchboard installs, operates, and maintains the Manual Telephone Central Office AN/MTC–1 required at the field army tactical operations center, and installs and maintains the local telephone distribution circuits and local telephones associated with FATOC operations.

(*a*) The section chief is responsible to the support platoon leader for the efficient operation of the telephone switching group (AN/MTA–3) which is a component of the AN/MTC–1. He schedules and supervises the operators of the switchboard and provides them with traffic diagrams. He assists the operators in handling difficult calls and furnishes information to those authorized to receive it. Twelve switchboard operators are required for the 24-hour operation of the manual telephone central office switchboard installed in the AN/MTA–3.

(*b*) One senior manual central office repairman and 1 manual central office repairman perform 24-hour direct support level signal maintenance on the AN/MTC–1 organic to the section.

(*c*) One wire team chief, 1 senior wireman, 2 wiremen, and 2 telephone installers install and maintain the local telephone distribution circuits and local telephones associated with FATOC operations.

(3) *Power section.* Continuous electrical power is furnished at the main or alternate CP for terminal communications facilities established by the telephone operations company and the communications center company located at these CPs.

(*a*) *Section chief.* The section chief is responsible to the platoon leader for the overall efficient operation of the section.

(*b*) *Senior precise power generator specialist.* This specialist assists the section chief in the supervision, maintenance, and operational activities of the section. Two precise power generator repairmen and 7 power generator operators provide 24-hour on-site operational attendance and organizational maintenance of seven 45 KW Diesel precise power generator sets PU–407/M and seven KW Diesel precise power generator sets PU–408/M organic to the section. Seven of the required powermen drive the heavy trucks that transport the truck-mounted PU–408's and tow the trailer-mounted PU–407's.

CHAPTER 6
COMMUNICATIONS CENTER COMPANY

Section I. INTRODUCTION

6–1. General

The communications center company (TOE 11–98) is organized to provide communications center facilities for the army main or alternate echelon of a field army headquarters. The company is a category II unit (AR 320–5), is 85 percent mobile, and is allocated and assigned on the basis of *two* each to an army command signal operations battalion (TOE 11–95).

6–2. Location

The communications center operations company is normally employed in one echelon. One company is normally located at the main echelon and one company is located at the alternate echelon of a field army headquarters.

6–3. Communications

a. Wire. The communications center company has one local battery switchboard and sufficient telephones to establish internal telephone communications. Facilities are available for the establishment of trunk circuits to battalion headquarters or other switchboards as required (fig. 6–1).

b. Radio. One FM radio is authorized for use in the battalion command net (fig. 4–5).

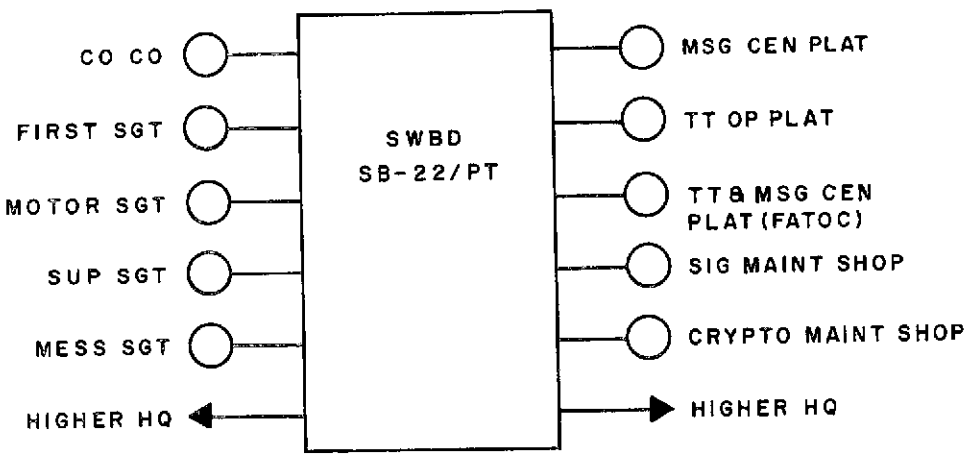


Figure 6–1. Type internal wire communications net, communications center company.

Section II. ORGANIZATION AND EMPLOYMENT

6–4. General

Each communications center company furnishes the communications center facilities at the army main or alternate echelon of a field army headquarters.

6–5. Capabilities and Limitations

a. Full Strength (Level 1). At full strength, this unit has the following capabilities:

(1) Installs, operates, and maintains communication center facilities at the army main

or alternate echelon of a field army headquarters to include—

(*a*) Message handling facilities and off-line cryptographic services.

(*b*) A secure tape relay facility which provides terminations for 16 full-duplex teletypewriter circuits.

(*c*) A secure teletypewriter terminal facility which provides terminations for 16 full-duplex teletypewriter circuits.

(*d*) Nineteen motor messenger teams for delivery of bulk traffic within the army headquarters complex and to its subordinate headquarters.

(2) Installs, operates, and maintains communications center facilities at a field army main or alternate tactical operations center (FATOC) to include—

(*a*) A message handling facility.

(*b*) A secure teletypewriter terminal facility which provides terminations for 12 full-duplex circuits for high precedence traffic.

(*c*) A remote secure teletypewriter terminal facility which provides terminations for nine full-duplex radio teletypewriter circuits.

(*d*) A facsimile facility which provides termination for four facsimile circuits.

(3) Provides unit administration, supply and mess facilities, and organizational maintenance of organic weapons, vehicles, and power equipment.

(4) Performs direct support level maintenance on organic signal equipment.

(5) Provides direct support level maintenance of cryptographic equipment organic to the battalion.

b. Reduced Strength. At reduced strength level 2 and 3, the operational capabilities decrease in 10 percent increments, from approximately 90 percent for level 2 to 80 percent for level 3.

c. Limitations. The company depends upon—

(1) Appropriate units in the area for medical and dental services, and supplemental transportation.

(2) The headquarters and headquarters company for consolidated personnel administration; supplemental organizational maintenance for power generators and motor vehicles; and supplemental direct support level maintenance of communications-electronics equipment; and religious services.

(3) The command cable and wire company, army command signal radio and cable battalion (TOE 11–78) for supplemental cable and wire support.

(4) The telephone operations company for electrical power support.

(5) The U. S. Air Force to provide air weather service (AWS) teams to support FATOC and U. S. Army airfields supporting the main or alternate echelon of a field army headquarters (AR 115–10).

