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**FM 11-10**

DEPARTMENT OF THE ARMY FIELD MANUAL

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**AUTHORITY HISTORICAL FILE**

**THE SIGNAL BATTALION  
INFANTRY DIVISION**



*HEADQUARTERS, DEPARTMENT OF THE ARMY  
JULY 1957*

FIELD MANUAL }  
 No. 11-10 }

HEADQUARTERS,  
 DEPARTMENT OF THE ARMY  
 WASHINGTON 25, D. C., 24 July 1957

THE SIGNAL BATTALION, INFANTRY DIVISION

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# CHAPTER 1

## GENERAL

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### 1. Purpose and Scope

*a.* This manual is prepared for use in training a signal battalion, infantry division.

*b.* The manual contains information relative to the organization, administration, and tactical employment of a signal battalion as organized and equipped under TOE 11-5t. Chapter 2 is the principal reference source for divisional commanders and their staffs on the division level communication system and the support provided to division elements.

*c.* This manual also contains two appendixes: appendix I covers references and appendix II covers the typical employment of the vehicles of the battalion.

*d.* Forward comments on this publication to Commanding Officer, United States Army Signal Publications Agency, Fort Monmouth, N. J.

### 2. Mission

*The mission of a signal battalion, infantry division is :*

*a.* To provide signal communications for division headquarters, division trains headquarters, the division administration center, and brigade headquarters. Staff vehicle radio sets are not provided by the signal battalion.

*b.* To establish and operate an infantry division area-type communication system.

*c.* To operate a ground messenger service within the division area.

*d.* To provide photographic services (except air photography) for the division, including ground and army air still picture laboratory service.

*e.* To provide signal supply and field maintenance of signal equipment for the division.

*f.* To install and maintain communication facilities connecting the battle group headquarters into the division area communication system.

*g.* To provide terminal equipment to connect division artillery headquarters into the area communication system.

### **3. Strength and Mobility**

*a.* The authorized strength of a signal battalion, infantry division is given in TOE 11-5t and in changes thereto as published.

*b.* The signal battalion is approximately 80 percent mobile.

### **4. Control**

Administrative and operational control of the signal battalion is the responsibility of the battalion commander, who is also the division signal officer (DSO).

### **5. Assignment**

The signal battalion is assigned to an infantry division which employs an area-type communication system in its operations.

## CHAPTER 2

### EMPLOYMENT AND CONTROL

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#### Section I. SIGNAL BATTALION, INFANTRY DIVISION

##### 6. Authorization

Personnel assigned to a signal battalion, infantry division are authorized by TOE 11-5t.

##### 7. Battalion Components

A signal battalion, infantry division (fig. 1) consists of:  
Headquarters and headquarters company (TOE 11-6t)  
Command operations company (TOE 11-7t)  
Forward communications company (TOE 11-8t)

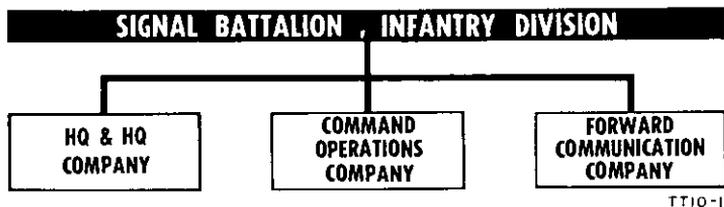


Figure 1. Organization of signal battalion, infantry division.

#### Section II. AREA COMMUNICATION CONCEPT

##### 8. Basic Communication Requirements

The concept of the infantry division, through its emphasis on operational flexibility, dispersion, and operation over greatly extended distances on a potential atomic battlefield, its incorporation of a brigade headquarters and a structure of five battle groups, its incorporation of a division trains organization, and its frequent attachment of supporting units from higher echelons, has placed increased demands on the division communication system and the division signal unit.

*a.* Operational flexibility of the division requires an equally flexible communication system. The system must be capable of being quickly reconstituted to meet changes in operational plans and task organization.

*b.* Dispersal and operation over greatly extended distances require a concurrent dispersal of supporting communication facilities throughout the division area and the primary use of radio with radio relay for division trunk lines. This concept also requires the increased use by divisional elements of multichannel trunk systems on a common-user pool basis in lieu of or to supplement separate organic systems.

*c.* Supporting operations on a potential atomic battlefield, as well as in nonatomic warfare, necessitates a communication system with sufficiently dispersed facilities and increased capabilities for alternate routing to reduce the vulnerability of the system to disruption by damage to any part.

*d.* The incorporation of a pentagonal structure of five battle groups, plus a brigade headquarters, greatly expands the scope of the division communication system.

*e.* The transfer of battle groups support functions to division-level units results in a requirement for increased communications between the forward and rear areas of the division.

*f.* The establishment of a division trains organization produces a requirement for the communication means for its operation.

*g.* The frequent attachment of supporting elements from higher echelons and the necessity for providing certain circuits for full-time use by artillery require a division communication system of sufficient inherent capacity to absorb additional loads placed upon it.

## 9. Division Area Communication System

In order to provide for the requirements listed in paragraph 8, the infantry division is furnished a signal battalion, and the concept of a division area communication system (figs. 2 and 7) is employed.

*a.* Under the area system concept, additional signal centers or switching points are established throughout the division area to support the dispersed divisional elements. The signal centers are interconnected by multichannel radio relay and, when the situation permits, by field cable, in such configuration as to provide alternate routes between any two points in the system.

*b.* The area coverage capability of the system and the use of multichannel trunks in lieu of field wire facilitate the dispersion and operation of headquarters and supporting units at more extended distances. The provision of dispersed signal centers and alternate routes of adequate capacity between them decreases the vulnerability of the system to damage and increases its flexibility of employment. This system enhances the operational flexibility

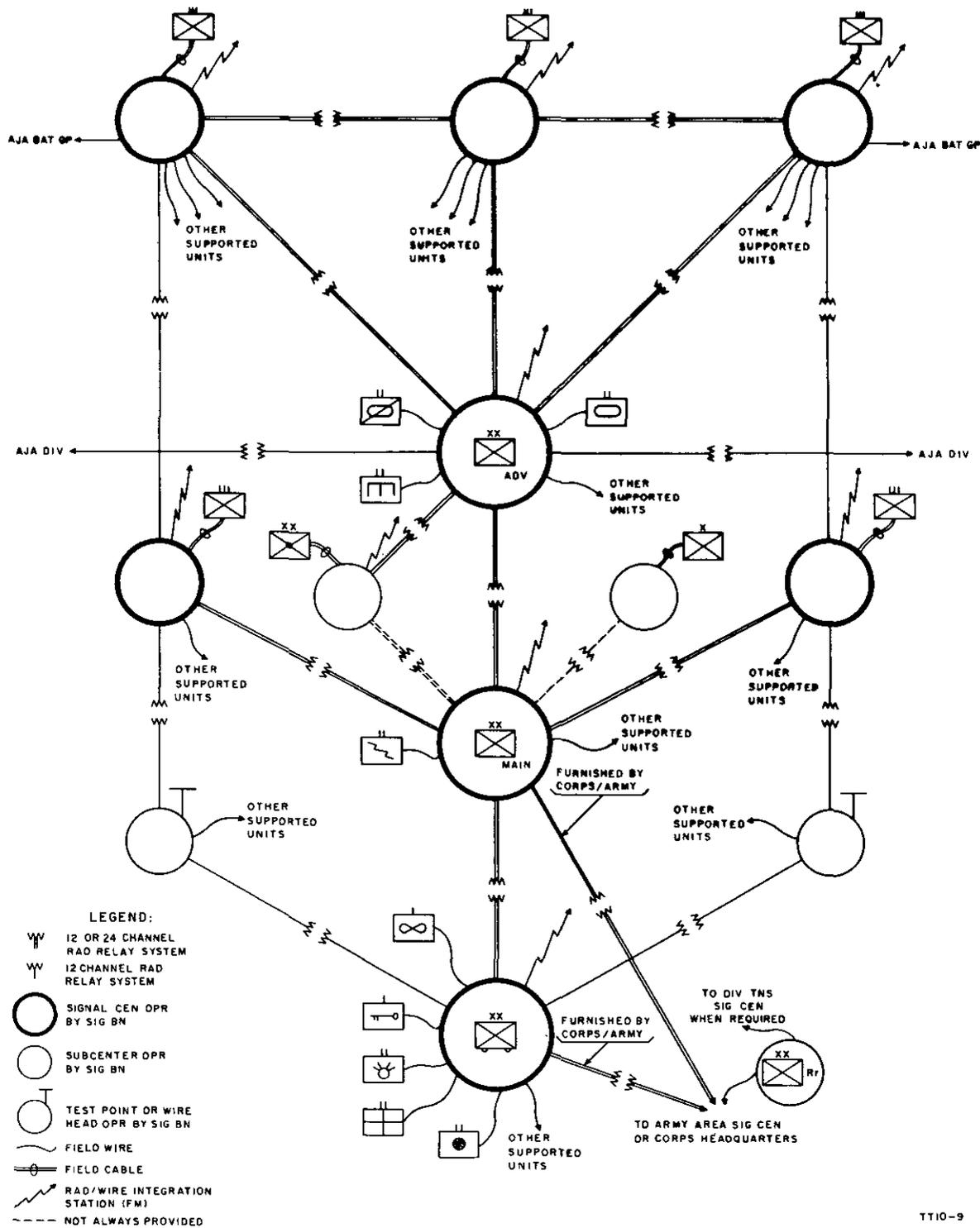


Figure 2. Type infantry division area communication system.

of division units, since elements of the division may be shifted rapidly throughout the division area with greater ease.

c. The division area communication system is comprised mainly of common-user circuits; however, to meet special requirements, a specified number of sole-user circuits will be allocated. Sole-user circuits are those circuits which are allocated to an organization, for full-time use, to provide point-to-point communication. The establishment of these circuits is based either on traffic volume or traffic precedence.

- (1) Traffic volume must be sufficient to keep the sole-user circuit busy during most of the 24-hour day. If the circuit is not kept busy for the required number of hours each day, it should be placed in common-user service.
- (2) The precedence of traffic may be sufficiently high to warrant a sole-user circuit, as in the case of air request or fire direction circuits, where normal traffic routing involves several switching points. This normal routing would result in unwarranted delay in transmission.

d. The signal centers or switching points in the division area communication system provide:

- (1) Points of entry into the system for the supported headquarters, units, and installations to facilitate their use of the trunk lines and channels in the system.
- (2) Terminal, testing, patching, and switching facilities for the radio relay circuits, field cable trunks, and the local lines in the system.
- (3) Local communication center facilities, to include message center, messenger (except at forward signal centers), cryptographic, teletypewriter, and telephone switchboard service for designated headquarters and for other units and installations as required to supplement organic capabilities.

e. The trunk lines in the division area communication system provide:

- (1) A means of communication from the echelons of division headquarters to immediate subordinate elements and between these elements.
- (2) Long lines and channels for the use of other divisional elements in lieu of or to supplement organic communications. These may be on a common-user or allocated-channel basis (in the case of division artillery), as required.

f. Signal centers in the division area communication system generally are located with or near the major divisional elements. Each forward signal center will be located in the vicinity of a

battle group CP. The basic system is extended to other users by field wire or by FM radio/wire integration links.

*g.* The division area communication system is supplemented by AM and FM radio nets of the using organization and, in the case of artillery, by a separate wire net.

## 10. Command Control

Command control of the signal battalion is facilitated through an internal battalion radio net. The radio terminals provided in this net are shown in figure 3. The primary purpose of the net is to enable the battalion commander/DSO to maintain direct contact with all elements of the signal battalion.

## 11. Area Signal Center Service

*a.* Except for radio, the division service support units, the engineer battalion, and the aviation company depend on the division area communication system for communication with unit elements operating away from the parent organization. Unit elements operating in the battle group area depend on the forward signal centers for connection into the division area communication system for telephone communication, and will depend on the centers directly for message center, cryptographic, and teletypewriter service supplemental to organic capabilities. Included in the telephone service is the installation and maintenance of connecting field cable/wire lines, and the furnishing of telephone instruments when required.

*b.* Organic radio and limited wire communication means are authorized division artillery to meet functional requirements. Artillery units, both division and corps, will use the division area communication system for administrative and logistic communication on a common user basis. Additionally, to supplement the organic wire capabilities of division and corps artillery, the division area communication system may provide sole-user circuits between division artillery and its assigned or attached units for fire support control and coordination.

- (1) The signal battalion will provide and operate terminal equipment to connect division artillery headquarters into the division area communication system. The signal battalion will also connect circuits from this terminal equipment to the division artillery switchboard by means of field cable. Both divisional and supporting corps artillery subordinate units are responsible for the installation of field wire to connect into the division area communication system at the nearest signal or switching center.

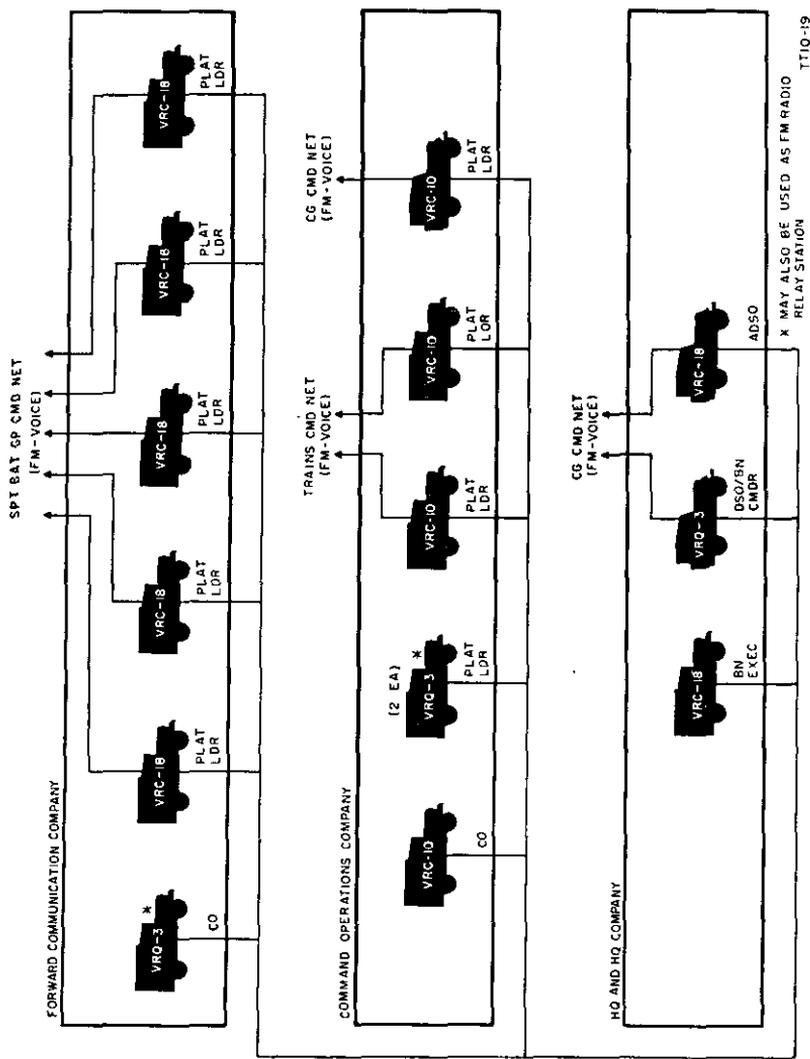


Figure 3. Signal battalion internal radio net.

- (2) The number of sole-user circuits to be provided from the division area communication system will vary with each situation, depending on the artillery organization for combat, the disposition of signal centers and artillery units on the battlefield, and the status of the artillery communication. Normally division artillery will require the following sole-user circuits:
  - (a) One circuit from division artillery to the division artillery liaison officer at the division G2-G3 operations center. If the division artillery fire support coordination center (FSCC) is located with the G2-G3 operations center, this circuit will not be required.
  - (b) One circuit from the artillery liaison at the division G2-G3 operations center, or, one circuit from the fire support coordination center (FSCC), to the artillery liaison officer at the battle group CP.
  - (c) One circuit from corps artillery to division artillery.
  - (d) Certain supporting corps artillery units positioned in the division sector may require sole-user circuits to corps artillery headquarters.
- (3) Figure 4 shows "a type" artillery sole-user circuits provided by the division area communication system. Depending on the status of artillery communications, additional sole-user circuits may be provided by the signal battalion when available and required between division artillery headquarters and their assigned and attached units, and between corps artillery headquarters and their assigned and attached units located within the division sector. Requests for artillery sole-user circuits will be placed with the division signal officer (DSO) by the artillery communication officer. Such requests normally will be placed through the signal center supporting the artillery unit.

