

## CHAPTER 4

# Organization and Mission of the Theater Signal Command and the Theater Tactical Signal Brigade

This chapter discusses the mission and organization of the Theater Signal Command and its subordinate units. There is no definite force structure for the Theater Signal Command. Its composition is established by theater specific requirements based upon the Commander in Chief's (CINC's) understanding of Mission, Enemy, Troops, Terrain, and Time Available (METT-T). This chapter also discusses the mission and organization of units that can comprise the Signal assets needed to support a theater of operation.

### **TSC**

4-1. The TSC consists of two to five Echelons Above Corps (EAC) Tactical Signal Brigades, one Strategic Signal Brigade, one Combat Camera (COMCAM) company, one Theater Signal Maintenance Company, one or more Data Processing Units (to be deactivated), and one or more Reproduction Detachments. The actual number of EAC signal brigades, and the number and type of their subordinate signal units deployed to the theater of operation, depends on the Mission, Enemy, Troops, Time, and Terrain (METT+T). Figure 4-1 illustrates a "type" organization of the TSC.

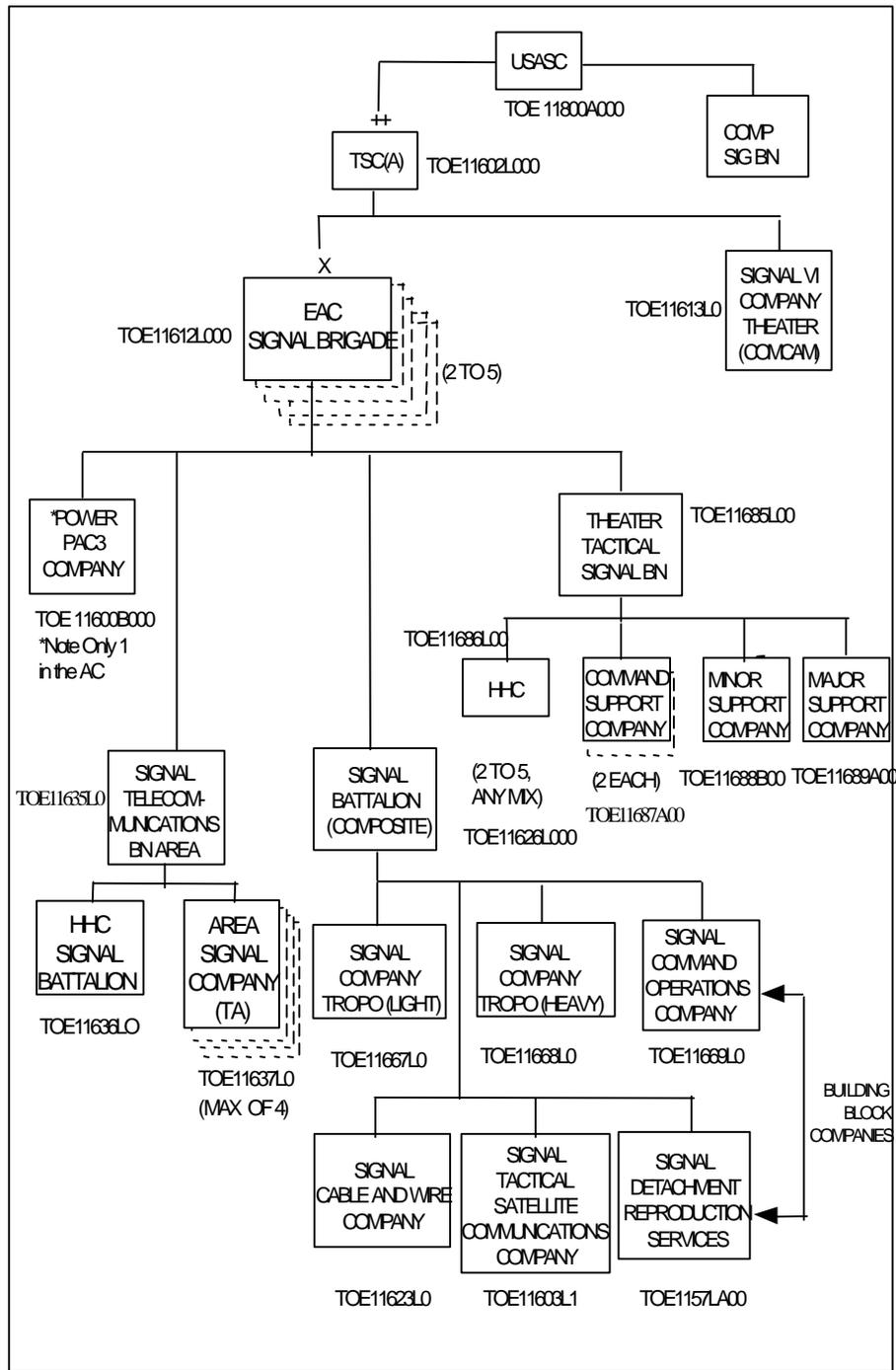


Figure 4-1. A “Type” Organization of the TSC

4-2. The TSC is responsible for planning, engineering, and managing the Army’s portion of the theater communications system. The Active Component (AC) TSC is a Major Subordinate Command (MSC) of United States Army Signal Command (USASC) and is under Operational Control (OPCON) of an