6–6. Organization

Each communications center company is organized into a company headquarters, a mes-

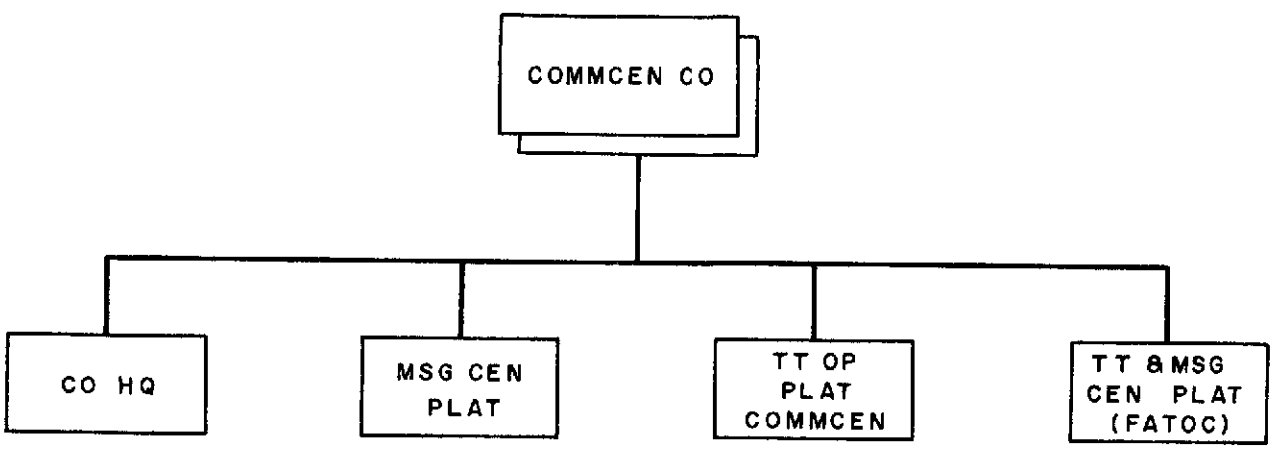


Figure 6–2. Communications center company, TOE 11–98.

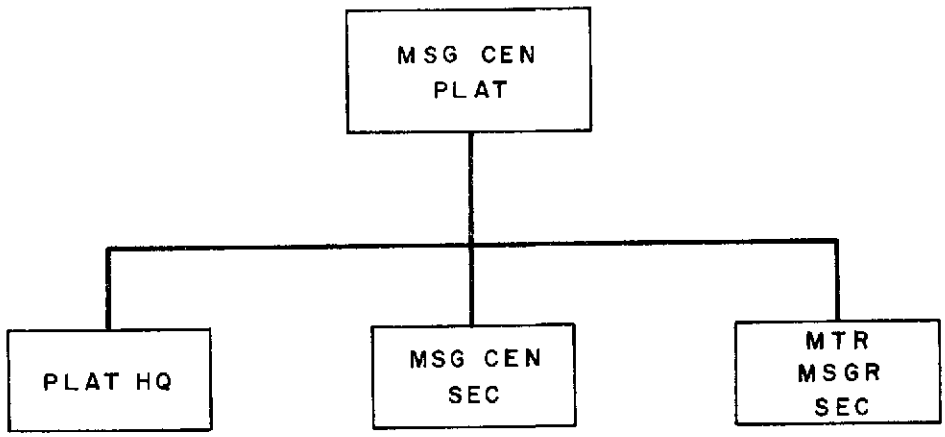


Figure 6–3. Message center platoon.

sage center platoon, a teletypewriter operations platoon-communication center, and a teletypewriter and message center platoon (FATOC) (fig. 6–2).

a. Company Headquarters. The company headquarters includes the command element along with administrative, supply, mess, and motor personnel which the company commander uses for the effective command and control of his unit. Organizational maintenance of organic weapons and vehicles is also provided by the company headquarters.

b. Message Center Platoon. The message center platoon consists of a platoon headquarters, a message center section, and a motor messenger section (fig. 6–3).

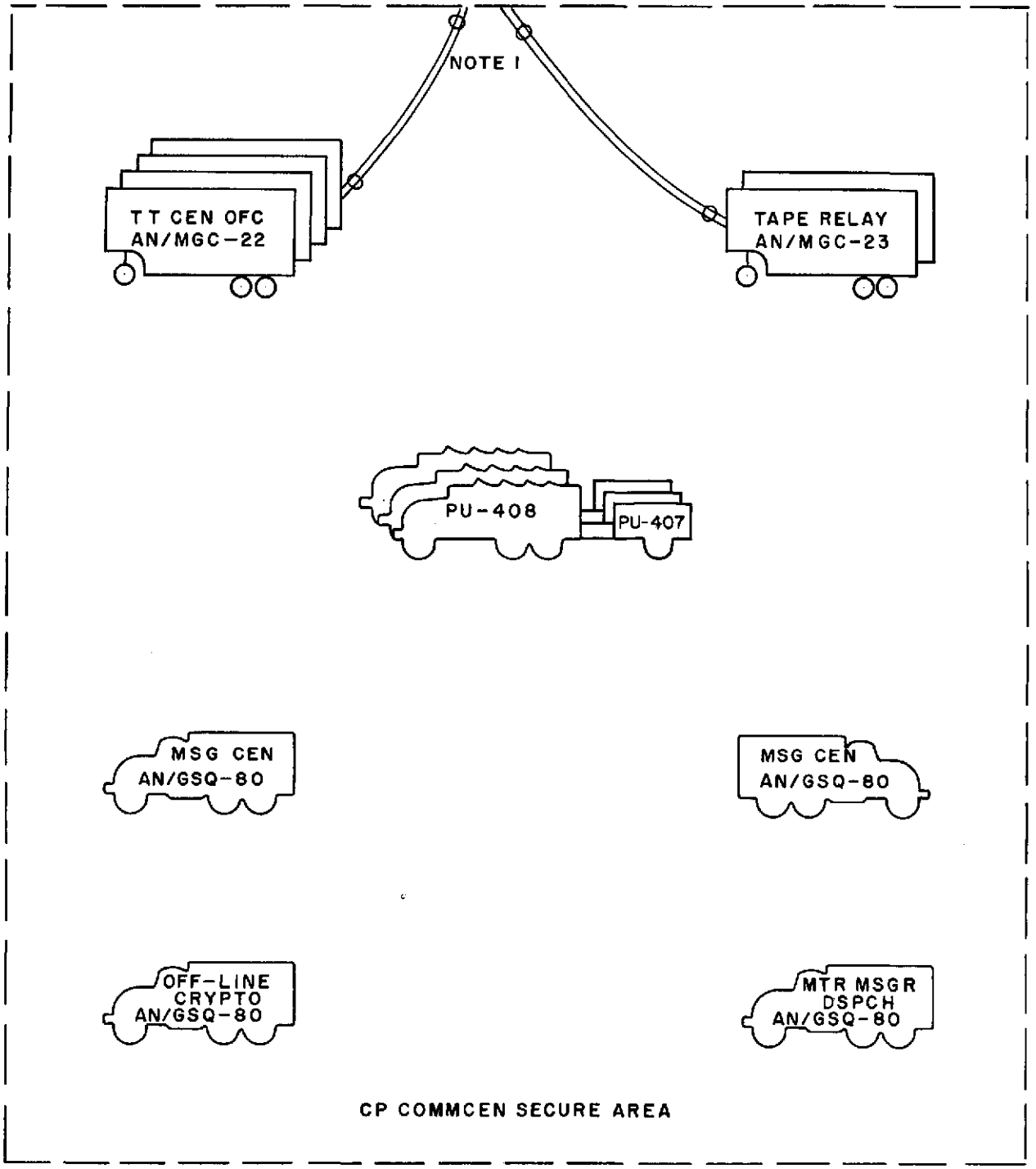
(1) *Platoon headquarters.* The platoon headquarters contains the personnel and equipment for command and control of the activities of the message center section and the motor messenger section. The platoon leader, assisted by the platoon sergeant, insures that the message center is manned and in operation 24 hours a day. He is also responsible for cryptographic security within the platoon and acts as the cryptographic security officer for the company.