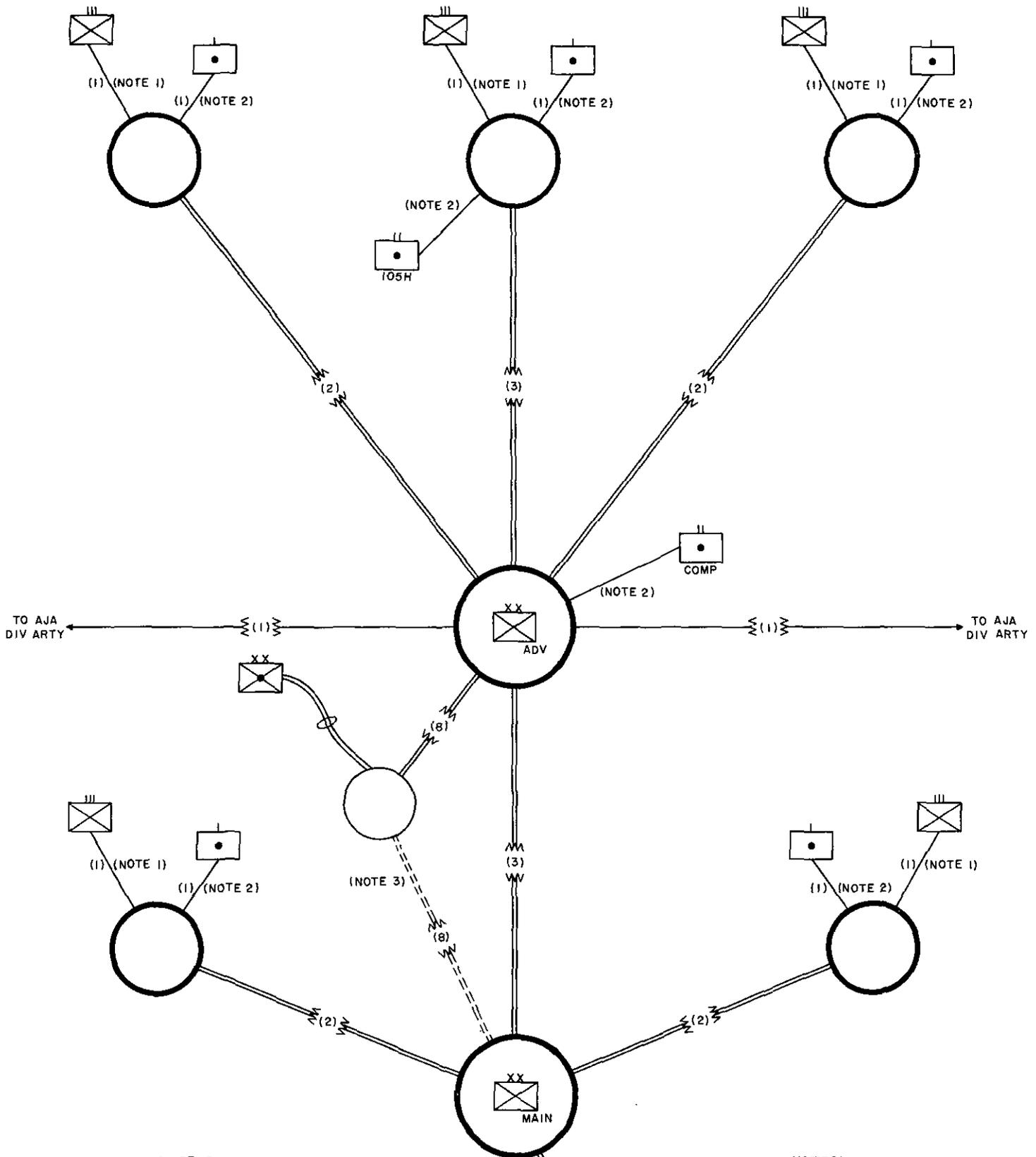
## 12. Personnel Utilization

For maximum personnel utilization and to help offset administrative losses and casualties individuals should be cross trained in allied specialties within their section to acquire skill in work related to their MOS.

### Section III. COMMUNICATIONS EMPLOYMENT

## 13. Communications Control

The communication control facility, operated by the communication control section of headquarters and headquarters company,



LEGEND:

- 12 OR 24 CHANNEL RADIO RELAY SYSTEM
- 12 CHANNEL RADIO RELAY SYSTEM
- FIELD WIRE
- FIELD CABLE
- SIGNAL CENTER OPERATED BY SIG BN
- SIGNAL SUBCENTER OPERATED BY SIG BN
- ( ) NUMBERS IN PARENTHESES INDICATE MINIMUM CIRCUITS ALLOCATED FOR FULL-TIME ARTILLERY USE

NOTES:

1. CIRCUIT FOR COORDINATION OF FIRE SUPPORT.
2. CIRCUITS INSTALLED BY ARTILLERY.
3. NOT ALWAYS PROVIDED.

Figure 4. Type artillery sole-user circuits provided by division area communication system.

aids the DSO in maintaining and operating the division area communication system. Division communications control is operated under the supervision of the DSO. Direction finding sets are employed to pinpoint and identify sources of communication and electronics interference, enemy or friendly, as reported by divisional units. Corrective action or recommendations to the commanding general for appropriate corrective action are initiated by the DSO, depending on the nature of the interference. The communication control facility also assists the cavalry squadron and the aviation company in locating or confirming the location of targets at which electronic radiating devices are used.

#### 14. Circuit Control

A Communications Patching Panel SB-611/MRC serves as a circuit control facility at each signal center of the division area communication system, except the division rear echelon. This facility is operated by the telephone sections at their respective signal centers. Each panel provides a means for switching and patching approximately 300 lines.

#### 15. Telephone Central Office

a. Manual Telephone Switchboards SB-86/P are operated at each signal center. Two-position switchboards are provided for the main and advance echelons of division headquarters, and one-position switchboards are provided for the other centers (fig. 7). The switchboards serve as trunk switches and local exchanges at all the signal centers except the rear echelon, at which the switchboard is used only for local exchange purposes.

b. Manual Telephone Switchboards SB-22/PT are employed to establish forward switches or distribution points where radio relay or carrier cable are used as extensions from the division area communication system. Where so used, the switchboards are operated by radio terminal and carrier attendants.

#### 16. Communication Centers

Communication centers are operated as components of each signal center (fig. 5) within the division area communication system. Cryptographic, teletypewriter, and messenger facilities are associated with each communication center. A facsimile facility is provided only at the main signal center. The communication centers located at the main and advance echelons of division headquarters, the division trains headquarters, and the division rear echelon (administrative center) not only serve those headquarters, but also the units and installations in the vicinity. The communication centers at the forward signal centers serve the units and installations in their

vicinity on an area basis as required to supplement the capabilities organic to those elements. (Communication service for battle group headquarters and other major units in the area is provided by organic elements (par. 34).)

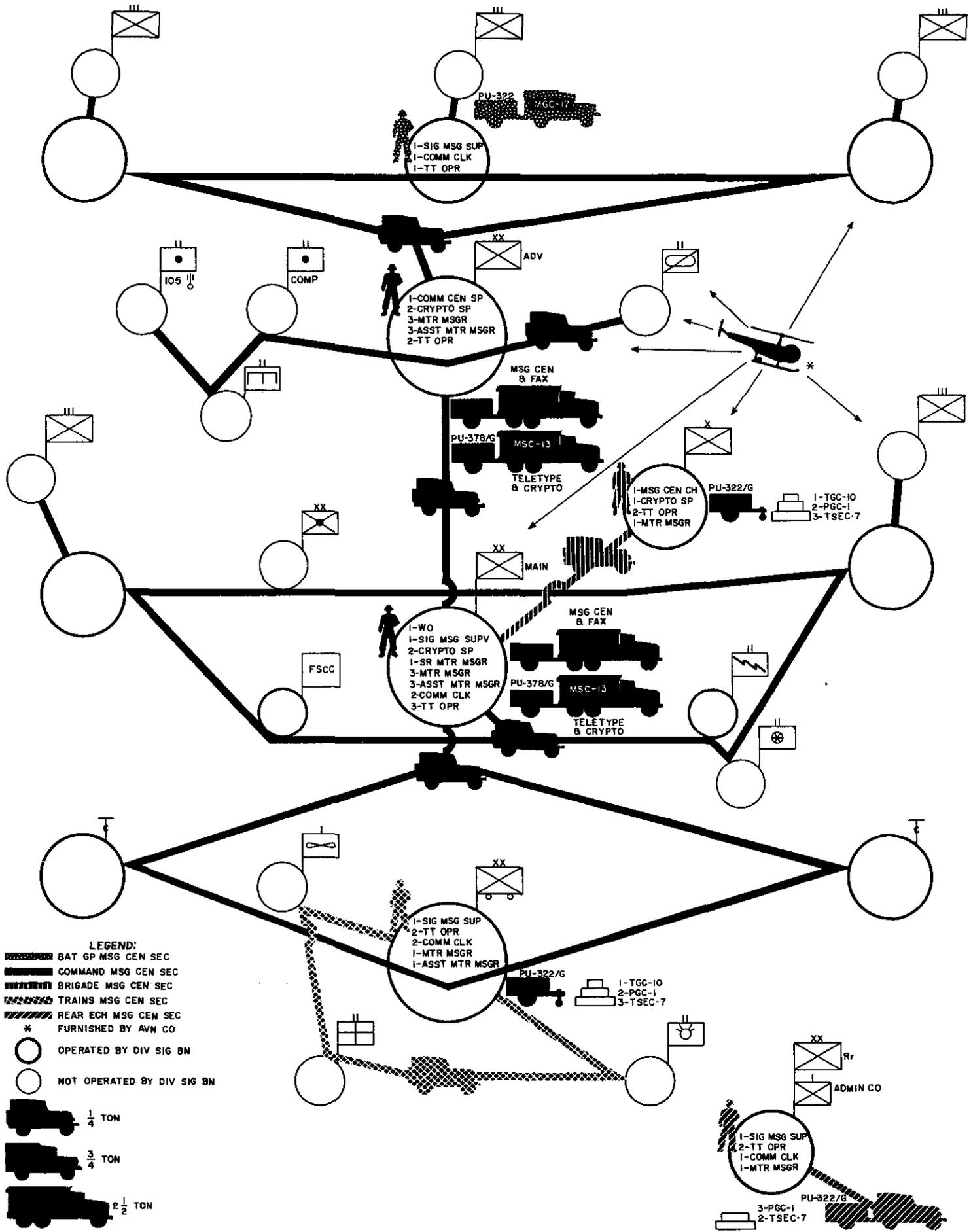
*a. Cryptographic Facilities.*

- (1) Each communication center is equipped with an off-line cipher machine (TSEC-7) for the handling of classified messages. On-line cryptographic facilities (TSEC-9) also are authorized for use with the teletypewriter systems. Operators of the TSEC-7 and -9 do not require cryptographic clearance. However, personnel operating at the main and advance echelons of division headquarters will require cryptographic clearance. Personnel operating at the other signal centers of the area communication system normally will require only a *security* clearance commensurate with the classification of traffic handled.
- (2) Cryptographic material (instruction, key lists, and other items which require cryptographic clearance for handling) will be distributed through normal cryptographic agencies. Cryptographic equipment and maintenance parts not falling into the above category will be distributed through Signal Corps supply and maintenance channels.

*b. Teletypewriter Facilities.* Teletypewriter terminal stations are operated at each communication center. Teletypewriter switching facilities are operated at each center, except at the division rear echelon. The division teletypewriter system is designed to operate on a teletypewriter exchange (TWX) basis. Limited tape relay facilities are provided at division main and advance to handle traffic which may originate outside the division.

*c. Messenger Service.* Messengers operating the division messenger service (fig. 5) will make deliveries directly to the headquarters message centers of the battle groups and to other major divisional elements, as well as to area signal centers operated by the signal battalion. The forward area signal centers will serve as messenger pick-up/delivery points only for the miscellaneous divisional unit elements in their respective areas. The division area ground messenger service is normally provided by messengers operating in pairs to effect maximum security. If additional messenger service is required, messengers may operate separately. However, miscellaneous personnel may be assigned to each messenger as a security guard.

*d. Facsimile Service.* Facsimile equipment located at the main signal center (fig. 5) will be used for facsimile communication with corps and army primarily for record communication, but may also be used for transmission of photographs as required.



- LEGEND:**
- BAT GP MSG CEN SEC
  - COMMAND MSG CEN SEC
  - BRIGADE MSG CEN SEC
  - TRAINS MSG CEN SEC
  - REAR ECH MSG CEN SEC
  - \* FURNISHED BY AVN CO
  - OPERATED BY DIV SIG BN
  - NOT OPERATED BY DIV SIG BN
  - 1/4 TON
  - 3/4 TON
  - 2 1/2 TON

Figure 5. Type division communication center and messenger operations.

## 17. Radio Relay

a. Radio relay is the primary means for long lines communication in the division area communication system. It is also the primary means for telephone service between the major headquarters in the division. Individual companies of the signal battalion are assigned areas of responsibility for installing terminals in the system.

- (1) The command operations company installs terminals for the main and advance echelon signal centers and for brigade headquarters (when established), division trains headquarters, and division artillery headquarters.
- (2) The forward communications company installs the terminals at the five forward area signal centers.
- (3) Headquarters company maintains a pool of terminal and repeater equipment for installation and/or augmentation as needed in the system.

b. A type 4-channel and 12-channel system, or combination of both, which the companies are capable of installing is shown in Fig 6; however, the full channel capabilities of radio relay and carrier equipment organic to the battalion are not utilized in this illustration.

c. The signal battalion has been provided more terminal equipments for the system than it has personnel authorized to operate them. By proper grouping of equipment, one team can operate more than one set, thereby making personnel available for the operation of repeater stations or displacement equipment.

d. Since a minimum number of wire personnel are available at the various signal centers, each terminal team proceeding to its site will simultaneously lay the necessary cable for remoting the radio relay equipment from the circuit control facility at the signal center.

e. Division terminal equipment and operating personnel for the radio relay circuits in the corps/army communication system are provided by corps/army units.

## 18. Wire and Cable Installation

The signal battalion has a relatively light capability for installing field cable, since radio relay will be the primary means of trunk-line communication throughout the division area system. When required, assistance from higher echelons may be requested. Corps/army units are provided with the capability for supplying the necessary augmentation. Wire and cable installation within the division is accomplished by 11 three- to five-man installation teams and 3 eight-man installation teams (fig. 7). Although the allocation of these teams among the companies and platoons is fixed in the unit TOE,

they may be shifted temporarily from one unit to another or pooled for a major wire construction effort.

a. The 11 three- to five-man installation teams install and maintain field wire lines and multipair telephone cables in CP areas and between signal center components. The teams also install telephone instruments.

b. The 3 eight-man installation teams install and maintain field carrier cable to supplement the radio relay facilities of the division area communication system. The amount of cable authorized by the TOE does not reflect the total cable the battalion may be expected to install. Additional cable may be requisitioned from division signal supply and army supply points or depots. Consequently, the cable and field wire capability may be increased or decreased as the situation warrants.

## 19. Radia Nets

a. Radio nets within the division (fig. 8) and divisional units are provided primarily for internal organizational communications and for communication between major divisional units. Additional radio equipment is provided for air warning systems and communications with echelons above division. Radio can be used in an emergency or fast-moving situation to supplement a segment of the radio relay system.

b. FM and AM radio will normally be used as an initial means of communication, particularly when other means are unavailable or unsuitable. If other means become available, the use of radio may be minimized and, where possible, radio stations placed on standby or on listening silence as the situation dictates. Employment of radio personnel and equipment is shown in figure 9.

c. The individual radio nets illustrated in figure 8 are discussed in the following subparagraphs:

- (1) *Division command, intelligence and administrative/logistics nets (AM-RTT)*. The signal battalion and other division units are equipped to operate three separate functional radioteletype nets: one for command operations, one for intelligence operations, and one for administrative and logistic operations. Additional sets have not been provided to permit simultaneous displacement of all net stations at any echelon. This arrangement results from expectations that full operation of all three nets simultaneously will be required infrequently, that the nets will be combined as traffic and the tactical situation permit, and that stations or nets will be placed in standby status when other means of communication are available.