Army Service Component Command (ASCC) in both peacetime and wartime. Reserve Component (RC) TSC becomes subordinate commands of the ASC during mobilization and is OPCON to its respective ASCC. The RC TSC plans and trains with its respective ASCC during peacetime.

4-3. Recent operations in Southwest Asia, Bosnia, and Haiti have demonstrated that ASCC and Joint Task Force (JTF) commanders must modify or revise their operational plans rapidly and frequently as the military and political situation develops. The theater communications system must be equally flexible and responsive to these operational changes if the necessary Command and Control (C2) systems are to be available at the right time and place. C2 tools, such as information systems and Video Teleconferencing Center (VTC) capabilities, have become increasingly important to the JTF and ASCC commanders. Complex systems such as these require that the TSC's early entry module be in theater early to ensure the commander's C2 requirements are met in the very fluid deployment and entry phase of the operation.

4-4. Immediately upon the commencement of contingency operations, the TSC will furnish an early entry module composed of engineers, planners, and operators. Their mission is to plan, engineer, and manage the EAC theater communications systems architecture by coordinating and interacting with the operational planners as they respond to their commander's changing intent and objectives.

4-5. Recent military operations have demonstrated the requirement for timely follow-on deployment of the remaining C2, planning, and engineering capabilities inherent in a TSC, even when there is one, or no, deployed EAC signal brigades OPCON to the TSC.

4-6. Listed below are two types of EAC signal brigades aligned under the TSC that provide global connectivity:

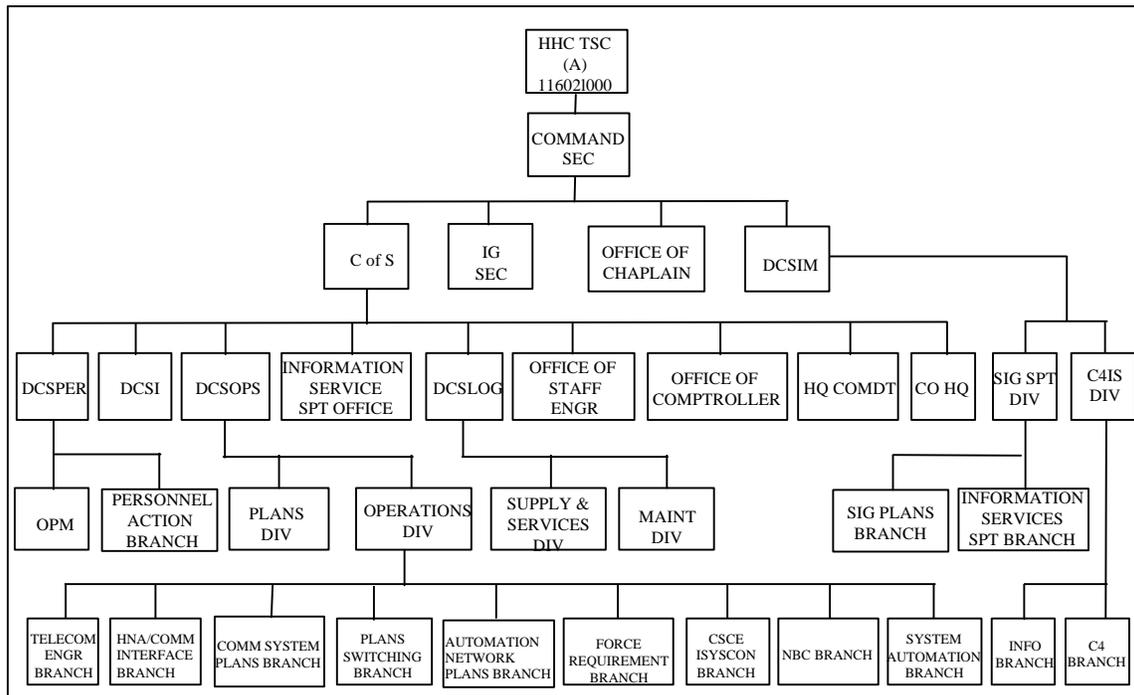
4-7. **Strategic Signal Brigades.** Located in certain theaters and are responsible for fixed, strategic communications support to the warfighter. During peace, each strategic brigade is doctrinally under the C2 of the ASC. During Major Theater War (MTW) or Military Operations Other Than War (MOOTW), each brigade becomes OPCON to the TSC.

4-8. **Tactical Signal Brigades.** Deployed to provide mobile, tactical communications support to the ASCC as required. During peacetime, the AC EAC tactical signal brigade is doctrinally under the C2 of the ASC, while the RC brigades are under their state or peacetime trace C2. During MTW or MOOTW, each brigade is OPCON to the TSC. The mission of this unit is to provide C2 of assigned and attached signal units, and to install, operate, and maintain assigned portions of the TCS as directed by the TSC.

4-9. The TSC provides centralized management and engineering of the entire theater data network. The TSC directs and coordinates Local Area Networks (LANs) as they are connected to the Wide Area Network (WAN). This includes configuration of databases and domain name servers, to include data network and email addressing and routing.

4-10. Figure 4-2 reflects the type of units that the TSC would be required to support.





**Figure 4-3. The TSC Headquarters**

4-12. The tasking of the TSC can vary due to the type military operation or situation. In some instances, the Commander in Chief (CINC) may task the TSC to provide overall signal C2, direction, and guidance to a joint JTF or apportion elements of the signal mission to the TSC. The TSC provides personnel and equipment to augment the Joint Communication Control Center (JCCC) if the Army Force (ARFOR) is tasked to be the JTF, or provides a ARFOR Systems Control (SYSCON) if the CINC deploys. The JCCC/SYSCON reports directly to the CINC J6 and to the ASCC.

4-13. The mission of the TSC is as follows:

- Provide C2 and supervision for units assigned and attached to the TSC.
- Formulate and implement plans, policies, and procedures for the engineering, installation, operation, and management of assigned portions of the Theater Communications System.
- Provide management of the Theater Communications System, to include centralized management of voice, data, messaging, and VTC capabilities.
- Provide communications planning and management of special purpose communications/information systems.
- Provide internal signal support to the ASCC Headquarters (HQ) through the DCSIM staff section.
- Provide intelligence and security support and oversight to subordinate commands.

- Provide ASCC C2 Protect planning and management for the Theater Communications System, and support the protect, detect, and react strategies of Army C2 Protect as directed by the ASCC G-6.