(2) *Message center section.* The message center section is organized and equipped to provide a 24-hour message handling and processing service. Two message center shelters provide the necessary working space, equipment, and supplies for sustained operations. The two shelters are located as close as possible to the teletypewriter terminals so that traffic between them may be expeditiously handled (fig. 6–4). A third shelter is used to house the off-line cryptographic equipment and supplies. This shelter is also located in the same secure area as the other two shelters.

(3) *Motor messenger section.* The motor messenger section provides the personnel and facilities for establishing and maintaining the special and scheduled motor messenger service for the main or alternate echelon of a field army headquarters. This service provides the most expeditious and economical means for handling the large amounts of bulk traffic normally associated with a headquarters of this size and type. The section chief is responsible for the coordination and efficient operation of the scheduled and motor messenger service. Two messenger dispatchers are required to provide 24-hour dispatch service for the 19 motor messenger teams assigned to the section. One messenger center shelter which is also located in the communications center secure area (fig. 6–4), provides working space and shelter for the messenger dispatch service.

c. Teletypewriter Operations Platoon (COMMCEN). The teletypewriter operations platoon (COMMCEN) consists of a platoon headquarters, one tape relay section, and two teletypewriter terminal sections (fig. 6–5).

(1) *Platoon headquarters.* The platoon headquarters contains the personnel and facilities for command and control of the activities of the tape relay section and the two teletypewriter terminal sections. The platoon provides



NOTE:

1. 26-PAIR CABLE CONNECTS TO SB-675 FURNISHED BY A RADIO CO, TOE 11-77.

Figure 6-4. Type signal equipment configuration.

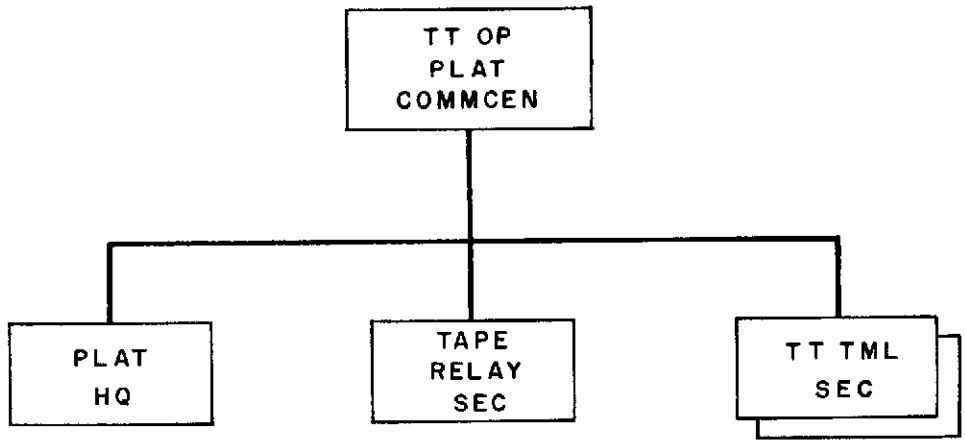


Figure 6–5. Teletypewriter operations platoon (COMMCEN).

tape relay and teletypewriter terminal facilities for either a main or alternate echelon of a field army headquarters. The platoon leader must insure that the communications equipment is operationally manned and maintained 24 hours a day. The platoon sergeant assists the platoon leader by coordinating the teletypewriter requirements with the technical control facility located at the supported echelon. The light-truck driver operates the ¼-ton vehicle assigned to the platoon headquarters, and he is also used as a teletypewriter operator in the teletypewriter terminal or tape relay facility as required.

(2) *Tape relay section.* The tape relay section installs, operates, and maintains two tape relay facilities (fig. 6–4) on a 24 hour basis. The section is responsible for relaying incoming teletypewriter traffic and for providing termination for 16 secure full-duplex circuits to handle traffic. A minor tape relay station is at either the main or alternate CP of the field army. These minor tape relay stations are so designated to insure that traffic not specifically intended for them is kept in the area communications portion of the field army tape relay system. In addition to the minor tape relay stations at army main and alternate CPs, army rear operates a tributary station in the system as required. The tape relay and terminal stations are normally positioned within 26 pair cabling distances from each other and the patching panel (fig. 6-4). The section leader, assisted by the teletypewriter supervisor, is responsible for the efficient operation of the secure tape relay facilities. The teletypewriter supervisor prepares shift schedules, coordinates the efforts of the four shift supervisors, and insures that operating procedures are maintained.

(3) *Teletypewriter terminal section.* There are two teletypewriter terminal sections in the teletypewriter operations platoon (COMMCEN). Each section installs, operates, and maintains two teletypewriter terminal facilities for an echelon of a field army headquarters (fig. 6–4). The section leader is responsible for the efficient operation of the communication equipment configurations organic to the section. The section chief assists the section leader by preparing shift schedules and insuring that the two teletypewriter terminals are adequately manned. He also coordinates the efforts of the shift supervisors and insures that security standards and standing operating procedures are maintained and followed.

d. Teletypewriter and Message Center Platoon (FATOC). The teletypewriter and message center platoon (FATOC) consists of a platoon headquarters, a teletypewriter operations section, and a message center section (fig. 6–6).

(1) *Platoon headquarters.* The platoon headquarters includes the personnel and equipment for the command and control of the activities of the platoon. The platoon leader, assisted by the platoon sergeant, insures that the communications equipment organic to the platoon is operational and is manned 24 hours a day. The platoon sergeant coordinates the teletype-

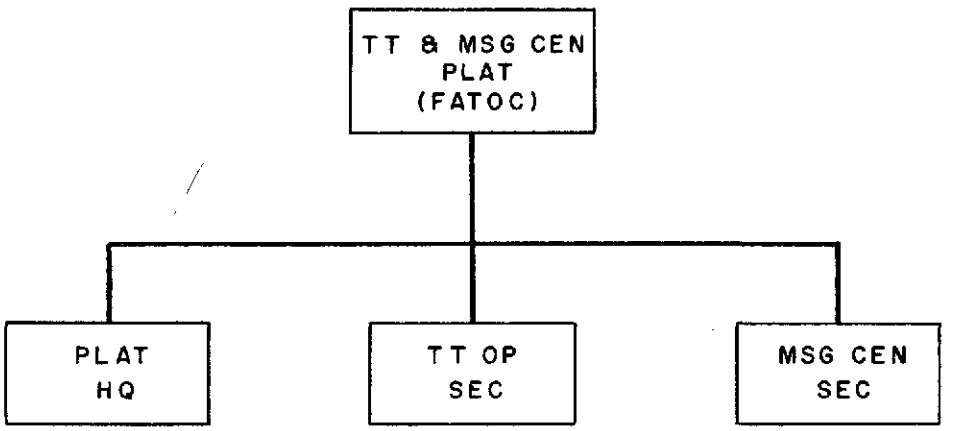


Figure 6–6. Teletypewriter and message center platoon (FATOC).

writer circuit requirements with the technical control facilities operated at the supported echelon. Two powermen are assigned to perform organizational maintenance on the power generators organic to the platoon. One powerman will be assigned the additional duty of operating the ¼-ton light vehicle that is assigned to the platoon.