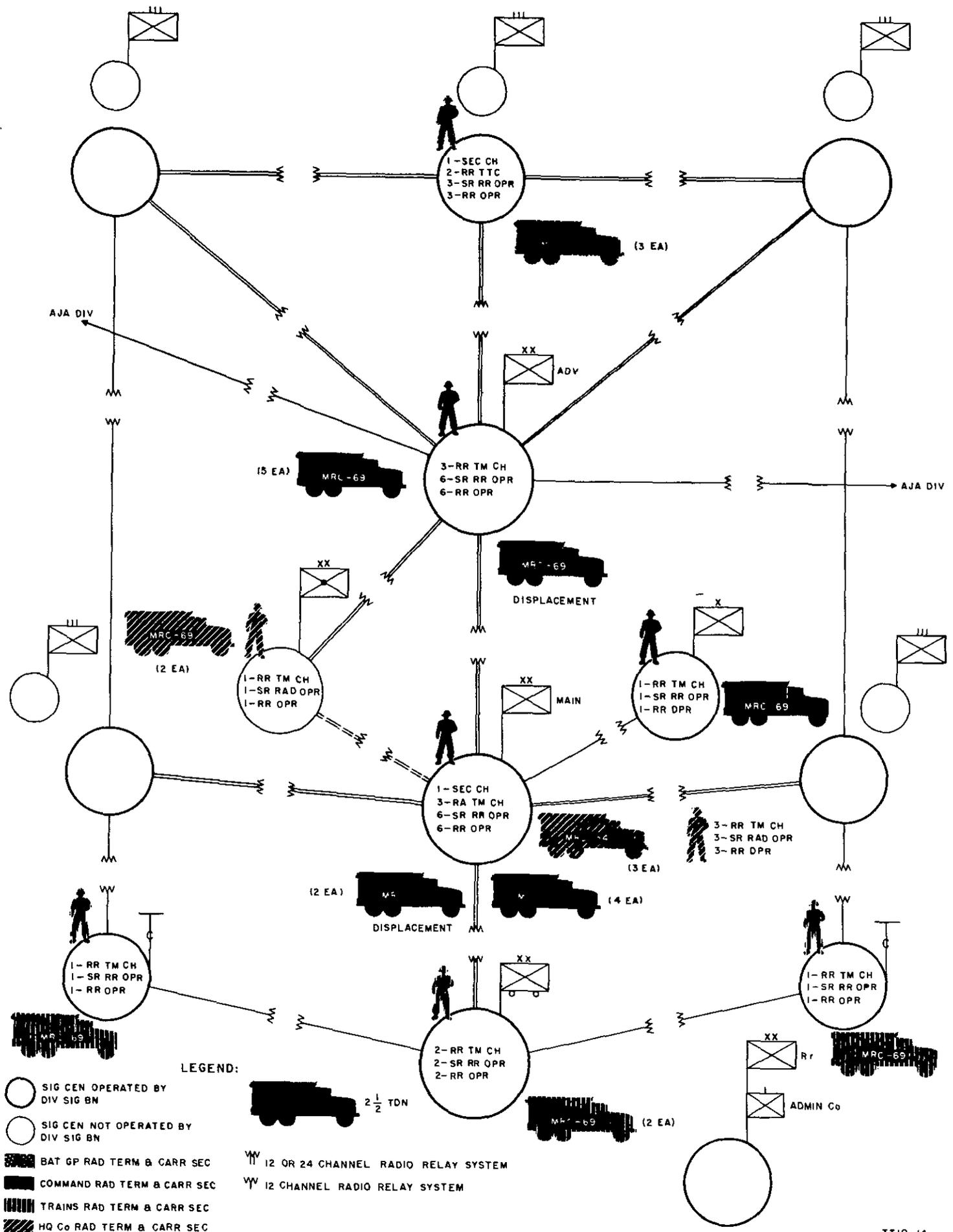


Figure 6. Type employment of radio relay personnel and equipment.

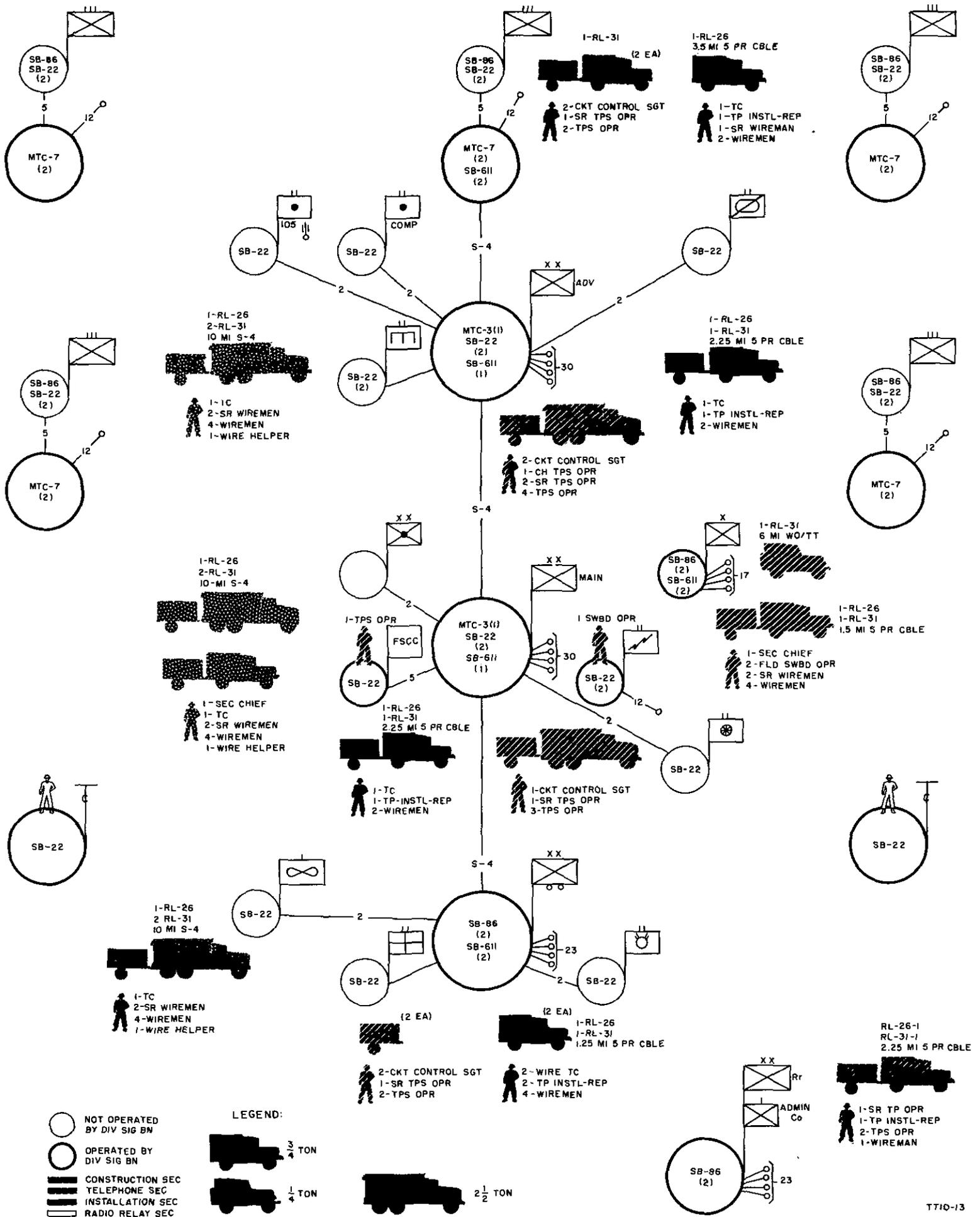
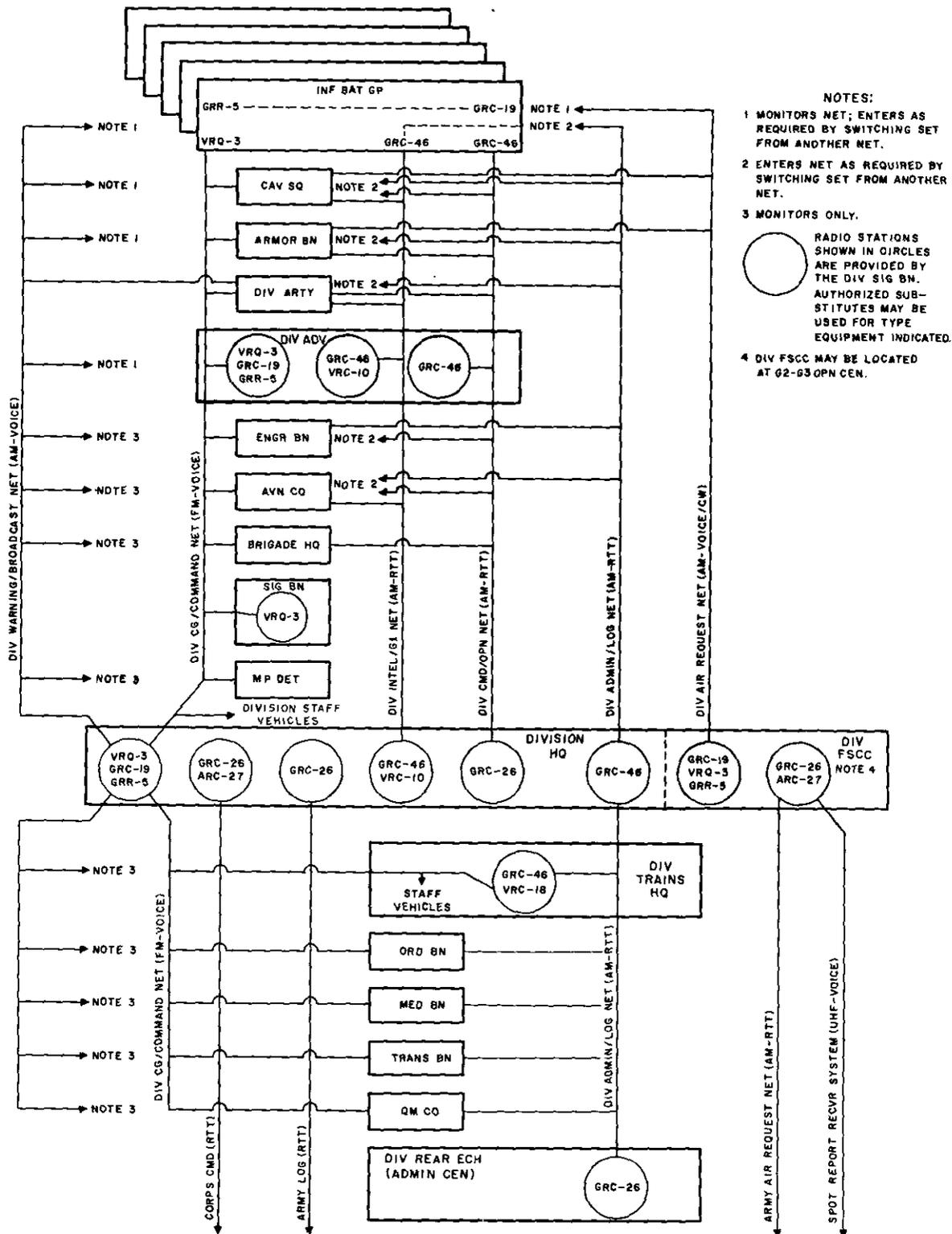


Figure 7. Type employment of wire personnel and equipment.



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Figure 8. Tube radio nets, infantry division.

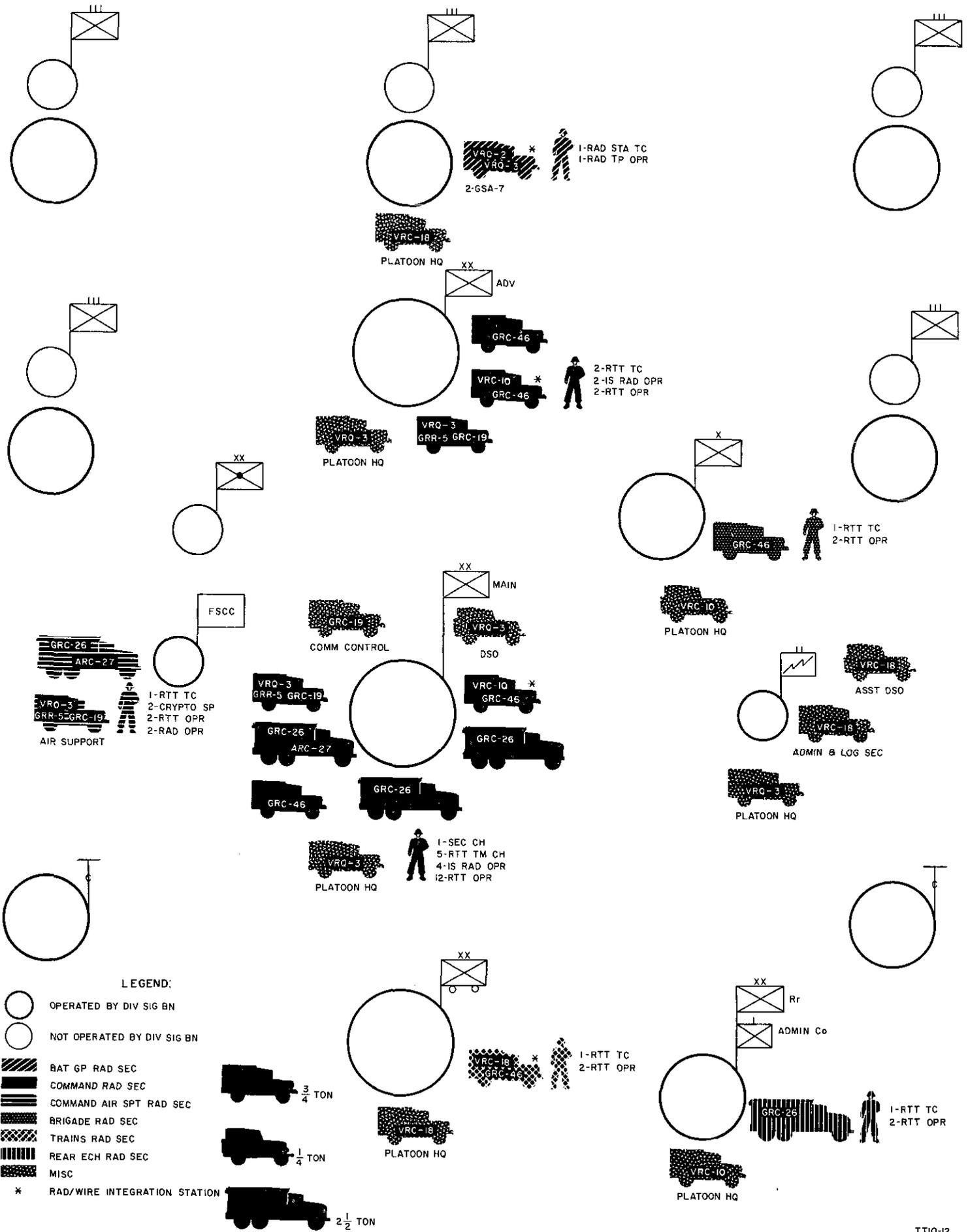


Figure 9. Type employment of radio personnel and equipment.

- (2) *Division CG/command net (FM-voice)*. The division CG/command net is intended primarily for communications between the division commander and staff and the commanders of all immediate subordinate units. The number of radio stations in the net dictates restrictions on its use. While specific employment of the net will be governed by the individual division commanders' desires, it is expected that lateral radio communications between subordinate unit commanders will be established by the calling commander entering the unit FM net of the called commander. The signal battalion operates the NCS in the CG/command net on a 24-hour basis. The battalion is equipped to establish relay stations in the net, either by use of AN/VRQ-3 radio sets provided for the purpose or by use of the radio/wire integration station facilities (par. 20). Airborne relay stations, when required, are established by the division aviation company.
- (3) *Division warning broadcast net (AM-voice)*. The signal battalion operates the NCS in the division warning broadcast net. The net broadcasts air alerts, CBR attack warnings, fall-out warnings, rad-safe data<sup>1</sup>, atomic strike warnings, and similar information of an urgent operational nature which applies to the division as a whole or to major divisional segments, which need not be handled through strict command channels, and for which no immediate receipt or reply is required. The battle group headquarters, the cavalry squadron, and armor battalions have radio sets, normally employed in other nets, that may transmit in the warning broadcast net as required. While use of these stations will be governed by individual division instructions, division artillery headquarters will operate a station in this net to broadcast air alert status and the cavalry squadron will be authorized to broadcast urgent reconnaissance information of interest to elements of the division with whom they are not in direct radio contact. Each battalion and separate company in the division, and subordinate elements of these units in some cases, is equipped with an AN/GRR-5 radio for receiving information broadcast in this net. In addition, a set is provided in each signal center in the division area communication system for receiving warnings from the net for local dissemination. Associated headquarters staffs and installations connected to the centers then are given this information by telephone. The nature

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<sup>1</sup> Data transmitted relative to the amount of radioactivity in a specified area.

of the information broadcast on this net tends to make it a prime target for electronic countermeasures; therefore, adequate safe-guards should be established, to include abbreviated transmissions and limitations on the use of the net.