4-14. The TSC provides the following capabilities:

- Provide C2 and supervision of all assigned and attached units.
- Plan, engineer, and manage signal support systems installed by the TSC, and network interface with systems installed by other units, to include joint, combined, and allied.
- Formulate and implement signal support plans, policies, and procedures for the ASCC. Provide staff management of the Theater Communications System, to include theater operational communications security (COMSEC) and C2 Protect management.
- Provide OPCON over the Theater COMSEC Logistics Support Center and other facilities that provide General Support (GS)/Specialized Repair Activity (SRA). Backup direct support COMSEC maintenance and supply in those theaters where TAACOM or Theater Support Command does not perform the function.
- Provide Battlefield Spectrum Management (BSM) to include allocation, assignment, and control of radio frequencies for Army elements, and for joint and coalition elements throughout the theater in coordination with host nation agencies, if so tasked.
- Provide communications engineering support and coordination of requirements for special purpose communications/information systems.
- Provide planning and staff management of the Ground Mobile Forces (GMF)/Tactical Satellite (TACSAT) Theater Satellite Communications Monitoring Center and Army GMF in the theater of operations.
- Provide planning and coordination of TSC transportation requirements.
- Provide planning, supervision, and coordination of logistic support of the TSC and communications/ information systems.
- Provide planning, staff supervision, and implementation of the public affairs program and command information programs for the TSC.
- Provide staff management and coordination of Battlefield Information Systems (BIS), recommending policy, procedures, standards, and convention. BIS are files and forms management, classified document control, Freedom of Information Act (FOIA), Privacy Act (PA), official mail, and distribution.
- Provide staff supervision of all personnel and administrative matters of planning, developing, and implementing command policies for personnel management and human affairs programs; centralized personnel records management and human affairs programs; and centralized personnel records management.
- Provide staff supervision, investigation, inquiries, surveys, studies, and reports of inspector general matters within the TSC.

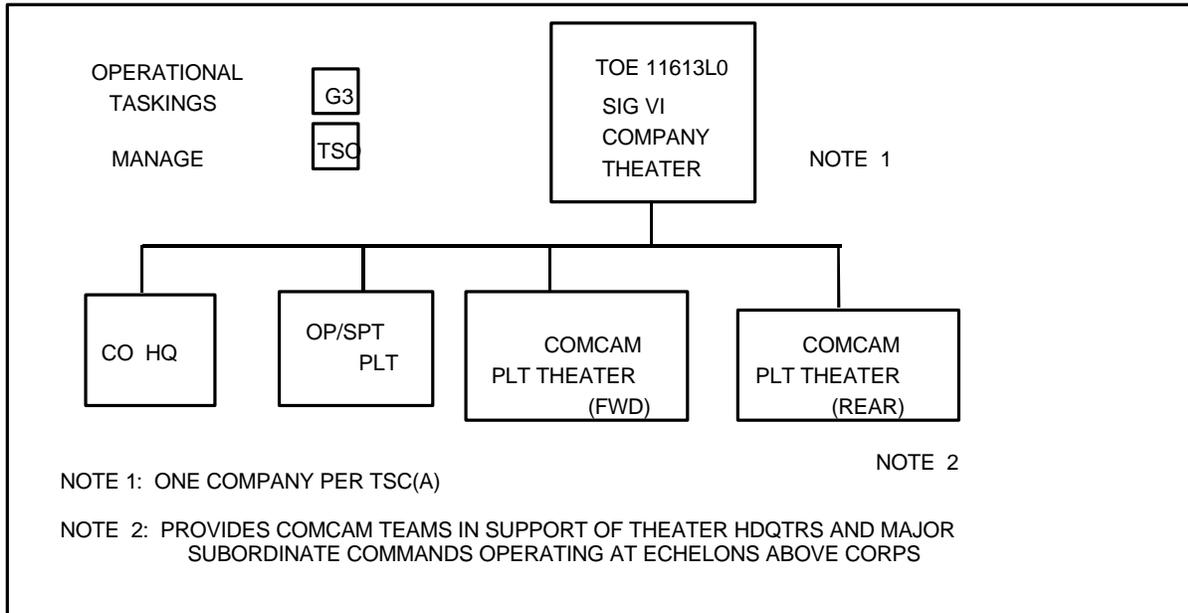
- Provide staff supervision of comptroller matters of management consultant services, of management surveys, and of programming, budgeting, and controlling funds within the TSC.
- Provide coordination of operations and planning; evaluate and prepare reports of Nuclear, Biological, and Chemical (NBC) activities throughout the TSC.
- Provide coordination of engineering support facilities supporting the TSC.
- Assist in the coordinated defense of the unit's area or installation.
- Perform unit maintenance on organic equipment.
- Provide management and coordination of volume reproduction units and Visual Information (VI) units at EAC.
- Provide staff supervision of software management, to include managing all signal software, managing all noncombatant service support software, and advising the command and staff on automation matters.