(2) *Teletypewriter operations section.* The teletypewriter operations section installs, operates, and maintains the teletypewriter terminals for the point-to-point teletypewriter circuits for the field army tactical operations center.

(*a*) *Section leader.* The section leader is responsible for the coordination and efficient operation of three teletypewriter operations centrals that are capable of providing 8 half-duplex or 4 full-duplex channels and 3 teletypewriter operations centrals each capable of providing 6 secure half-duplex or 3 secure full-duplex operating channels for multichannel and HF radio-teletypewriter operations between the FATOC and major subordinate headquarters and the tactical operations centers of these headquarters. Figure 6–7 depicts a type configuration and the nomenclature of the teletypewriter operations centrals used at the FATOC of the field army main or alternate command post.

(*b*) *Teletypewriter supervisor.* The teletypewriter supervisor is the chief NCO. He assists the section leader in all phases of the operation of the section.

(*c*) *Teletypewriter shift supervisor.* A total of eight shift supervisors are required for the continuous supervision of the 6 teletypewriter terminal facilities. Six shift supervisors are required for the supervision of the 3 teletypewriter operations centrals (AN/MGC–32) and 2 shift supervisors are required for the 3 collocated teletypewriter terminals (AN/MSC–29).

(*d*) *Teletypewriter operators.* Forty-five operators are required for the operation of the teletypewriter equipment installed in the 6 teletypewriter terminal facilities. Ten operators are required for the operation of the AN/MSC–29.

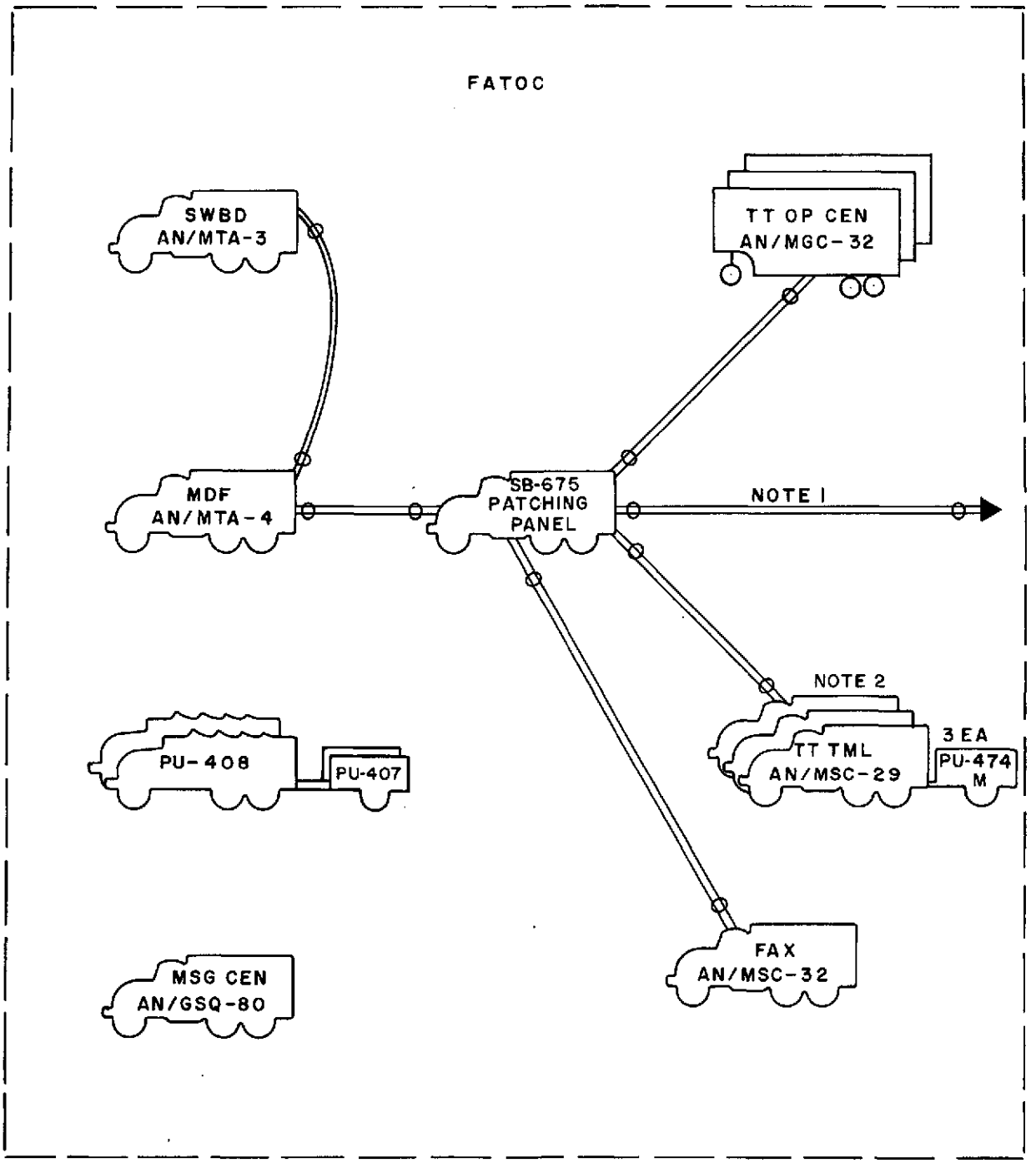
(*e*) *Teletypewriter equipment repairmen.* One senior teletypewriter equipment repairman and two teletypewriter repairmen perform direct support level maintenance on the organic teletypewriter equipment to insure 24-hour operation.

(3) *Message center section.* The message center section provides message handling, off-line crypto, motor messenger service, and facsimile facilities at an echelon of a field army headquarters for FATOC operations. Air weather service personnel are provided by the United States Air Force.

(*a*) *Section chief.* The section chief supervises the activities of the message center personnel who operate in the message center shelter and in the facsimile shelter (fig. 6–7). He is responsible to the platoon leader for the coordination and control of the operational mission of the section.

(*b*) *Signal message center supervisor.* The message center supervisor is responsible to the section chief for the efficient and secure operation of the message center to include the supervision of the facsimile operations.