- (4) *Air request radio nets (AM-voice/CW)*. Radio sets for establishing a separate division air request net are provided in the TOE of the ROCID infantry division. The NCS is operated by the signal battalion and is located with the G3 air at the FSCC. The battle group headquarters, cavalry squadron and armor battalions are also provided radio sets for use in this net. The radio sets used in this net are also used in secondary roles, such as for transmissions in the division warning broadcast net. The signal battalion also operates the division station (which accompanies G3 air) in the army air request net.
- (5) *Army logistics net (AM-RTT)*. The signal battalion is equipped to operate the division terminal in an army logistics net. The radio station provided for this net is designed to handle logistical traffic; however, in a fluid situation it will be employed to support displacement of other radioteletype stations in the division as required.
- (6) *Spot report receiver system (UHF-voice)*. The signal battalion operates a radio station in the spot report receiver system for monitoring Air Force close air support missions flown for the division. The station is mounted in the same vehicle as the division station in the army air request net. A second UHF-voice radio set is provided in the signal battalion primarily as an alternate for the above station. It may be used to monitor Air Force reconnaissance missions flown for the division; however, a separate set is provided in the division headquarters TOE for use by G2 for this purpose. Both of these facilities are frequently supplemented by similar monitoring sets operated by the division air liaison officer. The battle group headquarters, division artillery headquarters, the cavalry squadron and armor battalions are also equipped with UHF-voice radio sets for use in the spot report receiver system.

## 20. Radio/Wire Integration Stations

a. An FM-voice radio/wire integration station is operated at each signal center (except the rear echelon) (fig. 15, 16, and 21) to connect mobile FM radio stations into the division area communi-

cation system (fig. 2) on a push-to-talk basis. The system of integration stations is used to establish communications between mobile FM radio stations and elements connected to the area system by telephone. The stations are also used in lieu of FM radio relay stations to establish communications between FM radio stations operating beyond direct FM range. The system of stations is supplemented by similar facilities within some of the division combat units operating on unit net frequencies. Since the Remote Control Sets AN/GSA-7 associated with the radio/wire integration system are not technically capable of being operated directly into the SB-86/P switchboard, it will be necessary to provide SB-22/PT switchboards between the radio/wire integration station and the SB-86/P installation. This can be accomplished either by using the SB-22/PT normally associated with the teletypewriter centrals at the main and advance echelons or by installing an SB-22/PT in each radio/wire integration vehicle. The latter solution is considered more feasible, since the radio operator can monitor the circuit and perform the necessary push-to-talk switching, whereas the former solution would require a teletypewriter operator from the teletypewriter central to monitor the circuit on a full-time basis when in use.

b. The operation of the radio/wire integration system concerns not only signal personnel employed in the division area communication system, but also a large number of other FM radio users throughout the entire division. To accomplish a link-up through the integration system, standard procedures for radio operators, integration station operators, switchboard operators, and users should be set forth in the SSI prepared by the DSO's section. Special frequencies for use in the integration system should be listed in the division SOI.

c. The radio/wire integration system may be used:

- (1) By the commanding general, division staff, and other designated key personnel in the division, when operating from a mobile CP, to contact division elements connected to the division area communication system (fig. 10).
- (2) For initial establishment of telephone service from the division area communication system to using units until wire links can be installed.
- (3) For voice communication between mobile combat elements in the division forward area and supporting division logistic elements in the rear area.
- (4) For communication between low-flying army aircraft operating in distant parts of the division area and airstrips or flight control elements connected to the division area

communication system when direct FM contact cannot be maintained.

- (5) For communication between forward air controllers (equipped with Radio Sets AN/VRC-30) and the air liaison officer's communications facilities (normally at the division FSCC) when connected into the division area communication system.
- (6) During displacement of CP's, to keep commanders and staffs in contact with subordinate and higher headquarters as required.

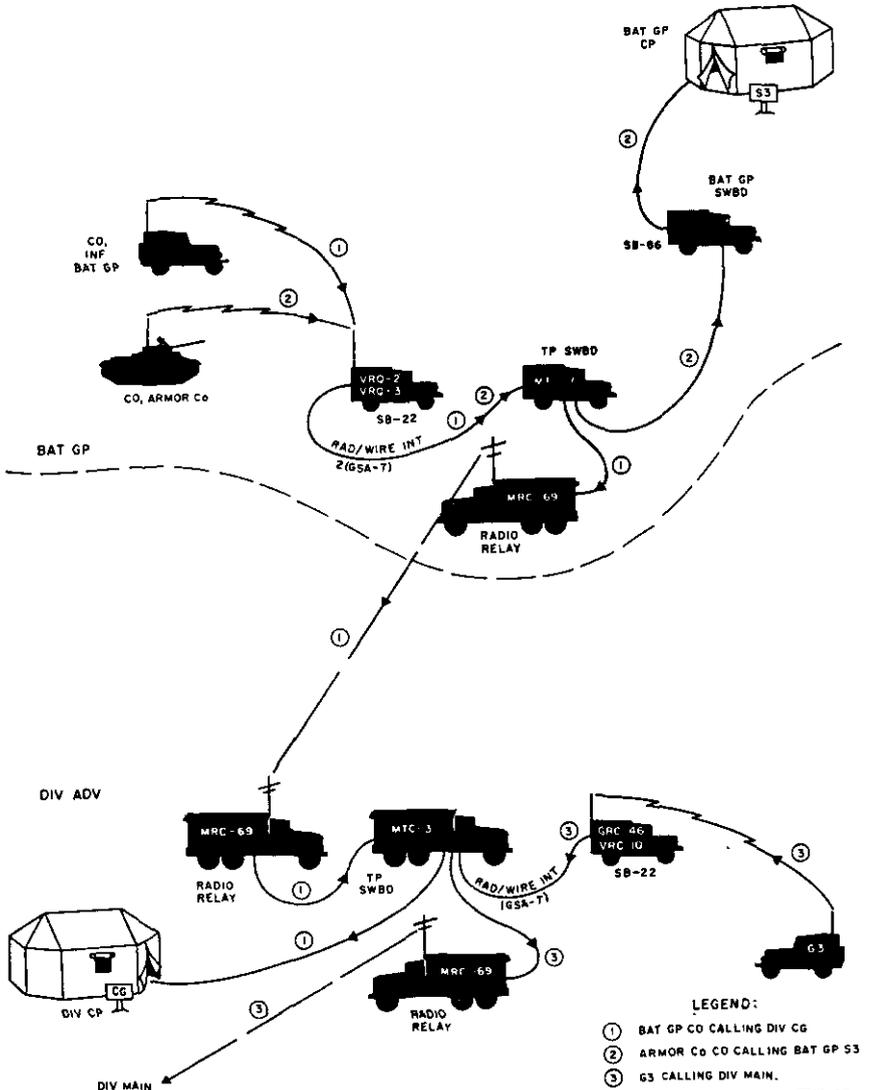


Figure 10. Type utilization of radio/wire integration system.

- (7) For connecting two switchboards and for spanning a break in a wire line between units.
- (8) During river crossings.

#### Section IV. PHOTOGRAPHIC AND SIGNAL SUPPLY AND MAINTENANCE SUPPORT

##### 21. Photography

Division photographic services are provided by the photographic section of headquarters and headquarters company. These services include still and motion picture black and white photography (except air photography) for the division and air and ground still photographic laboratory service for all divisional units.

*a.* The photographic section has the primary mission of performing tactical ground photography. It is expected that the photographers in the division administration company at the rear echelon will perform the major part of divisional public and troop information and operational record coverage. Photography from aircraft may be performed on request by the photographic section, using ground-type cameras when air-type cameras are not essential or available.

*b.* Two mobile photographic laboratories are provided for the processing of still pictures. These laboratories will be employed to process coverage by photographers of the photographic section, coverage by the photographers in the administration company, air-photographic coverage by the division aviation company, and coverage by other photographers operating in the division area. One of these laboratories will be located at a designated division airstrip and the other will usually be located at the signal battalion headquarters.

*c.* The photographic section is equipped to record but not process motion pictures. The latter service is normally performed for the division by Army. The section is not equipped to process Air Force air photography for the division.

*d.* Color photography may be performed by the photographic section when materials are available. Exposed color film will be sent to the nearest color-processing facility.

##### 22. Signal Supply and Maintenance

Division signal supply and maintenance support is provided by the signal supply and maintenance section of headquarters and headquarters company and the forward repair sections of the forward communications company.

a. The division signal supply and maintenance section performs supplemental organizational signal maintenance for the battalion and signal supply and field maintenance of signal equipment for the division.

- (1) Maintenance is performed through the operation of four mobile repair shops: one for general signal equipment, including telephone, photographic, teletypewriter, and cryptographic; one for radio and radar equipment; one for radio avionic equipment; and one for radio, radio relay, and carrier equipment.
- (2) Maintenance may be performed either on-site by direct exchange, or by repair and return to user. Signal equipment which cannot be conveniently moved, such as radar, radio relay and carrier, larger radio sets, or telephone switchboards, will normally be repaired on-site. Smaller items of wire and radio equipment will be repaired by direct exchange of end items or major components, with subsequent repair and return to stock. In combat, maintenance normally will not be performed on a repair and return to user basis unless other methods cannot be followed.
- (3) Normally, the radio repair element will work in close coordination with the division ordnance battalion to inspect and repair, if necessary, radio sets on vehicles returned for maintenance. The supply element will normally work in close coordination with the division quartermaster company to take advantage of the daily ration and supply runs for the routine delivery of wire, batteries, and other items of supply and repair equipment.

b. The forward repair sections performed organizational and limited field maintenance of signal equipment for the platoons, and field signal maintenance for other elements of the division. Each section is equipped with a mobile shop van to provide limited field signal maintenance for units in the division forward area. The vans are equipped to provide general maintenance support and will perform it normally by direct exchange of the defective component. As far as possible, maintenance is performed *on call* in the supported unit's area. Physical repair of defective components is performed only in emergencies. Defective components are normally returned to the rear area for repair and return to stock. In addition to the organic maintenance personnel, all operators and supervisors should be trained to perform and/or supervise first echelon maintenance, and certain personnel should be trained to perform and/or supervise second echelon maintenance.

## CHAPTER 3

### SIGNAL BATTALION ORGANIZATION AND OPERATING TECHNIQUES

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#### Section I. HEADQUARTERS AND HEADQUARTERS COMPANY

#### 23. General

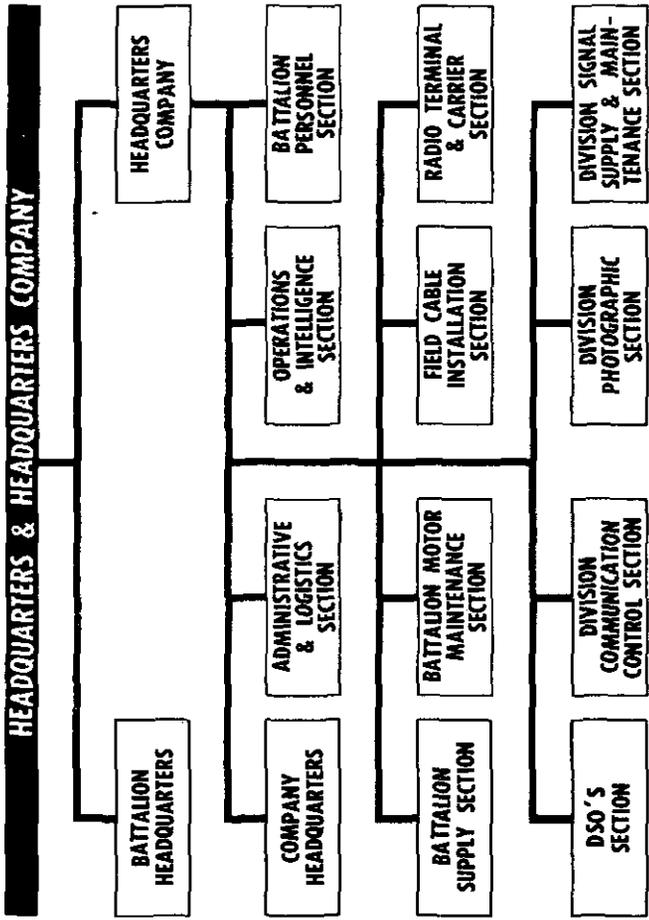
Headquarters and headquarters company (fig. 11) directs and coordinates the operations and training of the signal battalion, and provides the facilities with which the battalion commander exercises control of the battalion. The company also:

- a. Provides consolidated personnel administration, and supplemental supply and maintenance support for the battalion.
- b. Performs field cable and supplemental field wire construction, and provides augmentation equipment for radio relay terminal and repeater stations and telephone carrier terminals for the battalion.
- c. Performs photography (except air photography) for the division, and performs photographic still picture laboratory service.
- d. Provides signal supply and field maintenance of signal equipment for the division.

#### 24. Method of Operation

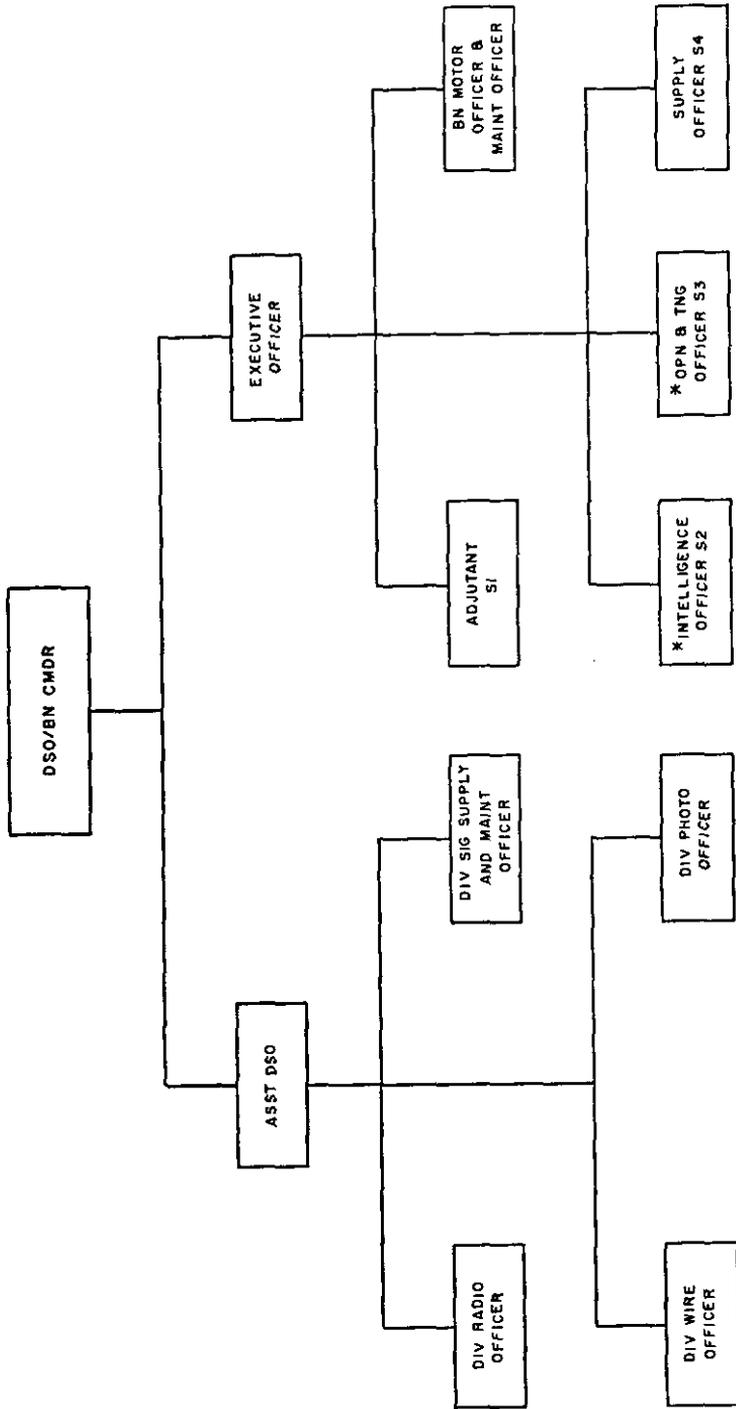
a. The DSO's office usually is located at the main echelon of division headquarters (normally near G2-G3 operations). The DSO, however, will operate at the same echelon of division headquarters at which the division commander is located. Battalion headquarters and headquarters and service company usually operate in one echelon, at the most suitable place in the division area to perform their mission. This location will be governed by the need for accessibility to the DSO, to the operating companies of the battalion, and to the other divisional elements supported. It is expected that the major elements of the company will usually be located near but not at the main echelon of division headquarters.

b. The assistant division signal officer (ADSO) and the radio and wire officers in the DSO's section provide the immediate staff for the DSO. In addition, the battalion S3, S2/assistant S3, and the officers in the division photographic section and the division signal supply and maintenance section are employed also by the



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Figure 11. Organization of headquarters, headquarters and service company.



\* MAY ALSO BE EMPLOYED ON THE DIVISION SIGNAL OFFICER'S STAFF

Figure 12. Staff organization of DSO/battalion commander's office.

division signal officer as division signal operations officer, signal security officer, photographic officer, and signal supply and maintenance officer, respectively (fig. 12).

c. The battalion executive, the battalion headquarters staff, the administrative and logistics section, and the operations and intelligence section provide the staff and facilities for the battalion commander for direction and coordination of battalion operations.

d. It is expected that the battalion officer next junior to the battalion commander/DSO will normally be assigned as battalion executive, and will be designated to succeed the DSO in the event the latter is incapacitated. As far as is permitted by regulation, the battalion executive will act for the battalion commander/DSO on all battalion matters, to assure the latter maximum freedom to devote attention to his responsibilities as DSO.