4-15. The TSC depends on appropriate Army units for health services; finance, legal, personnel, and administrative services; and supplemental transportation, to include aviation for maintenance contact teams and C2. This unit requires 100 percent of its Tables of Organization and Equipment (TOE) and supplies be transported in two surface movements, using its authorized organic vehicles and supplemental transport. This unit depends on the Signal Telecommunications Battalion (Area) (TOE 11635L0) for signal communications facilities.

4-16. See Appendix B, Section 1 for further information on this organization.

#### **SIGNAL COMPANY, VISUAL INFORMATION (VI), TOE 11613L0**

4-17. The mission of the Signal Company, VI is to provide visual imagery acquisition and exploitation support to satisfy the operational requirement of the ASCC and joint headquarters when required. The unit can assist in the coordinated defense of the unit's area or installation (see Figure 4-4).



**Figure 4-4. Signal Company, Visual Information**

4-18. Signal Company, Visual Information can provide the following:

- Tailored VI products, including graphics, to support operational requirements.
- Historical documentation to support the Army VI Documentation Program.
- Processing, maintenance, and repair support of VI to ASCC units beyond the capacity of those units.

4-19. This unit depends on appropriate elements of the ASCC for health services; legal, religious, finance, personnel, and administrative services; transportation; communications; support for transmission of VI on data capable communication lines across the corps. This unit depends on Theater Signal Command, TOE 11602L000, for food services and C-E maintenance support. See FM 24-40 for further information on this organization.

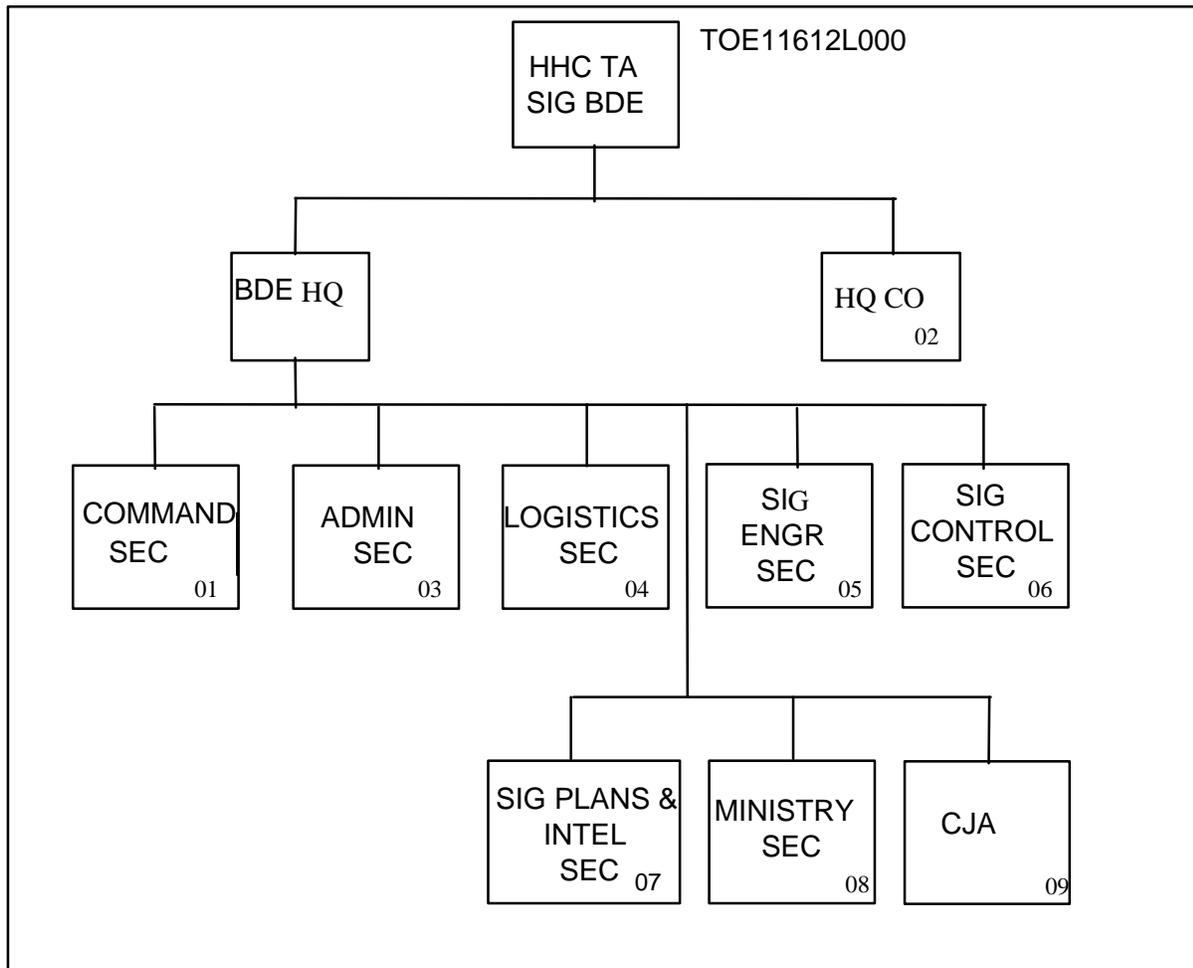
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## **THEATER TACTICAL SIGNAL BRIGADE, TOE 11612L000**