(*c*) *Other enlisted personnel.* A communications center specialist and a communications center clerk perform the message handling and processing services and the off-line crypto operations. Two 2-man motor messenger teams provide service on a 24-hour basis for the field army tactical operations center. Three facsimile operators are assigned to operate and perform organizational maintenance on a 24-hour basis on the facsimile equipment installed in the facsimile shelter. Air Force personnel (AR 115–10) will also be provided for processing meteorological data by teletypewriter and facsimile in this shelter. Additional teletypewriters are included to provide speech-plus-teletypewriter terminals for one army airfield. This equipment will be operated by Air Force personnel.



NOTE:

1. 26-PAIR CABLE CONNECTS TO SB-675 FURNISHED BY A RADIO CO, TOE 11-77.
2. TO BE REPLACED BY AN/TSC-58 WHEN AVAILABLE.

FM 11-95-6-7

Figure 6-7. Type signal equipment configuration at FATOC.

CHAPTER 7
SECURITY AND TRAINING

Section I. PHYSICAL SECURITY

7–1. General

Physical security embraces those measures taken to protect the army command signal operations battalion against—

a. Nuclear explosion and the resultant blast, heat radiation and nuclear radiation (initial radiation, fallout, and radiological contamination) effects.

b. Attack by enemy ground, air, and airborne elements.

c. Chemical and biological attack.

d. Enemy guerrilla activity.

e. Enemy observation.

7–2. Mission Diversion

The mission of the army command signal operations battalion requires communications support to be provided on a 24-hour basis. Under certain conditions, the dispersion of battalion elements may require that a considerable amount of communications support effort of the battalion be diverted to provide the necessary security for its installations. To insure the maximum productive use of the battalion's communications capability, security for the battalion's installations within the various headquarters supported must be assumed by the army troops that provide the security force for these headquarters.

Section II. COMMUNICATIONS SECURITY

7–3. General

Communications security (COMSEC) is defined as the protection resulting from all measures designed to deny to unauthorized persons information of value which might be derived from the possession and study of telecommunications, or to mislead unauthorized persons in their interpretations of the results of such a study. Communication security includes cryptosecurity, physical security, and transmission security.

a. Cryptosecurity is that component of communication security which results from the provision of technically sound cryptosystems and their proper use.

b. Physical security is that part of communications security concerned with physical measures designed to safeguard personnel; prevent unauthorized access to equipment, facilities, material, and documents; and safeguard them against espionage, sabotage, damage, and theft. Refer to AR 320–5 for detailed information.

c. Transmission security is that component of communication security which results from all measures designed to protect transmissions from unauthorized interception, traffic analysis, and imitative deception.

7–4. Application of Communication Security

The basic objective of COMSEC is to prevent unauthorized personnel from gaining useful information from communications. This objective can only be realized if all personnel are security conscious and are aware of their personal responsibilities in this regard. COMSEC should be a habit—a state of mind developed through training and application in daily routine. All personnel should be thoroughly famil-

iar with and follow the security practices designed to minimize the value of communications as a source of intelligence to unauthorized personnel. A summary of the more basic practices for effective COMSEC follow. Refer to FM 32–5 for a more detailed discussion.

a. Cryptosecurity.

(1) Use only authorized cryptosystems.

(2) Insure strict compliance with the operating instructions for cryptosystems employed.

(3) Use cryptosystems designed to provide the degree and term of security required.

b. Physical Security.

(1) Maintain proper safeguards against capture, theft, or unauthorized observation of messages and COMSEC materials at all times.

(2) Maintain adequate emergency evacuation and destruction plans and practice them frequently.

(3) Guard against carelessness and laxity by frequent inspections and tests of security measures.

c. Transmission Security.

(1) Use radio transmission only when other means of communication are not adequate.

(2) Be aware that all means of transmission, not only radio, are subject to interception by unauthorized personnel. Restrict plain language transmission to a minimum.

(3) Maintain circuit discipline and avoid extraneous transmissions.

(4) Assign call-signs/words and frequencies in a random manner and change them simultaneously at frequent intervals.

(5) Make transmissions brief.

(6) Use broadcast and intercept transmission methods when possible.

(7) Use only prescribed communications operation procedures.

(8) Use authentication properly.

(9) Use minimum power required.

(10) Use security monitoring stations to determine if transmission security is practiced.

Section III. STABILITY OPERATIONS

7–5. General

Stability operations is that portion of internal defense and internal development operations provided by the U. S. Army to maintain, restore, or establish a climate of order within which responsible government can function effectively and without which progress cannot be achieved. The field army to which the army command signal operations battalion is assigned, may operate in an internal defense and internal development environment by engaging in stability operations. When the field army is engaged in such operations, the signal battalion adapts its standing operating procedures to the local situation and performs its normal support mission for the field army.

7–6. Functions

a. In addition to performing its regular mission, the battalion may be assigned such additional functions as are listed below.

(1) *Civil emergency communications.* The signal battalion may have to assist in establishing civil emergency communications. This requirement may arise in the absence of civil communications facilities, whether former communications in the area have been damaged beyond use or whether communication facilities never existed at all.

(2) *Civil communications extension.* The battalion may have to extend existing civil communications facilities. Such extensions may be required in furtherance of the civil internal defense effort of the receiving state (RS).

(3) *Friendly military communications.* Augmenting the signal communications capability of friendly forces may be an additional function of the signal battalion. This function may be generated by international U. S. commitments with respect to internal defense and internal development operations.

(4) *Advice and assistance.* Technical advice and assistance in the field of communications may be another of the additional functions assigned to the battalion. Such advice and assistance with respect to the stability operations

of the field army may be in connection with either the training activities or the tactical operations of the receiving state.

b. It is particularly important to note, however, that when the signal battalion fulfills any of these additional functions, its capability to satisfy the army command communications requirements is reduced accordingly. Under the provisions of the battalion TOE 11–95, augmentation of additional personnel, communications equipment, and aircraft is authorized when the battalion is operating in Southeast Asia or in a similar environment.

c. In stability operations, there is a characteristic requirement for a major effort to secure all installations due to the nature of the enemy threat. Consequently, signal battalions frequently will be required to contribute a significant number of personnel to security missions. In this situation, personnel augmentation may be required to assure mission accomplishment.

d. A detailed discussion of the effects of internal defense and internal development operations on signal communications is contained in FM 11–57 and FM 24–1. Detailed information on internal defense and internal development operations is contained in FM 31–16, FM 31–22, FM 31–23, FM 31–22A, FM 31–73, FM 33–1, and FM 100–20.

Section IV. DEFENSE AGAINST ENEMY AIRCRAFT

7–7. General

In any combat theater, all units must recognize the threat of enemy aircraft and must be prepared to take action against it. The threat may be in the form of air strikes, CB spray attacks, aerial reconnaissance, and airmobile operations. Actions that might be taken against such air threats may be either passive or active. The air defense plan of the supported headquarters will define when and how active or passive defense will be employed against enemy aircraft. Commanders must insure that their units are familiar with the air defense plans of the supported headquarters.