## 25. Battalion Headquarters

Battalion headquarters contains the officer staff that controls and supervises the employment and operation of equipment and personnel of the companies organic to the signal battalion. The assisting staff and staff facilities are contained in the administrative and logistics section, operations and intelligence section, and the battalion personnel section.

## 26. Headquarters Company

(fig. 11)

a. *Company headquarters* directs and coordinates the administrative and logistical support for the company, battalion headquarters, and the division signal office. Company headquarters will provide the messing facilities for signal personnel at the division main CP area (fig. 13). Since this will be the largest signal battalion messing facility in the division, additional mess personnel may be required. If augmentation is necessary, mess personnel from the command operations company may be reallocated to provide the support required.

b. The *administrative and logistics section* provides the enlisted personnel and equipment for the battalion commander/DSO, S1/adjutant, battalion S4, and the battalion motor officer.

c. The *operations and intelligence section* provides the enlisted personnel and equipment for the battalion S3 and S2/assistant S3. It also supports these officers when they are operating as a part of the DSO's staff.

d. The *battalion personnel section* provides consolidated personnel administration for the battalion, under supervision of the S1/ad-

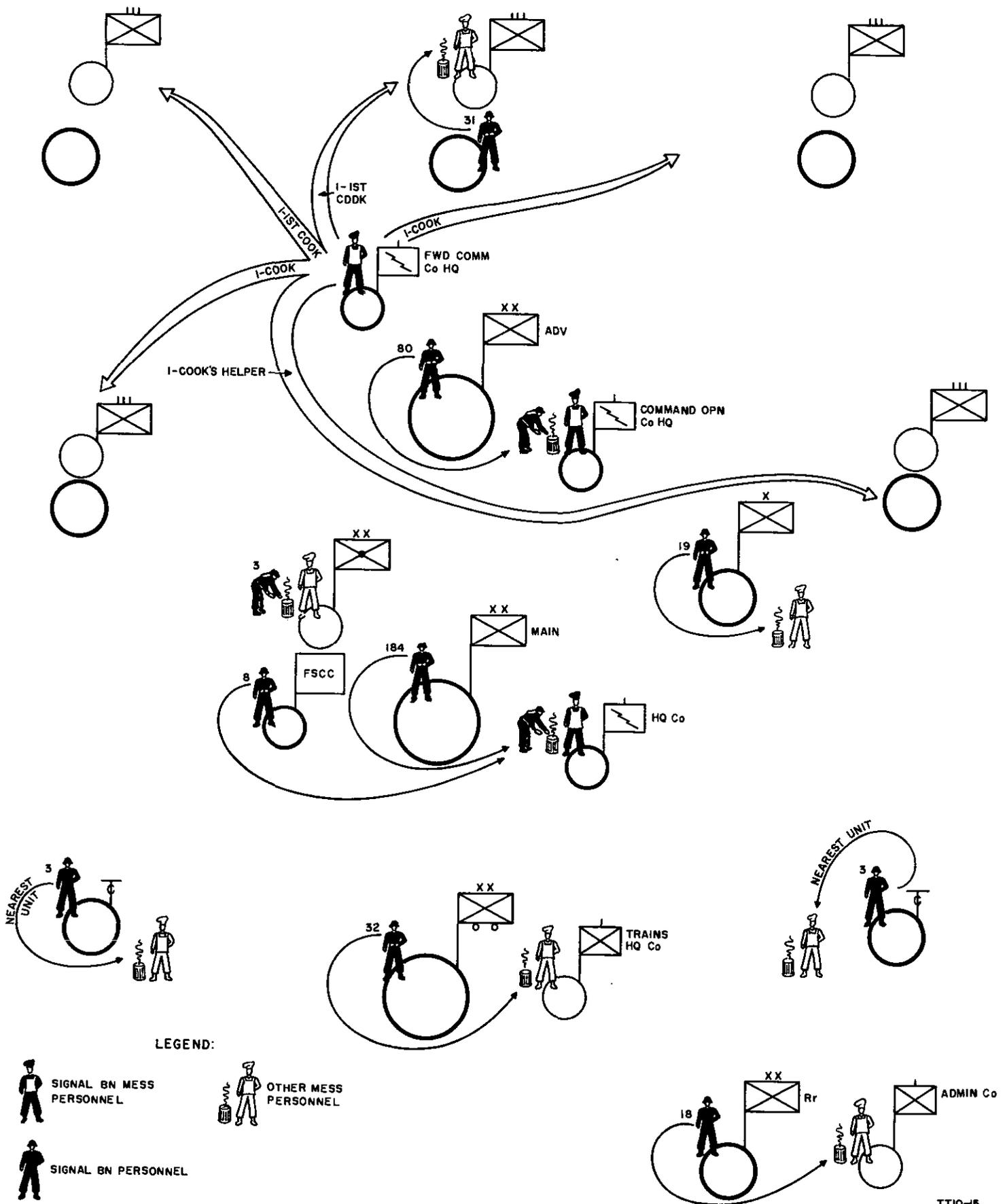


Figure 13. Type utilization of signal battalion mess personnel.

jutant. All personnel records and reports required by higher headquarters are maintained or prepared in the section. Information upon which these records and reports are based is obtained from the companies, but on an informal or abbreviated basis only. The section is normally located, with personnel sections from all other division units, in the division administrative center at the division rear echelon.

e. The *battalion supply section* provides supply support (except repair spare parts) for all elements of the battalion. The section operates under the supervision of the battalion S4. It prepares requisitions and supply reports, and receives, processes, stores, and delivers supplies as required. The section is organized on the basis that a minimum of supplies will be held in the battalion, and that rations, water, wire, and cable may be delivered directly to using company elements. The organization of the section has also taken into account that all company elements will be refueled directly by mobile filling stations operated by the division quartermaster company. It is expected that the battalion supply section can be employed for one supply round trip per day to requiring battalion elements.

f. The *battalion motor maintenance section* operates under the supervision of the battalion motor officer. It provides motor maintenance for headquarters and headquarters company, and armament maintenance and supplemental second echelon motor maintenance for the operating companies of the battalion. It also provides the ordnance and engine generator repair parts for the battalion. Battalion motor maintenance is performed on-site insofar as practicable. Tool sets, a wrecker, and a maintenance shelter (not available at company level) are provided for establishing a repair facility to take care of heavier unit motor maintenance. The generator maintenance capability in the section supplements the limited capability of company vehicle mechanics for maintenance of the prime-mover components of engine generators. The maintenance section clerical personnel will prepare requisitions for repair parts and maintain organizational maintenance records and files.

g. The *field cable installation section* installs, maintains, and recovers carrier field cable (CX-1065/G) in the division area, and assists the operating companies of the battalion, as required, in the installation and recovery of field wire and multiconductor cable. The installation section is organized to operate in three 8-man teams, under supervision of the battalion S3. It is expected that the section will be employed as needed to assist the wire teams of the battalion operating companies with initial installation. Conversely, it is ex-

pected that the field wire teams of the operating companies may also lay and recover field carrier cable. When wire cable installation is beyond the capabilities of the battalion wire teams, assistance may be requested from corps/army units, which are organized to provide the necessary augmentation.

- (1) After initial signal center installations have been completed, the 8-man installation teams will install CX-1065/G cable between the main CP and advance CP and between the trains area and the main CP if the situation permits (fig. 7). These lines will be used as emergency back-up in the event electronic countermeasures preclude the use of radio relay.
- (2) If the time and the situation permit, additional cable installation from the advance CP to the forward battle groups and division artillery headquarters is highly desirable and will be used as back-up and to provide more secure means of communication. In establishing priorities for cable installation, consideration will be given to the back-up of those radio relay circuits oriented toward enemy-held territory. This cable back-up will serve as a counter countermeasure.
- (3) Although the initial installation of signal centers is the responsibility of the platoons which will operate them, there will be times when these platoons will require additional support from the field cable installation section. To insure efficient utilization of the installation section, the DSO must closely coordinate the efforts of the section and establish signal center installation priorities. Predetermined priorities are essential to enable the teams of the installation section to move from job to job with a minimum of delay, supervision, and duplication of effort. A probable signal center priority is as follows:
  - (a) On-line battle groups.
  - (b) Division advance CP.
  - (c) Division main CP.

*h.* The *radio terminal and carrier section* operates under the supervision of the battalion S3. It provides a pool of radio relay repeater and terminal stations and telephone carrier terminals for use in the division area as required to supplement capabilities organic to battalion operating companies. Although a total of five radio relay terminal and repeater stations (two MRC-69's and three MRC-54's) and four separate carrier terminal equipments (AN/TCC-7) have been included in the TOE, personnel have been provided for opera-

tion of only four stations simultaneously (3 men per station). It is estimated that the need for additional stations will seldom exceed four at any one time and that a greater capacity may be achieved by reduced manning, by reinforcement from the operating companies to which attached, or by co-location of two or more stations which, once installed, can be operated by a single crew. Station teams from the section, when deployed, are normally attached to the company with which they operate. If the stations are radio repeater stations, the teams will normally be attached to the company operating the control station in the link.

*i.* The *division signal officers' section* provides the officer and enlisted staff and equipment for the DSO and ADSO and their office. Refer to paragraph 24 for details concerning operations of the section.

*j.* The *division communication control section* operates under the control of the DSO. Refer to paragraph 13 for section operations.

*k.* The *division photographic section* operates under the direction of the DSO. Refer to paragraph 21 for section operations.

*l.* The *division signal supply and maintenance section* operates under the control of the division signal supply and maintenance officer. Refer to paragraph 22*a* for section operations.

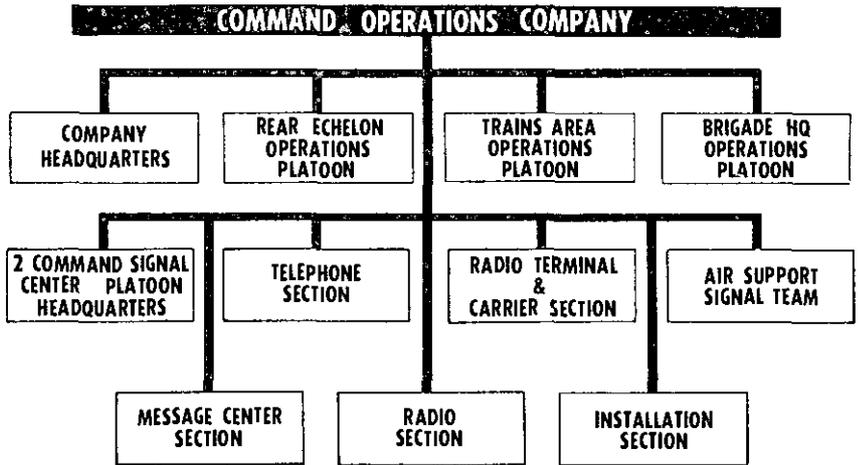
## Section II. COMMAND OPERATIONS COMPANY

### 27. General

The command operations company (fig. 14) establishes and operates an assigned portion of the division area communication system. It provides signal communications at the echelons of division headquarters, the brigade headquarters, the division trains headquarters, the division administrative center, and the division G2-G3 operations center. It also provides signal communications, excluding internal radio nets, for the division headquarters company, division trains headquarters company, and the administration company. Area signal center service is provided to those units located in the vicinity of the above elements.

*a.* The company establishes and operates facilities to connect division artillery headquarters into the division area communication system (fig. 2).

*b.* It provides and operates division net control stations (NC's), and other stations in higher echelon radio nets as required, to include division and army air request nets and the division warning net. The company also operates the division area ground messenger service (fig. 5).



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Figure 14. Organization of command operations company.

## 28. Company Headquarters

Company headquarters provides command control and coordination of company operations. It also provides mess facilities and second echelon motor maintenance. To perform these functions, company headquarters is normally located at a major echelon of division headquarters.

a. Mess personnel of company headquarters will normally establish and operate mess facilities at the division advance echelon (fig. 13). They may also be required to provide mess support for other elements of the battalion. Through prior arrangement between commanders and mess personnel of signal units and other divisional elements, personnel of the command operations company may be provided mess support by the major unit to which they are attached.

b. Supply support for the company is provided by the battalion supply section. This section maintains all battalion supply records, prepares requisitions based on company needs, and normally delivers required supplies on a routine basis. Although the battalion is equipped to deliver class III (POL) supplies to the company, the company elements will normally make joint use of the refueling capability in the division headquarters and headquarters company area. Elements of the command operations company may obtain direct delivery of rations, water, wire, and cable from designated supply points.

c. Second and third echelon electronic maintenance support is provided by the signal supply and maintenance section in headquarters company.

d. The battalion motor maintenance section provides armament maintenance and supplemental second echelon motor maintenance support for the command operations company. It also furnishes the ordnance and engine generator parts for the company, and supplements company maintenance for the prime-mover component of engine generators.

e. Administrative and logistical reports will be consolidated and forwarded, on a brief and informal basis, to the battalion headquarters for preparation and forwarding to higher headquarters.

## 29. Command Signal Center Platoon (fig. 14)

The two command signal center platoon headquarters and teams from the separate sections are organized into functional groups as needed to establish and operate signal centers at the division headquarters main echelon (fig. 15) and at the division headquarters advance echelon (fig. 16). Designated signal centers provide and operate facilities to connect division artillery and brigade headquarters into the division area communication system.

a. *Platoon Headquarters.* Two command signal center platoon headquarters are employed as the supervisory element for the signal centers established by the company at the division main and advance echelons. Each platoon leader operates a Radio Set AN/VRQ-3 in the signal battalion internal radio net (fig. 3). This radio may also be used as a relay station in the division CG/command net as required.

b. *Message Center Section.* The message center section provides communication center facilities, including message center, cryptographic, and teletypewriter service, on a 24-hour basis, for the division headquarters main and advance echelons, and supplements the organic capability of units located in the vicinity of these echelons. The section is equipped and manned to operate two mobile centers. Each center consists of a mobile teletypewriter and cryptographic operation group and an S-56/G shelter for use as a combined message center and facsimile terminal room. However, the facsimile equipment authorized the battalion is sufficient only for operation at the division main signal center (par. 16d). Two CP tents are provided to expand communication center operations and to facilitate displacement.

- (1) The signal center operated by this section will normally be the only location in the division that will use cryptographic systems requiring operators with cryptographic clearances.