7–8. Passive Defense Measures

The effectiveness of enemy air attacks can be curtailed considerably by employing passive measures such as camouflage and dispersion. Passive measures should always be in effect to decrease the possibility of surprise attack by enemy aircraft. It may be more important to employ passive measures against enemy aircraft than to actively engage the aircraft and disclose the location of the supported headquarters. An active defense may also present danger to friendly troops and installations, and an active defense must be command decision. Normally, theater headquarters will promulgate doctrine on when and how passive and active defense against enemy aircraft will be employed.

7–9. Active Defense Measures

Active defense against enemy aircraft must be emphasized because large volumes of small arms fire have proven capable of destroying both high-speed or low-speed aircraft or disrupting their attack. To maximize the effectiveness of organic weapons when employing them in an air defense role, the following actions should be taken.

a. Commanders must insure that their unit air defense SOP are based on the SOP of the supported headquarters. These SOP must contain firm guidance on how to identify aircraft, the personnel who are to engage the aircraft, the techniques of fire to be used, the rules of engagement, and the controls to be exercised.

b. All personnel must be made aware of the effectiveness of a large volume of small arms fire against low flying aircraft. Emphasis must be placed on the aggressive engagement of hostile aircraft in accordance with the SOP.

c. All personnel must be well trained and kept current on aircraft identification, techniques of firing at aerial targets, fire discipline, and response to control methods. Extreme emphasis must be placed on the threat to friendly aircraft involved in failure to properly identify and discriminate between friendly and enemy aircraft.

d. Tactics of withholding fire to preclude disclosure of position must be kept in proper perspective.

e. When the army command signal operations battalion elements are located within a headquarters complex of the supported headquarters, they will adhere to the air defense SOP of that headquarters.

Section V. CHEMICAL, BIOLOGICAL, AND RADIOLOGICAL DEFENSE

7–10. Defensive Measures

The use of unit chemical, biological, and radiological defensive measures (FM 21–40) is necessary to permit the unit to operate effectively in a CBR environment. These defensive measures include—

a. Using chemical agent and radiological detection devices.

b. Using protective masks, clothing, and equipment.

c. Using protective shelters.

d. Alerting unit personnel, by sentinels, to the presence of a CBR hazard.

e. Protecting food and water supplies.

f. Using decontaminating agents and decontamination equipment.

g. Administering first aid.

7–11. Responsibilities

Battalion readiness to operate with maximum individual and unit effectiveness under conditions produced by either friendly or enemy employment of CBR weapons is a command responsibility. In addition, individual members of the battalion have responsibilities for certain general functons connected wth CBR defensive operations. Refer to FM 21–40 for detailed information.

a. Individual Soldier. The individual soldier learns individual and unit CBR procedures so that he can carry out his mission with the least risk of injury. Refer to FM 21–41 for detailed information.

b. Unit Officers and Noncommissioned Officers. Commensurate with the level of their authority, unit officers and noncommissioned officers insure that CBR defensive measures are taught to and applied by all battalion personnel.

7–12. CBR Organization and Training

At battalion level, the normal command and staff structure provides for the conduct of training in CBR defense. The battalion commander appoints as an additional duty on the battalion staff, a school-trained CBR officer. The battalion chemical staff enlisted specialist performs the duties of battalion CBR NCO and advises the battalion CBR officer in the conduct of CBR training. Each company commander appoints as an additional duty, a CBR school-trained officer and a school-trained CBR noncommissioned for CBR duties within each company. The specific, duties assignments, and equipment of CBR personnel will be as designated in the unit SOP. Training in CBR defense must enable all personnel of the battalion to carry out CBR instructions, and, in the absence of specific instructions, to be able to take the proper actions when faced with any CBR activity. For detailed information on CBR training, refer to FM 21–48.

7–13. Army Medical Service

The medical group of the army medical brigade provides the signal battalion with medical treatment and the identification of biological agents. In addition, the army medical service support unit furnishes advice to the battalion commander on the following subjects, as required: immunization procedures, decontamination procedures that may be beyond the functions of the battalion CBR NCO, contaminated food and water, capabilities of the supporting medical facilities, and the effects of CBR agents on personnel.

Section VI. TRAINING

7–14. General

a. The training objective of the army command signal operations battalion is to assist individuals in becoming proficient in their assigned tasks, to cross-train them in other related tasks, and to achieve the balance of skills and

the cooperation necessary to achieve efficient individual, team, and unit performance. Training is continuous, and the battalion commander, as well as the individual company commanders, will always be concerned with some aspect of this important function. Board training principles and policies to be used by all commanders are included in AR 350–1. Signal communications training considerations are discussed as a doctrinal matter in FM 24–1.

b. Training is conducted on an individual, group, or unit basis. It may consist of service schools training, unit school training, on-the-job training, correspondence and extension course training, or any combination thereof. Training is supplemented, as required, by refresher training to keep personnel and units informed of new methods, techniques, and equipment. A review of certain subjects, which may not be directly associated with the technical mission, is considered essential for maintaining proficiency in general military subjects. Subjects which must be reviewed periodically include military justice, CBR operations, internal defense and internal development operations, first aid, physical training, survival and escape procedures, qualification in arms, and the code of conduct.

7–15. Responsibilities

The battalion commander is responsible for insuring that all personnel assigned or attached to the battalion are adequately trained. Emphasis must be placed upon the training of the soldier to enable him not only to perform his technical duties but also to defend himself and his installation should the need arise. The battalion headquarters establishes training programs, supervises the training and cross-training of the personnel of the battalion, operates and supervises battalion schools, furnishes training assistance and advice where needed, and conducts training inspections. The battalion recommends personnel to fill school quotas allotted by higher headquarters, and coordinates the training activities of the units of the battalion. The commanders of the companies of the battalion are responsible for insuring that their personnel are trained; for conducting on-the-job, individual, and refresher training; for providing qualified instructors, as necessary, to staff battalion schools; for providing training materials to support schools established by the battalion; and for selecting personnel to attend schools.

7–16. Methods

a. The army provides an extensive system of service schools to teach officers and enlisted personnel the special skills required to effectively perform their duties. It is desirable that all personnel be school trained and that full advantage be taken of quotas authorized by these schools. Prospective students must be carefully screened to insure that they will be able to successfully complete the courses of instruction.

b. Unit training is conducted by utilizing assigned personnel as instructors. Most battalion training is decentralized. Certain training, such as systems control training, can be best conducted at battalion level. This centralized training is normally consolidated because of limited company training facilities, complexity of subject matter, or the need for close supervision and evaluation by the battalion staff. The bulk of the training, however, is normally conducted by the companies. Unit training provides instruction to those who cannot attend school courses and gives special instruction not provided by service schools. Unit training may be necessitated by the receipt of new equipment; modifications made to existing equipment; or changes in procedure, mission, or doctrine; or changes in methods of operation. Because of the nature of signal unit missions, technical training is frequently fragmented with emphasis placed on individual, team, and platoon training.

c. On-the-job training is a process whereby students or trainees acquire knowledge and skills through actual performance of duties under competent supervision, in accordance with an approved, planned program. The most effective method is to group experienced specialists with untrained personnel. Untrained personnel may be given the simpler jobs to perform until proficiency is attained. Later, as experience is gained and skills are developed, these personnel may be permitted to unertake tasks that are progressively more complex.

CHAPTER 8
SUPPLY AND MAINTENANCE RESPONSIBILITIES AND PROCEDURES

Section I. SUPPLY

8–1. Supply Responsibilities

The acquistion and timely distribution of adequate supplies is essential to the successful accomplishment of the battalion's communications mission. The battalion commander, S3, S4, and the company commanders must be familiar with the status of supplies and equipment at all times and must thoroughly consider the logistical support required for current and future operations. The battalion S4 conducts logistical operations in accordance with the staff policies and procedures established by the S4 of the army signal brigade. Close coordination and cooperation with designated support units of the army support brigade, proper planning, accurate maintenance of records, and continuous supervision are inherent actions that are required to insure the steady flow of required supplies and services for the battalion.

8–2. Supply Operations

a. Supply is a major function of the battalion supply section and of the associated company headquarters supply sections. Each section has the responsibility for assuring that undue delay does not occur in the accomplishment of effective supply support. Internal battalion supply procedures established by the S4 must be designed to implement and facilitate responsiveness in the supply system. The requisitioning and distribution of supplies may be influenced by the factors listed below. However, supply procedures must conform with the criteria established by AR 735–35 and other pertinent supply directives (app).

(1) Dispersement of organic units and elements.

(2) Transportation.

(3) Supply sources.

(4) Mission to be performed.

b. Commanders at every level must give command supervision to the practice of conservation to supplies and materiel by all personnel within their command. This includes a continuous review and updating, when required, of authorization documents, e.g., MTOE. Through strict enforcement of specific supply economy instructions and directives, and by frequent inspections, each commander insures that every individual, whether or not he is personally signed for the equipment or materiel he is using, is responsible for its care, preservation, and conservation.

c. Supply procedures and techniques for stability operations will require special planning because of the hazards encountered along roads, vulnerability of operational sites, and the great dependence on aerial supply. Supply planning must consider the stockage of larger quantities of essential items and planning of resupply well in advance of the normal requisitioning cycle.

8–3. Combat Service Support, Field Army Support Command

The field army support command provides combat service support to the field army. Although the army signal brigade and its assigned units are under the direct control of the field army headquarters, the supply and maintenance of these units are a FASCOM responsibility.

a. Army-Wide Organizations. Army-wide service organizations such as civil affairs, medical, military police, and transportation units are provided throughout the field army area by separate brigade-size organizations.

b. Support Brigades. The support brigades

provide supply, maintenance, and certain other services in a designated area. A corps support brigade is employed in each corps area, and an army support brigade is employed in the army service area. Each of the support brigades provides a variety of services (supply, maintenance, POL, postal, finance) within its assigned area. Their primary missions are supply and maintenance of all equipment and supplies except those provided by army-wide service brigades such as the transportation or medical brigades. Each of the corps support brigades provides both direct and general support to nondivisional units in the corps area. The army support brigade provides direct and general support to the units in the army service area.

Section II. MAINTENANCE

8–4. Maintenance Responsibilities

Maintenance of equipment includes all actions taken to retain materiel in a serviceable condition or to restore it to serviceability. It includes the routine recurring care exercised by operators and users, as well as the repair, rebuilding, and overhaul performed by trained technicians. The Army materiel maintenance system is divided into four categories: organizational maintenance, direct support maintenance, general support maintenance, and depot maintenance (AR 320–5 and AR 750–1). These categories, which are based upon the extent of capabilities, facilities, and skills required to perform authorized maintenance operations, are used as the means of designating the scope of maintenance to be performed at the various command levels. Commanders at all levels are responsible for compliance with established practices and procedures for preventive maintenance operations, for the training of personnel in their command in preventive maintenance of equipment, and for the allocation of sufficient time to perform the required preventive maintenance.

a. The battalion commander must give priority and personal attention to the preventive maintenance program. He must know his equipment and demonstrate his interest through personal supervision of maintenance operations and by means of frequent informal inspections. Command maintenance management inspections, conducted as prescribed by AR 750–8, provide a means for the commander to insure that proper maintenance is being performed on all major items of equipment and that information annotated on material readiness reports is valid.

b. It is the responsibility of every officer and noncommissioned officer of the battalion to initiate on-the-spot corrective action whenever and whenever he observes deficiencies in the condition or operation of equipment. Evidence of abuse will be immediately investigated and corrective action taken. Some common abuses are—

(1) Improper, careless, or negligent use of equipment.

(2) Lack of lubrication, over lubrication, or use of unauthorized lubricants.

(3) Deferred maintenance, including lack of proper servicing.

(4) Attempted repairs by unauthorized personnel or by the use of improper tools.

(5) Failure to assign direct maintenance responsibility and the lack of adequate inspection.

(6) Unauthorized cannibalization.

c. The company commanders are responsible for maintaining the operational readiness for equipment assigned or under their control. The organizational capability of the companies is augmented by battalion level maintenance personnel assigned to the headquarters and headquarters company. The battalion S4 schedules and coordinates the performance of battalion level organizational support on vehicles and power generators with the company commanders.

d. Refer to the technical manual pertaining to the item of equipment and to DA PAM 750–1 for information on preventive maintenance. TM 38–750 and TM 38–750–1 contain details on the preparation and use of maintenance performance records. Additional maintenance reference publications are listed in the appendix.

8–5. Maintenance Support Beyond Organizational Level

In addition to the organizational maintenance performed by the companies, the command signal operations battalion has a direct support level capability of maintaining the communications-electronics (excluding avionics items) and cryptographic equipment organic to the battalion. The telephone operations companies perform direct support level maintenance on their organic communications-electronics equipment. The communications center companies perform direct support level maintenance on their organic signal and cryptographic equipment. This direct support level maintenance capability is augmented by the battalion signal maintenance section of the headquarters and headquarters company for the entire battalion. When the direct support level capability and capacity of the battalion is exceeded, arrangements are made by the battalion S4 for the necessary additional maintenance from the army support brigade of FASCOM. In addition, the battalion S4 makes the necessary arrangements for the continuous maintenance support of deployed units or elements of the battalion. When an item requires maintenance or repairs at the general support level or beyond, it is evacuated (except cryptographic items) to the designated general support unit, which then assumes the responsibility for further evacuation of the item to the general support maintenance level. Normally, the headquarters and main support company, maintenance direct support battalion, DS group, provides direct support maintenance, maintenance supply, and evacuation support on organic items of communications-electronics equipment; the transportation aircraft direct support company, DS group, provides direct support aircraft, aircraft armament, and avionics maintenance and maintenance supply, and aircraft recovery support; the headquarters and headquarters company, GS group, contains an organic cryptologistics platoon which provides cryptologistics services to include the distribution and accounting for cryptomaterial and general support maintenance for communications security equipment. Refer to FM 29–22 for further details on maintenance operations in the field.