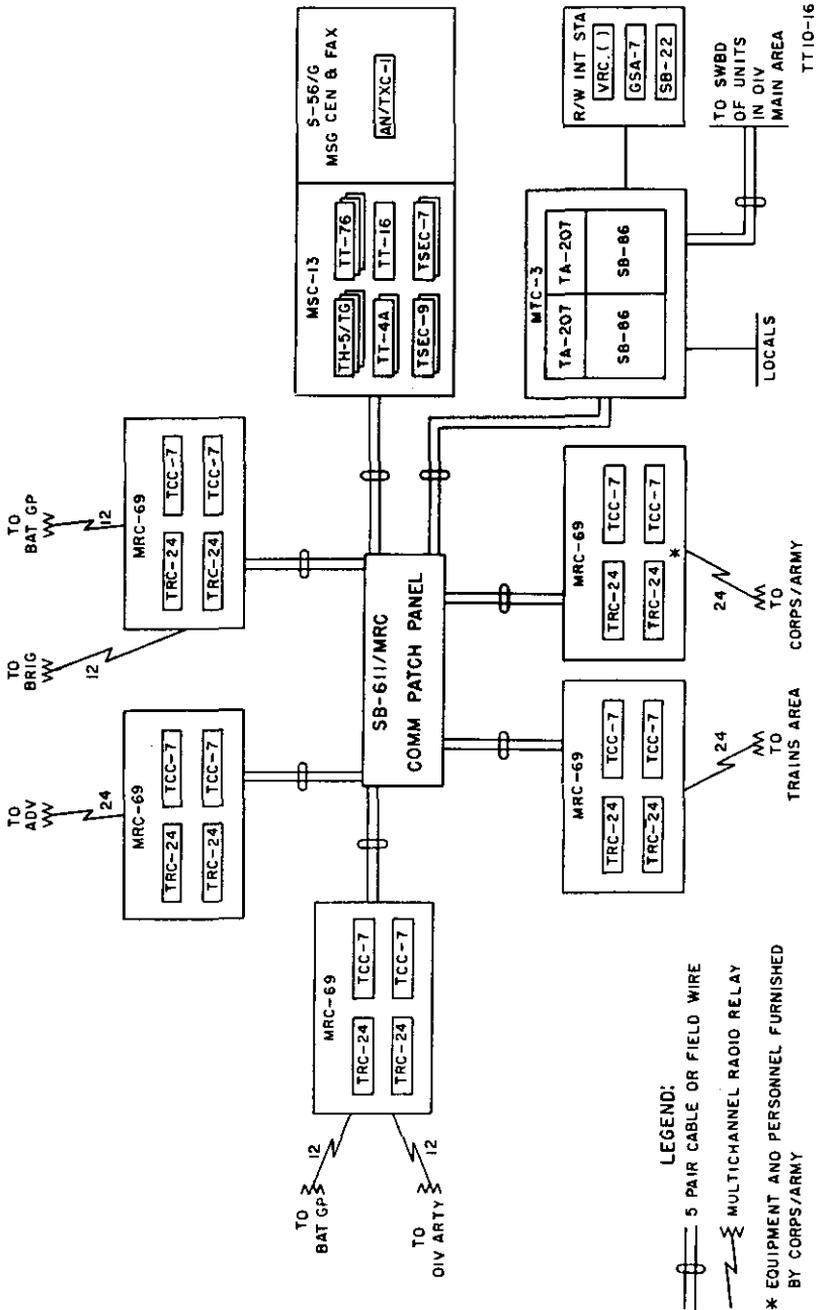
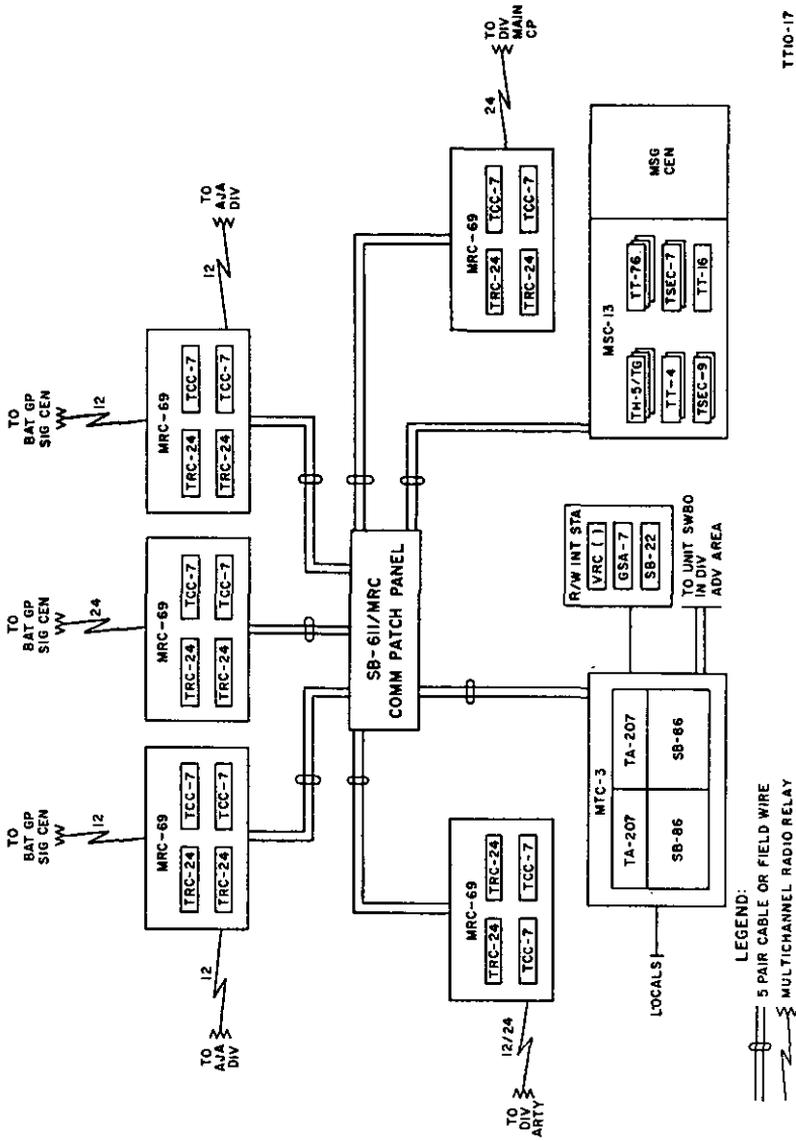


Figure 15. Division main signal center, block diagram.



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Figure 16. Division advance signal center, block diagram.

- (2) The division area ground messenger service is operated by the message center section (fig. 5). To perform this mission, the section is authorized five  $\frac{1}{4}$ -ton trucks and 12 motor messengers. Normally, the messengers will operate in pairs (one as driver and one as guard) on all motor messenger runs, particularly on those routes forward of division headquarters. If the tactical situation dictates, the messenger capability may be expanded by providing guards and vehicles from other sources.
- (3) Air messenger service may be obtained from the aviation company upon request.

*c. Telephone Section.* This section operates the telephone central offices at the division headquarters main and advance echelons. It is capable of operating two mobile, two-positions switchboards (AN/MTC-3) simultaneously on a 24-hour basis. Portable switchboards (SB-22/PT) are authorized for alternate operation as required. Normally, the two-position switchboards will be located the division main echelon; one in use and one for displacement. The SB-22/PT switchboards will be located at a forward echelon. When circumstances require operation of both two-position switchboards simultaneously, displacement may be accomplished either by use of the SB-22/PT switchboards or by use of the displacement switchboards authorized in other elements of the signal battalion. The telephone section also performs the circuit control function in the signal centers at which located, to include patching and termination of trunk lines, circuit testing, and direction of circuit testing and maintenance. To carry out this mission, the telephone section is authorized three circuit control operators and two trailer-mounted communications patching panels (SB-611/MRC).

*d. Radio Section.* The radio section operates the NCS's in division headquarters radio nets and subordinate stations at the echelons of division headquarters (other than rear) (fig. 8). It also operates the radio/wire integration stations at the main and advance echelons of division headquarters. The section is manned and equipped to operate the following sets simultaneously on a 24-hour basis:

- (1) AN/GRC-26 radioteletype stations (one equipped with the AN/ARC-27).
- (2) AN/GRC-46 radioteletype stations (two equipped with Radio Sets AN/VRC-10).
- (3) AN/GRC-19 radio sets (both equipped with one AN/VRQ-3 and one AN/GRR-5 radio set).

*e. Radio Terminal and Carrier Section.* The radio terminal and carrier section installs and operates the terminals of the radio relay

system and associated carrier equipment at division headquarters main and advance echelons, and the terminals of a link connecting division artillery and brigade headquarters, when established, into the division area communication system. The section is capable of operating radio terminal sets (AN/MRC-69) with associated carrier terminal equipment (AN/TCC-7) and (AN/TCC-3). Typical employment of these terminal facilities is indicated in figure 6. Personnel allocation to this section is based on the concept of co-location of terminals which will permit some reduction over the standard 3-man-per-station criteria for 24-hour operation.

*f. Installation Section.* The installation section installs interconnecting cable between signal center components, wire and cable in division echelon CP areas, and wire locals to other units in the vicinity of division echelon signal centers.

- (1) The section is organized and equipped to make up two 4-man field wire teams, each equipped with a  $\frac{3}{4}$ -ton truck and Reel Units RL-26 and RL-31. Each team carries a small basic load of wire and cable in the  $\frac{3}{4}$ -ton trailer provided.
- (2) During the period of installing interconnecting cable between signal center components, the teams of the installation section will require assistance from personnel in other sections of the company. Installation teams from headquarters and headquarters company, augmented if necessary from other elements of the battalion, will be required to assist the installation teams in situations beyond their capabilities.

*g. Air Support Signal Team.* The air support signal team provides communications at the division artillery FSCC. It installs and operates the telephone switchboard (SB-22/PT) at the G2-G3 operations center, provides message center and cryptographic facilities, operates an AN/GRC-19 radio NCS in the division air request net, and operates an AN/GRC-26 radio station in the army air request net. It also operates a UHF receiver in the spot report receiver system for monitoring UHF-equipped tactical air support aircraft operating in the division area. This radio equipment accompanies the G3 air to the division artillery FSCC.

### 30. Rear Echelon Operations Platoon

The rear echelon operations platoon (fig. 17) establishes and operates a signal center at the division rear echelon. It provides communications for that echelon, the administration company, and the administrative center. Radio relay and carrier facilities are not

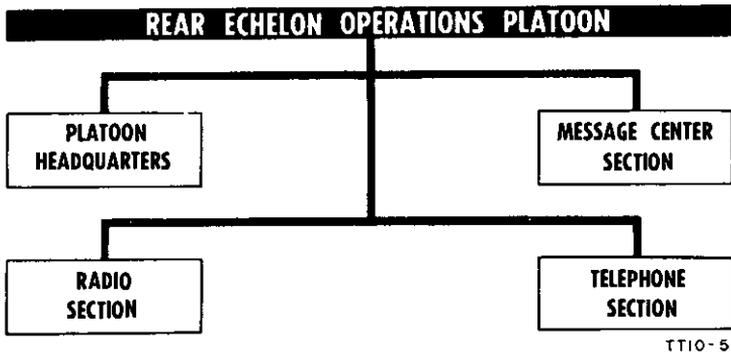


Figure 17. Organization of rear echelon operations platoon.

provided in the platoon. Field wire or field cable is considered adequate for connection to the nearest army area signal center (or a division signal center if the rear echelon is located in the division area) by the signal center to which connected.

a. *Platoon Headquarters.* Platoon headquarters provides command control and coordination of platoon operations. The platoon leader serves as signal officer for the division rear echelon, administrative center, and administration company.

b. *Message Center Section.* The message center section provides communication center facilities, including message center, cryptographic, teletypewriter, and limited motor messenger service, on a 24-hour basis, for the division rear echelon. It also operates the rear echelon signal center radio receiver station in the division, corps, or army warning net. The message center section is designed to operate in one echelon only.

c. *Telephone Section.* The telephone section is organized to install the telephone system and to install and operate a single-position Manual Telephone Switchboard SB-86/P on a 24-hour basis for the division rear echelon, administrative center, and the administration company. The section is equipped with a second switchboard (SB-86/P) for use during periods of overload or for displacement. Normally, the division rear echelon will locate in the corps/army area. When so located, the telephone switchboard will be connected into the nearest area signal center operated by higher headquarters. One or more trunks usually will be patched through the army and division area communication system to the switchboard in the division headquarters or trains area signal center.

d. *Radio Section.* The radio section operates a radioteletype set (AN/GRC-26) in the division administrative net. The AN/GRC-26 is provided in lieu of a less powerful set due to the distances frequently encountered between the division rear and main echelons.

### 31. Trains Area Operations Platoon

The trains area operation platoon (fig. 18) establishes and operates a signal center at the division trains headquarters. It provides communications for that headquarters and the trains headquarters company.

a. *Platoon Headquarters.* Platoon headquarters provides command control and coordination of platoon operations. The platoon leader serves as signal officer for the trains headquarters and for units served by the platoon.

b. *Message Center Section.* The message center section provides communication center facilities, including message center, cryptographic, teletypewriter, and limited local area messenger service on a 24-hour basis for the division trains headquarters and for units in the division trains area (supplementary to the organic capabilities of these units). The section operates the trains area signal center radio receiver station in the division warning net. The section is manned and equipped to operate in one echelon only.

c. *Telephone Section.* The telephone section operates a single-position manual telephone switchboard in the trains area signal center. The switchboard provides telephone service for trains headquarters and for units in the division trains area. It also provides trunk-switching service in the division area communication system. A second switchboard (SB-86/P) is authorized for displacement and utility purposes. The section performs the circuit control function in the trains area signal center, to include patching and termination of trunk lines, circuit testing, and direction of circuit testing

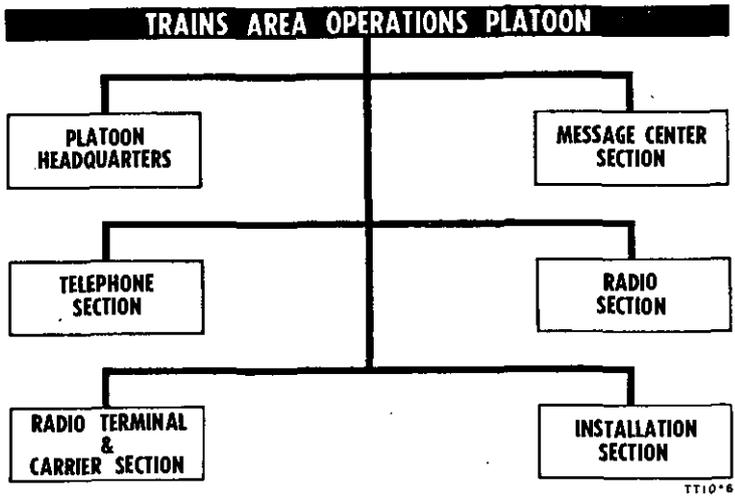


Figure 18. Organization of trains area operations platoon.

and maintenance. To carry out this mission, the telephone section is authorized communications patching panels (SB-611/MRC) and circuit control operators. During operations, one panel is normally in use; the second being used during displacement.

*d. Radio Section.* The radio section operates a radioteletype set (AN/GRC-46) in the division administrative and logistics net. It also operates the trains area signal center radio/wire integration station and FM station either in the trains net or division CG/command net as required (fig. 8).

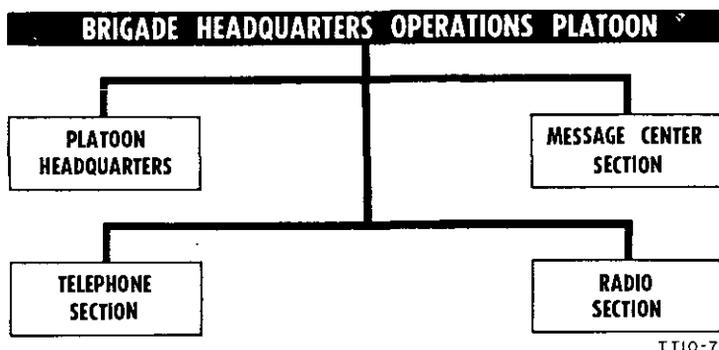
*e. Radio Terminal and Carrier Section.* The radio terminal and carrier section installs and operates the trains area signal center terminals of the radio relay system and associated carrier equipment in the division area communication system. The section is manned and equipped to operate radio terminal sets (AN/MRC-69) (fig. 6). Two sets are employed at the trains area signal center and one set is employed at each of the two lateral switching points in the area system.

*f. Installation Section.* The installation section consists of two 4-man wire installation teams. The teams install and maintain the wire system for trains headquarters, and the field wire links from the trains area signal center to units in the area. Each team is equipped with a  $\frac{3}{4}$ -ton truck and Reel Units RL-26 and RL-31. A  $\frac{3}{4}$ -ton trailer is also provided each team for transporting a small basic load of field wire and cable.

## 32. Brigade Headquarters Operations Platoon

The brigade headquarters operations platoon (fig. 19) establishes and operates a signal center at brigade headquarters.

*a. Platoon Headquarters.* Platoon headquarters provides command control and coordination of platoon operations. The platoon leader



TTIO-7

Figure 19. Organization of brigade headquarters operations platoon.

functions as signal officer for brigade headquarters and for units in the area served by the platoon.

*b. Message Center Section.* The message center section provides communication center facilities, including message center, cryptographic, teletypewriter, and limited local area messenger service, on a 24-hour basis, for brigade headquarters and for units in the area. This service is supplemental to the organic capabilities in these units. The section operates the brigade signal center radio receiver station in the division warning net. The message center section operates in one echelon only.

*c. Radio Section.* The radio section operates a radioteletype set (AN/GRC-46) in the division command/operations net (fig. 8).

*d. Telephone Section.* The telephone section operates a single-position manual telephone switchboard (SB-86/P), on a 24-hour basis, for brigade headquarters. A second switchboard (SB-86/P) is provided for use during displacement. The section contains two 3-man wire teams equipped with a  $\frac{3}{4}$ -ton truck, a  $\frac{1}{4}$ -ton truck, and Reel Units RL-26 and RL-31. The two teams install and maintain the telephone wire system for brigade headquarters. They also install and maintain field wire trunks from brigade headquarters to other units in the area and, when augmented by other signal battalion wire teams, to subordinate commands as required.

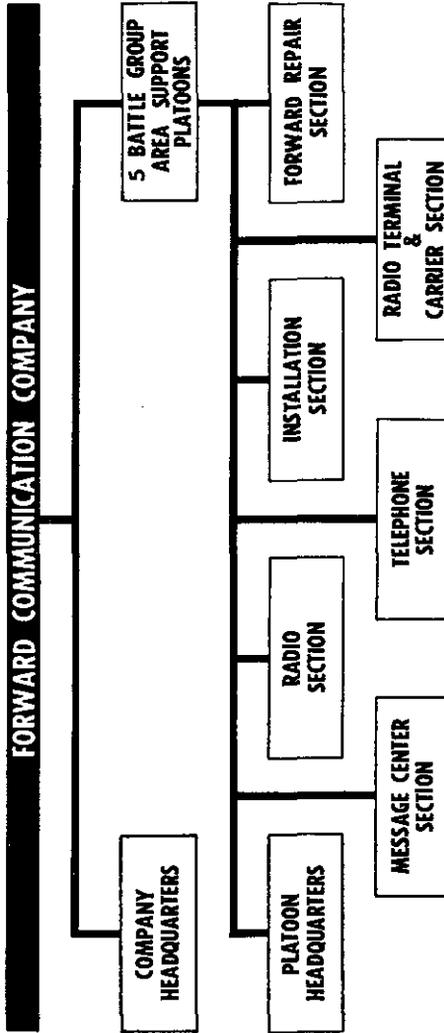
## Section III. FORWARD COMMUNICATIONS COMPANY

### 33. General

The forward communications company (fig. 20) provides area signal center service for units in the division forward area supplemental to organic capabilities, to include the installation and maintenance of connecting cable/wire lines. It establishes and operates communication facilities to connect battle group headquarters and supporting units into the area communication system. The company also provides terminal, patching, and switching facilities for wire and radio relay trunk circuits, and provides radio/wire integration facilities for the battle group and units in the group areas. It provides limited signal field maintenance for the battle groups and supporting units, and supplemental organizational signal maintenance for the battle group area support platoons.