8–6. Maintenance Data Collection

Commanders at all echelons, in accordance with AR 750–1, insure that data record and maintenance arrangement systems are accurately recorded and used in maintenance management. The system and its procedures are described in TM 38–750–1. The assistant chiefs of staff for maintenance at the support brigades and FASCOM headquarters are responsible for staff supervision of the data collection effort.

APPENDIX

REFERENCES

1. Army Regulations (AR)

220–58	Organization and Training for Chemical, Biological, and Radiological (CBR) Operations.
320–5	Dictionary of United States Army Terms.
320–50	Authorized Abbreviations and Brevity Codes.
350–1	Army Training.
380–5	Safeguarding Defense Information.
(C) 380–8	Army Communications Security Policies, Objectives, and Responsibilities (U).
380–40	Safeguarding Crypto Information.
380–41	Control of Crypto Material.
(S) 380–46	Restriction on the Use of Information Processing Equipment (U).
(C) 380–51	Transmission of Classified Information (U).
600–20	Army Command Policy and Procedures.
711–16	DSU/Installation Stock Control and Supply Procedures (Army Field Stock Control System).
750–1	Maintenance Concepts.
750–5	Organization, Policies, and Responsibilities for Maintenance Operations.
750–8	Command Maintenance Management Inspections (CMMI).
750–10	Materiel Readiness (Serviceability of Unit Equipment).

2. Army Subject Schedules (ASubjScd)

11–16	Signal Equipment Repair.
11–19	Radio Communications.
11–20	Radio Relay and Carrier Communications.
11–21	Carrier and Repeater Communications.
11–23	Teletypewriter Communications.
11–24	Telephone Central Office Communications.
11–25	Signal Construction Outside Plant.
11–28	Command Post and Field Exercises.
11–30	Communication Center Operation and Messenger Service.
11–34	Electronic Warfare (ECCM).
11–35	Defense of Signal Installations.
11–36	Radiotelephone Operations.

3. Department of the Army Pamphlets (DA Pam)

360–522	The US Fighting Man's Code.
108–1	Index of Army Films, Transparencies, GTA Charts, and Recordings.
310–1	Military Publications: Index of Administrative Publications (Army Regulations, Special Regulations, Circulars, Pamphlets, DA Posters, JCS Publications, and General Orders).

310–2	Military Publications: Index of Blank Forms.
310–3	Military Publications: Index of Doctrinal, Training and Organizational Publications (Field Manuals, Reserve Officers' Training Corps Manuals, Training Circulars, Army Training Programs, Army Subject Schedules, Army Training Tests, Firing Tables and Trajectory Charts, Tables of Organization and Equipment, Type Tables of Distribution, and Tables of Allowances).
310–4	Military Publications: Index of Technical Manuals, Technical Bulletins, Supply Manuals (types 7, 8, and 9), Supply Bulletins, Lubrication Orders, and Modification Work Orders.
310–6	Military Publications: Index of Supply Catalogs and Supply Manuals, (excluding types 7, 8, and 9).
750–1	Preventive Maintenance Guide for Commanders.

4. Field Manuals (FM)

1–10	Army Aviation, Organizational Aircraft Maintenance.
1–100	Army Aviation, Utilization.
3–12	Operational Aspects of Radiological Defense.
11–20	Signal Operation, Theater of Operations.
11–21	Tactical Signal Communications Systems, Army, Corps, and Division.
11–50	Signal Battalion, Armored, Infantry, and Infantry (Mechanized) Divisions.
11–57	Signal Battalion, Airborne Division.
11–75	Army Command Signal Radio and Cable Battalion.
11–92	Corps Signal Battalion and Airborne Corps Signal Battalion.
11–117	Signal Support Company.
21–5	Military Training Management.
21–6	Techniques of Military Instruction.
21–10	Military Sanitation.
21–26	Map Reading.
21–30	Military Symbols.
21–40	Chemical, Biological, and Nuclear Defense.
21–41	Soldier's Handbook for Defense Against Chemical and Biological Operations and Nuclear Warfare.
21–48	Chemical, Biological and Radiological (CBR), and Nuclear Defense Training Exercises.
21–60	Visual Signals.
24–1	Tactical Communications Doctrine.
24–16	Signal Orders, Records, and Reports.
24–17	Tactical Communications Center Operations.
24–19	Communication-Electronics Reference Data.
24–20	Field Wire and Field Cable Techniques.
24–21	Field Radio Relay Techniques.
29–3–1 (Test)	Direct Support Supply and Service in the Field Army.
29–22	Maintenance Operations in the Field Army.
29–45–1 (Test)	General Support Supply and Service in the Field Army.
30–5	Combat Intelligence.
30–9	Military Intelligence Battalion, Field Army.
31–22	US Army Counterinsurgency Forces.
31–23	Stability Operations, US Army Doctrine.
(C) 32–5	Signal Security (U).
33–1	Psychological Operations, US Army Doctrine.
44–1	US Army Air Defense Artillery Employment.

54–3	The Field Army Support Command.
54–4	The Support Brigade.
100–5	Operations of US Army Forces in the Field.
100–10	Combat Service Support.
100–15	Theater Army Group, Field Army, and Corps.
(C) 100–20	Field Service Regulations, Internal Defense and Development, (IDAD) (U).
100–27	US Army/US Air Force Doctrine for Tactical Airlift Operations.
101–5	Staff Officers' Field Manual: Staff Organization and Procedure.

5. Tables of Organization and Equipment (TOE)

11–75	Army Command Signal Radio and Cable Battalion.
11–85	Army Area Signal Battalion.
11–95	Army Command Signal Operations Battalion.
11–102	Army Signal Brigade.

6. Technical Manuals (TM)

3–220	Chemical, Biological, and Radiological (CBR) Decontaminations.
38–750	Army Equipment Record Procedures.
38–750–1	Maintenance Management: Field Command Procedures.

7. Supply Bulletin (SB)

11–244	Stockage of Signal Items for Use as Maintenance Float (exchange).
11–478	Cannibalization as a Source of Supply for Signal Parts.

8. Allied Communication Publication (ACP)

(C) 121	Communications Instructions—General. (U)
(C) 122C	Communications Instructions—Security. (U)
(C) 124	Communications Instructions—Radio-Telegraph Procedures. (U)
129	Communications Instructions—Visual Signal Procedures.

By Order of the Secretary of the Army:

HAROLD K. JOHNSON,
General, United States Army,
Chief of Staff.

Official:

KENNETH G. WICKHAM,
Major General, United States Army,
The Adjutant General.

Distribution:

To be distributed in accordance with DA Form 12–11 requirements for Army Signal Battalion.

☆U.S. Government Printing Office: 1968 — 305-547/9849A