### 34. Employment

The forward communications company (fig. 20) is organized along functional lines. Each of the five battle group area support platoons is closely associated with a particular battle group. Each platoon



TTIO-8

Figure 20. Organization of forward communications company.

operates a forward signal center (fig. 21), and furnishes associated facilities for general and direct communication support of units and unit elements in the battle group areas. The signal centers, including their radio relay system and associated carrier equipment, are a part of the division area communication system. The centers provide points of entry into the system for users (including battle groups), and switching and patching points for channels of the system. In addition, local communication service for units in the battle group area may be provided to supplement the organic capabilities of these units. While designation of specific geographic areas of responsibility is not usually feasible in combat, the company commander and platoon leaders act, in effect, as area signal officers for the service support units in their respective areas.

a. Each platoon provides direct signal support for a battle group and general signal support, to include limited wire laying and field

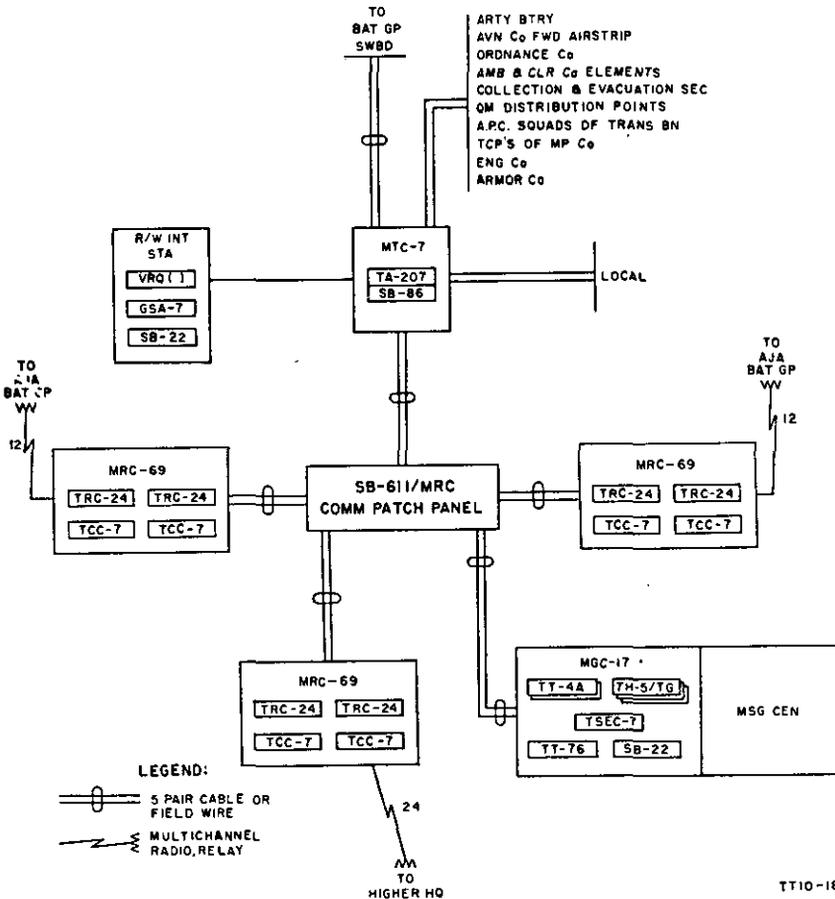


Figure 21. Forward signal center, block diagram.

signal maintenance, for units in the area. Each platoon normally will be included as a part of the task force when such groupings are required and will accompany the battle group if it is attached to another division. The composition of the platoons so attached may be modified to meet a particular mission by making reallocations among other platoons or other signal battalion elements. When a battle group area support platoon is attached by division order to a battle group or a task force, the unit to which the platoon is attached is responsible for maintaining the integrity of the division area communication system. The degree of system integrity desired in each instance should be specified clearly in the signal portion of the division operations order.

*b.* The organization of the battle groups is premised on the provision of certain support by the forward communications company. This support must include :

- (1) Installation and maintenance of communication facilities connecting the group headquarters into the division area communication system.
- (2) Lateral communications (except radio) between battle groups (normally by switching or patching through the area communication system).
- (3) Communications from battle group headquarters (except radio) to supporting divisional logistic and administrative elements. (Supporting combat elements are expected to provide communication to battle groups in accordance with current doctrine concerning the relationship between supported and supporting units.)

### 35. Company Headquarters

*a.* Company headquarters provides command control and coordination of company operations and provides mess facilities and second echelon motor maintenance. In order to perform these functions expediently, company headquarters operates at a central location, normally in the division advance CP area.

*b.* Since each of the platoons is assigned to a particular battle group and, as such, will mess and quarter with that group, the cooks in company headquarters may be allocated (fig. 13) in the following manner:

- (1) One cook or first cook to each of four battle groups; the remaining battle group will be augmented with one cook's helper.
- (2) The mess steward will remain at the forward communications company headquarters to coordinate mess activities

and to establish and supervise the operations of a company mess when required.

c. Administrative and logistical reports to higher headquarters will be consolidated and forwarded, on a brief and informal basis, to battalion headquarters for preparation and submission to higher headquarters.

d. Supply (Class I, II, and IV) will be handled administratively by company headquarters. Physical distribution to the platoons will be effected by a daily supply trip from the supply section of headquarters and headquarters company. Class III (POL) for the platoons and company headquarters normally will be made available through mobile gas stations operated by the division quartermaster company.

### 36. Battle Group Area Support Platoons

a. The *platoon headquarters* provide command control and coordination of platoon operations, and limited organizational maintenance of platoon power units. The platoon leaders must maintain close coordination with the communication officers and commanders and staffs of the units which they support.

b. The *message center sections* provide communication center facilities, including message center, cryptographic, and teletypewriter service, on a 24-hour basis, for units and unit elements located in their respective areas (fig. 5). This service is supplemental to organic capabilities. The sections are not manned or equipped to provide messenger service. Serviced units will normally pick up and deliver their messages as required. Each section contains one AN/GRR-5 receiver with which it monitors in the division warning net. One mobile Teletypewriter Terminal Group AN/MGC-17 is provided to furnish three teletypewriter terminals, two with cryptographic facilities, at each center. The sections are manned and equipped to operate in one echelon only.

c. The *telephone sections* each operate a mobile Manual Telephone Central Office AN/MTC-7 (fig. 7).

- (1) Each section is equipped with two AN/MTC-7's; however, the section is manned on the basis that only one AN/MTC-7 will be in operation at a time, with the other being used as a spare for displacement or for establishing a forward switch for limited periods as required. The AN/MTC-7's will handle both the local and trunk line switching requirements placed on the center.
- (2) The sections are also responsible for the circuit control functions in their respective signal centers, to include

patching and termination of trunk lines, circuit testing, and direction of circuit maintenance. For this purpose, two Communications Patching Panels SB-611/MRC are provided. Each panel is mounted in a 1½-ton trailer; one in use, the second for displacement or for establishing forward switches.

d. The *radio sections* operate an AN/VRQ-2 radio set (artillery) and an AN/VRQ-3 radio set (infantry) using AN/GSA-7's as a radio/wire integration station in the division radio/wire integration systems (fig. 9 and 10). Each station must be located in the immediate vicinity of the AN/MTC-7 operated by the telephone section to facilitate operation.

e. The *radio terminal and carrier sections* operate the terminals of the radio relay system and associated carrier equipment at their respective forward signal centers, and at battle group headquarters or forward switches as required (fig. 6).

- (1) Each section is manned and equipped to operate three mobile multichannel radio terminal sets (AN/MRC-69). The sets will normally be in continuous use (fig. 21). During a displacement, however, the sets in communication with adjacent battle groups may discontinue operation to aid in the move if required. The third set will remain in contact with division advance until one of the displaced sets can establish communication with that headquarters.
- (2) These terminal sets will normally be positioned as close to the patching facility (SB-611/MRC) as is consistent with security and dispersion, to facilitate cable/wire laying to terminal sets. If feasible, terminals should be co-located to enable a minimum of personnel to operate efficiently and to reduce the number of wire routes to be installed and maintained.
- (3) The sections are also equipped with two portable telephone switchboards (SB-22/PT) for establishing forward switches or patching points on extension links from the forward signal centers.

f. The *installation section* in each platoon is organized as a 5-man field wire team and is equipped with one ¾-ton truck and a trailer (fig. 7).

- (1) This section installs interconnecting cable for components of a forward signal center and is responsible for wire laying, maintenance, and furnishing telephone instruments as required to the following supported units:
  - (a) Platoons of the forward support company of the division ordnance battalion and company headquarters.

- (b) Elements of the ambulance and clearing companies of the division medical battalion and the headquarters of these companies if located in the division forward area.
  - (c) Collection and evaluation section of the collection and evaluation platoon of the division quartermaster company.
  - (d) Forward distribution points, if established by the division quartermaster company.
  - (e) Truck and/oil armored personnel squads of the division transportation battalion if located in the forward area.
  - (f) Traffic control points (TCP's), if established in the forward area by the division military police detachment.
  - (g) General support platoon groups and associated landing fields established in the division forward area by the division aviation company.
  - (h) Companies or company elements of the division engineer battalion operating in the forward area when in general operation, and field wire connections to battalion headquarters if so located.
- (2) Since this section has many responsibilities and a limited number of personnel and equipment with which to perform its mission, priority should be established for connecting units into the system. Priorities will depend on the immediate situation and should be coordinated fully with the battle group staff. An SOP should also be established to dictate the number of pairs each unit will receive initially and the necessary augmentation at a later date if time and equipment permit.
- (3) Initially, the section has only 3.5 miles of CX-162/G five-pair cable. This is not to be construed as a maximum load for the section, since additional wire and cable will be available from the battalion or other wire teams.
- (4) In some cases the organic 5-man wire teams will not be physically capable of installing the total circuits within the time limit prescribed. Augmentation of personnel and equipment for a situation of this type is available by attaching all or a portion of one of the 8-man installation teams from headquarters and headquarters company to complete the initial installation.

*g.* The forward repair sections operate as indicated in paragraph 22b.

# APPENDIX I

## REFERENCES

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### 1. General

This appendix contains a selected list of numbers and titles of publications pertinent to the operations of the signal battalion, infantry division. For availability of items listed and publications on additional subjects, refer to DA Pam 310-1, 310-3, 310-4, and 310-7.

### 2. Administration

AR 230-5	Nonappropriated Funds Facilities and General Policies Activities.
AR 220-60	Battalions: General Provisions.
AR 220-70	Companies: General Provisions.
AR 340-15	Correspondence.
AR 380-1	Safeguarding Official Information.
AR 611-201	Manual of Enlisted Military Occupational Specialities.
AR 230-10	Nonappropriated Military Welfare Funds.
SR 605-105-5	Commissioned and Warrant Officer Personnel, Military Occupational Specialities.
FM 100-10	Field Service Regulations (Administration).
FM 101-5	Staff Officer's Field Manual: Staff Organization and Procedure.
FM 101-10	Staff Officer's Field Manual: Organization, Technical, and Logistical Data.
TM 10-402	Mess Management.

### 3. Operations

AR 380-5	Military Security.
FM 7-100	Infantry Division (when published).
FM 11-17	Tactical Communications Center Operation.
FM 24-5	Signal Communications.
FM 24-18	Field Radio Techniques.
FM 24-20	Field Wire Techniques.
FM 31-21	Guerrilla Warfare.
FM 31-25	Desert Operations.
FM 31-71	Operations in the Arctic.

FM 70-10	Mountain Operations.
FM 72-20	Jungle Operations.
FM 100-5	Field Service Regulations (Operations).
FM 100-11	Signal Communication Doctrine.
TM 11-462	Signal Corps Tactical Communication Reference Data.

#### 4. Training

FM 21-5	Military Training.
FM 21-6	Techniques of Military Instruction.
FM 21-40	Defense Against CBR Attack.
FM 21-60	Visual Signals
FM 22-5	Drill and Ceremonies.
FM 22-10	Leadership.
FM 22-100	Command and Leadership for the Small Unit Commander.

#### 5. Supply and Maintenance

DA Pamphlet 310-21	Index of Supply Manuals: Signal Corps.
AR 735-2	Transfer of Property Accountability and Responsibility.
AR 735-4	Expendable Property.
AR 735-5	Property Accountability: General Principles and Policies.
AR 735-11	Accounting for Lost, Damaged, or Destroyed Property.

#### 6. Fortifications, Camouflage, and Demolition

FM 5-15	Field Fortifications.
FM 5-20-series	Camouflage.
FM 5-25	Explosives and Demolition.

#### 7. Miscellaneous

DA Pam 108-1	Index of Army Motion Pictures, Film Strips and Phono-Recordings.
DA Pam 310-1	Index of Administrative Publications, (Army Regulations, Special Regulations, Department of the Army Pamphlets, Commercial Traffic Bulletins, General Orders, Circulars, and Army Procurement Circulars).
DA Pam 310-2	Index of Blank Forms.

- DA Pam 310-3 Index of Training Publications (Field Manuals, Reserve Officer's Training Corps Manuals, Training Circulars, Army Training Programs and Mobilization Training Programs, Programs of Instruction, Army Subject Schedules, Army Training Tests, Graphic Training Aids, War Department and Department of the Army Posters, and Firing Tables and Charts).
- DA Pam 310-4 Index of Technical Manuals, Technical Regulations, Technical Bulletins, Supply Bulletins, Lubrication Orders, and Modification Work Orders.
- DA Pam 310-5 Index of Graphic Training Aids and Devices.
- DA Pam 310-7 Index of Tables of Organization and Equipment, Tables of Organization, Type Tables of Distribution, and Tables of Allowances.

## APPENDIX II

### TYPICAL VEHICLE EMPLOYMENT

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#### 1. Headquarters and Headquarters Company

*a. Battalion Headquarters.* Vehicles for support of Battalion Headquarters are carried in authorizations for Administrative and Logistics Section, Operations and Intelligence Section, and Division Signal Officer's Section.

*b. Company Headquarters.*

- (1) One (1) Truck Cargo  $\frac{3}{4}$  ton and one (1) Trailer Cargo  $\frac{3}{4}$  ton—Company commander and 1st Sergeant. Transports company records and part of company headquarters equipment.
- (2) Three (3) Trucks Cargo  $2\frac{1}{2}$  ton and three (3) Trailers Water Tank  $1\frac{1}{2}$  ton—Transport of kitchen, Class II, ration and water resupply, and delivery of prepared food and water to Headquarters Company, Command Operations Company, and forward communications Company elements which may be located at a distance from company headquarters. Also used for emergency resupply within the Battalion.

*c. Administrative and Logistics Section.*

- (1) One (1) Truck Utility  $\frac{1}{4}$  ton and one (1) Trailer Cargo  $\frac{1}{4}$  ton—Vehicle for battalion Executive, S1/Adjutant, S4, and Motor Officer on shared basis for execution of their responsibilities. Transport for these officers and part of Section equipment during displacements. Power for Radio Set AN/VRC-18.
- (2) One (1) Truck Cargo  $\frac{3}{4}$  ton and one (1) Trailer Cargo  $\frac{3}{4}$  ton—Battalion mail pick-up and delivery, and transport for the Executive, S1/Adjutant, S4, or Motor Officer supplemental to vehicle described in (1) above. Truck and trailer transports Section personnel and remainder of Section equipment during displacement.

*d. Operations and Intelligence Section.* One (1) Truck Utility  $\frac{1}{4}$  ton and one (1) Trailer Cargo  $\frac{1}{4}$  ton—Vehicle for the battalion S3 and S2/Assistant S3. Transport for Section personnel equipment during displacement.

e. *Personnel Section.* No transportation authorized specifically Section normally located at Division Rear Echelon (Administrative Center ) and uses transportation arranged for by the Center.

f. *Battalion Supply Section.* One (1) Truck Cargo 2½ ton and one (1) Trailer Cargo 1½ ton—Battalion Supply delivery.

g. *Battalion Motor Maintenance Section.*

(1) One (1) Truck Cargo ¾ ton and one (1) Trailer Cargo ¾ ton—For on-site maintenance of vehicles, armament, and engine generators in the battalion. Secondary use is for emergency maintenance elements. Also tows trailer-mounted engine generators evacuated to third echelon maintenance shops. Transports part of section equipment, spare parts, and personnel during displacement.

(2) One (1) Truck Medium Wrecker 5 ton—Wrecker for Battalion Motor Maintenance Operations. Also used for off-loading and reloading of signal equipment shelters mounted on vehicles.

h. *Field Cable Installation Section.*

(1) One (1) Truck Cargo ¾ ton and one (1) Trailer Cargo ¾ ton—Route reconnaissance and supervision by Section Chief. Also used by Field Cable Installation Teams for laying, pick-up, and maintenance of spiral-four cable. Trailer to transport part of battalion basic load of cable and wire and Section equipment.

(2) Three (3) Trucks Cargo 2½ ton and three (3) Trailers Cargo 1½ ton—Mission transport for three 8-man Field Cable Installation Teams. For laying, maintenance, and pickup of spiral-four cable, for resupply of cable, and for transport of part of battalion basic load of cable and wire.

i. *Radio Terminal and Carrier Section.*

(1) Five (5) Trucks Cargo 2½ ton—Transport for two mobile Radio Terminal Sets AN/MRC-69 and three mobile Repeater Radios AN/MRC-54. Tow trailer-mounted power units organic to above sets.

(2) One (1) Truck Cargo 2½ ton—Transport for Four Terminal Telephones AN/TCC-7. Tows Generator Set Gasoline Engine Trailer Mounted PU-294/G.

j. *Division Signal Officer's Section.* Two (2) Trucks Utility ¼ ton and two (2) Trailers Cargo ¼ ton—For Division Signal Officer (also Battalion Commander), assistant Division Signal Officer, Division Wire Officer, and Division Radio Officer for execution of their responsibilities. Also used by Div Sig Supply and Maintenance Officer. Transport section personnel and equipment during displacements. One trailer contains the power source for Radio Set AN/

VRQ-3 and the other contains the power source for Radio Set AN/VRC-18.

*k. Division Communication Control Section.*

- (1) Two (2) Trucks Cargo  $\frac{3}{4}$  ton and two (2) Trailers Cargo  $\frac{3}{4}$  ton—Transport for two Direction Finding (DF) teams employing DF set AN/PRD-1.
- (2) Two (2) Trucks Cargo  $2\frac{1}{2}$  ton—Mounts DA sets AN/TRD-10. Tow trailer-mounted Power units organic to sets.

*l. Division Photographic Section.*

- (1) Three (3) Trucks Utility  $\frac{1}{4}$  ton and three (3) Trailers Cargo  $\frac{1}{4}$  ton—Mission transport for Division Photographic Officer and photographers for photographic assignments within the division. Trailers to transport Section equipment.
- (2) Two (2) Trucks Cargo  $2\frac{1}{2}$  ton—Mount two mobile Laboratory Darkrooms AN/TFQ-7. Tow trailer-mounted power units organic to laboratories.

*m. Division Signal Supply and Maintenance Section.*

- (1) Two (2) Trucks Cargo  $\frac{3}{4}$  ton and two (2) Trailers Cargo  $\frac{3}{4}$  ton—Transport for Division Signal Supply and Maintenance Officer staff, for emergency on-site maintenance calls within Division, and pick-up and delivery of repair items, spare parts, and emergency Class II and IV supply.
- (2) Four (4) Signal Corps Repair Shops, Truck-mounted  $2\frac{1}{2}$  ton, 6x6, M185—Mobile element of Division Signal Repair Shop. One truck for general signal maintenance, including teletypewriter and cryptographic; one truck for radio and radar maintenance; one truck for radio, avionic, and photographic equipment maintenance; and one truck for radio, radio relay, and carrier maintenance. Tow four (4) Trailer-mounted Power Units PU-290/MR.

## 2. Command Operations Company

*a. Company Headquarters.* One (1) Truck Cargo  $\frac{3}{4}$  ton and one (1) Trailer Cargo  $\frac{3}{4}$  ton—Company commander and 1st Sgt; for company signal reconnaissance, supervision, and administration. Also transports company records and company equipment during displacement. Power for Radio Set AN/VRC-10, company station in Sig Bn Cmd Net (FM).

*b. Command Signal Center Plat Hq (two/Co), Each.* One (1) Truck Cargo  $\frac{3}{4}$  ton and one (1) Trailer Cargo  $\frac{3}{4}$  ton—Platoon leader and sergeant for signal reconnaissance and supervision. Also transports platoon equipment during displacement. Power for Radio

Set AN/VRQ-3, platoon station in Signal Bn Cmd Net (FM) or division FM radio relay station.

(1) *Message center section.*

- (a) Five (5) Trucks Utility  $\frac{1}{4}$  ton—For division area scheduled and special messenger service on a 24-hour basis. Transport part of section equipment during unit displacement.
- (b) Five (5) Trailers Cargo  $\frac{1}{4}$  ton—Transport section and company equipment during displacement, and overload on heavy area messenger runs.
- (c) Two (2) Trucks Cargo  $2\frac{1}{2}$  ton—Mount mobile Terminal Telegraph Groups AN/MS-13 for teletypewriter communication and cryptographic operations at echelons of division headquarters. Tow two Generator Sets Gasoline Engine Trailer mounted PU-294/G.
- (d) Two (2) Trucks Cargo  $2\frac{1}{2}$  ton—Mount Shelter Electrical Equipment S-56/G for facsimile receiver/transmitters and for mobile message centers and protected cryptographic rooms at echelons of division headquarters.
- (e) Two (2) Trailers Cargo  $1\frac{1}{2}$  ton—Transport section and company equipment during displacement.

(2) *Telephone section.*

- (a) Two (2) Trucks Cargo  $2\frac{1}{2}$  ton—Mount two mobile Telephone Switchboard Groups AN/MTC-3 for telephone switchboard operations at echelons of division headquarters. Part of section equipment carried in AN/MTC-3 during displacement.
- (b) Two (2) Trailers Cargo  $1\frac{1}{2}$  ton—Mount two Panels, Patching, Communication SB-611/MRC for circuit control and patching operations at echelons of division headquarters. Also transport part of section equipment during displacement.

(3) *Radio section.*

- (a) Two (2) Trucks Cargo  $\frac{3}{4}$  ton—Mount and power for two mobile radio stations, each with one AN/GRC-19, one AN/VRQ-3, and one AN/GRR-5 radio set. For operation in division radio nets.
- (b) Four (4) Trucks Cargo  $\frac{3}{4}$  ton—Mount four mobile Radio Teletypewriter Sets AN/GRC-46 for radio communication in division nets. Two also mount Radio Set AN/VRC-10 for Radio/Wire Integration Stations at Div echelons.

- (c) Six (6) Trailers Cargo  $\frac{3}{4}$  ton—Transport portable engine generators for powering above radio sets. Also transport part of section equipment during displacement.
- (d) Three (3) Trucks Cargo  $2\frac{1}{2}$  ton—Mount three mobile Radio Sets AN/GRC-26 for radioteletype communication for echelons of division headquarters. Tow power unit trailer for radio set (trailer and power unit are components of radio set).
- (4) *Radio terminal and carrier section.* Thirteen (13) Trucks Cargo  $2\frac{1}{2}$  ton—Mount 13 mobile Terminal Radio Sets AN/MRC-69 for radio relay communication in Division Area Communication System. Tow organic power units in component trailers.
- (5) *Installation section.* Two (2) Trucks Cargo  $\frac{3}{4}$  ton and two (2) Trailers Cargo  $\frac{3}{4}$  ton—Mission vehicles for two field wire and cable installation teams operating at echelons of division headquarters. Trailers to transport part of authorized load of wire and cable.
- (6) *Air support signal teams.*
  - (a) One (1) Truck Cargo  $\frac{3}{4}$  ton and one (1) Trailer Cargo  $\frac{3}{4}$  ton—Mounts mobile air support radio station, consisting of one each of Radio Sets AN/GRC-19, AN/VRQ-3, and AN/GRR-5. Trailer mounts 28-VDC, 1.5-KW engine generator used with radio station and also carries team equipment during displacement.
  - (b) One (1) Truck Cargo  $2\frac{1}{2}$  ton—Mounts mobile air support radio station (AN/GRC-26). Tows power unit trailer for radio set (trailer and power unit are components of radio set).

c. *Rear Echelon Operations Platoon Headquarters.* One (1) Truck Cargo  $\frac{3}{4}$  ton—Platoon leader and sergeant; for signal reconnaissance and supervision. Also transports platoon equipment during displacement. Tows trailer-mounted Generator Set PU-322/G in Message Center Section.

(1) *Message center section.*

- (a) One (1) Truck Utility  $\frac{1}{4}$  ton—Scheduled and special local messenger service from Rear Echelon Signal Center. Transports part of section equipment during unit displacement.
- (b) One (1) Trailer Cargo  $\frac{1}{4}$  ton—Transports part of section equipment during displacement.
- (2) *Telephone section.* One (1) Truck Cargo  $\frac{3}{4}$  ton and one (1) Trailer Cargo  $\frac{3}{4}$  ton—For field wire and cable installation at the Rear Echelon Signal Center. Trailer trans-

ports part of authorized load of wire and cable. Truck and trailer transport switchboard and other section equipment during displacement.

- (3) *Radio section.* One (1) Truck Cargo  $2\frac{1}{2}$  ton—Mounts mobile Radio Set AN/GRC-26 for radio communications for division Rear Echelon. Tows organic power unit for radio set in component trailer.

*d. Trains Area Operations Platoon Headquarters.* One (1) Truck Cargo  $\frac{3}{4}$  ton—Platoon leader and sergeant; for signal reconnaissance and supervision. Also transports platoon headquarters equipment during displacement. Power for Radio Set AN/VRC-18, platoon station in Signal Bn Cmd Net (FM) and trains Cmd Net (FM). Tows trailer-mounted Generator Set PU-322/G in Message Center Section.

- (1) *Message center section.*

- (a) One (1) Truck Utility  $\frac{1}{4}$  ton—Scheduled and special local messenger service from the Division Area Signal Center. Transports part of section equipment during unit displacement.

- (b) One (1) Trailer Cargo  $\frac{1}{4}$  ton—Transports part of section equipment during displacement.

- (2) *Telephone section.* Two (2) Trailers Cargo  $\frac{3}{4}$  ton—Mount two Panels, Patching, Communication SB-611/MRC for circuit patching and testing in Division Area Communication System Signal Centers operated by platoon. Trailers towed by vehicles in installation section.

- (3) *Radio section.*

- (a) One (1) Truck Cargo  $\frac{3}{4}$  ton—Mounts mobile Radio Teletypewriter Set AN/GRC-46 for communications, including area damage control communications, in the Division Trains area. Also mounts Radio Set AN/VRC-18, the Trains Area Radio/Wire Integration Station.

- (b) One (1) Trailer Cargo  $\frac{3}{4}$  ton—Transports section and platoon equipment during displacement, and portable engine generators for powering above radio set.

- (4) *Radio terminal and carrier section.* Four (4) Trucks Cargo  $2\frac{1}{2}$  ton—Mount mobile Terminal Radio Sets AN/MRC-69 for Trains Area Signal Center terminal and repeater stations in the Division Area Communication System. Tow organic power units in component trailers.

- (5) *Installation section.* Two (2) Trucks Cargo  $\frac{3}{4}$  ton—Mission vehicles for two field wire and cable installation teams operating out of the Trains Area Signal Center. Tow

trailers authorized Telephone Section during displacements of that section's facilities.

*e. Brigade Operations Platoon Headquarters.* One (1) Truck Utility,  $\frac{1}{4}$  ton, 4x4—Platoon Leader and sergeant; for signal reconnaissance and supervision. Power for Radio Set AN/VRC-10, platoon station in Signal Bn Cmd Net (FM). One (1) Trailer Cargo  $\frac{1}{4}$  ton—Transports part of platoon equipment during displacement.

(1) *Message center section.*

(a) One (1) Truck Utility  $\frac{1}{4}$  ton—Scheduled and special local messenger service from the Brigade Signal Center. Transports part of section equipment during unit displacement.

(b) One (1) Trailer Cargo  $\frac{1}{4}$  ton—Transports section equipment during displacement.

(2) *Radio section.*

(a) One (1) Truck Cargo  $\frac{3}{4}$  ton—Mounts mobile Radio Teletypewriter Set AN/GRC-46 for communication in the division command/operations net.

(b) One (1) Trailer Cargo  $\frac{3}{4}$  ton—Transports section and platoon equipment during displacement, and portable engine generator for powering above radio set.

(3) *Telephone section.*

(a) One (1) Truck Cargo  $\frac{3}{4}$  ton—For field wire and cable installation team operating in the Brigade Headquarters area. Mounts Reel Unit RL-26.

(b) One (1) Trailer Cargo  $\frac{3}{4}$  ton—Transport for part of authorized load of wire and cable. Transports section equipment during displacement.

### 3. Forward Communications Company

*a. Company Headquarters.* One (1) Truck Cargo  $\frac{3}{4}$  ton and one (1) Trailer Cargo  $\frac{3}{4}$  ton—Company commander and 1st Sgt; for company signal reconnaissance, supervision, and administration. Also transports company records and company equipment. Power and mount for Radio Set AN/VRQ-3; company station in Signal Bn Cmd Net (FM) or forward area FM radio relay station in Div CG/ Command Net.

*b. Battle Group Area Support Plat Hq (Five/Co), Each.* One (1) Truck Cargo  $\frac{3}{4}$  ton and one (1) Trailer Cargo  $\frac{3}{4}$  ton—Platoon leader and sergeant; for signal reconnaissance and supervision. Also transports platoon headquarters equipment. Power for Radio Set AN/VRC-18; platoon station in Sig Bn Cmd Net (FM) and in Cmd Net (FM) of supported battle group.

*c. Message Center Section (Five/Co), Each.* One (1) Truck Cargo  $\frac{3}{4}$  ton—Mounts mobile Teletypewriter Terminal Group AN/MGC-17 for teletypewriter, message center, and cryptographic operations in a Forward Signal Center. Transports section equipment during displacement. Tows trailer-mounted Generator Set PU-322/G.

*d. Telephone Section (Five/Co), Each.*

(1) Two (2) Trucks Cargo  $\frac{3}{4}$  ton—Mount two mobile Telephone Switchboard Groups AN/MTC-7, for telephone switchboard operations in a Forward Signal Center (one in operation, the second for displacement and for establishing a Forward Switch). Transports part of section equipment during displacement.

(2) Two (2) Trailers Cargo  $\frac{3}{4}$  ton—Mount two mobile Panels, Patching, Communication SB-611/MRC for circuit control and patching operations in a Forward Signal Center (one in operation, the second for displacement and for establishing a Forward Switch). Transports section equipment during displacement.

*e. Radio Section (Five/Co), Each.* One (1) Truck Cargo  $\frac{3}{4}$  ton and one (1) Trailer Cargo  $\frac{3}{4}$  ton—Mount and power for Radio Sets AN/VRQ-2 and AN/VRQ-3; Radio/Wire Integration Station in a Forward Area Signal Center. Trailer transports power unit and part of platoon equipment.

*f. Radio Terminal and Carrier Section (Five/Co), Each.* Three (3) Trucks Cargo  $2\frac{1}{2}$  ton—Mounts mobile Terminal Radio Sets AN/MRC-69 for Forward Area Signal Center terminals and extensions in the Division Area Communication System. Tow organic power unit in component trailer.

*g. Installation Section (Five/Co), Each.* One (1) Truck Cargo  $\frac{3}{4}$  ton and one (1) Trailer Cargo  $\frac{3}{4}$  ton—Mission vehicle for field wire installation team. Trailer transports part of authorized load of wire.

*h. Forward Repair Section (Five/Co), Each.* One (1) Signal Corps Repair Shop Mounted in Truck Cargo  $2\frac{1}{2}$  tons 6x6—Mobile radio and wire field maintenance shop for direct support emergency repair of signal equipment in division forward area. Also used for organizational signal maintenance for Platoon. Tows Generator Set PU-290/MR in component trailer.

By Order of *Wilbur M. Brucker*, Secretary of the Army:

MAXWELL D. TAYLOR,  
*General, United States Army,*  
*Chief of Staff.*

Official:

HERBERT M. JONES,  
*Major General, United States Army,*  
*The Adjutant General.*

Distribution:

*Active Army:*

ASA	Inf Div
DCSOPS	Svc Colleges
DCSLOG	Br Svc Sch
Technical Stf, DA	USA Intel Sch
USCONARC	USA Avn Sch
OS Maj Comd	SigC Tng Cen
MDW	Army Elet PG
Armies (CONUS)	Units org under fol TOE:
Corps	11-5 (ROCID)

*NG:* None.

*USAR:* None.

For explanation of abbreviations used, see AR 320-50.