4-20. The EAC signal brigade is comprised of two to five signal battalions depending upon mission and theater requirements. Units assigned to the brigade include one or two POWER PAC 3 companies; Signal Telecommunications Battalion (Area); Theater Tactical Signal Battalion; and the Signal Battalion (Composite).

4-21. The Theater Tactical Signal Brigade is responsible for providing theater tactical communications support to a theater CINC. The theater tactical brigade is doctrinally under the C2 of the deployed TSC. If there is not a TSC deployed to the theater, then it would be under the C2 of ASC and OPCON to the deployed ASCC headquarters. An EAC signal brigade is typically composed of two or more battalions that may be of three different types: Signal Telecommunications Battalion (Area), Signal Battalion Composite, or Theater Tactical Signal Battalion. The Signal brigade is modular to allow for the tailoring of a suitable force to accomplish the specific mission.

4-22. Each battalion is tailored to the supported theater. Each brigade, shown in Figure 4-5, can usually establish up to 12 or 16 area nodes. The organization reflects the planned or expected needs of the Communications Zone (COMMZ).



**Figure 4-5. Theater Tactical Signal Brigade**

4-23. The mission of the Theater Tactical Signal Brigade is as follows:

- Provide C2 of assigned and attached units.
- Install, operate, and maintain assigned portions of the theater communications system as directed by the TSC.
- Coordinate the training, administration, and logistical support of assigned units.

4-24. The Theater Tactical Signal Brigade provides the following capabilities:

- Provide staff planning, C2, and supervision of the brigade.
- Coordinate the training, administration, and logistical support of assigned units.
- Perform unit maintenance on organic equipment, except Communications Electronic (CE) equipment.

4-25. The Theater Tactical Signal Brigade depends on appropriate Army units for the following:

- Health services.
- Finance, legal, personnel, and administrative support.
- NBC decontamination.
- Supplemental transportation services, to include aviation support for C2 of dispersed sites,
- Evaluation and replacement of critical equipment.
- Command post/relay site reconnaissance as required.

4-26. This unit also depends on subordinate battalions (Signal Telecommunications Battalion or Theater Tactical Signal Battalion) for Direct Support (DS) maintenance of signal and COMSEC equipment, as well as food service and signal unit maintenance.

4-27. Each Theater Tactical Signal Brigade can directly control up to 16 nodes. See Figure 4-6 for an example of Notional Signal Brigade Area or Responsibility (AOR). See Figure 4-7 for an example of a notional Theater Tactical Signal Brigade Force Structure.

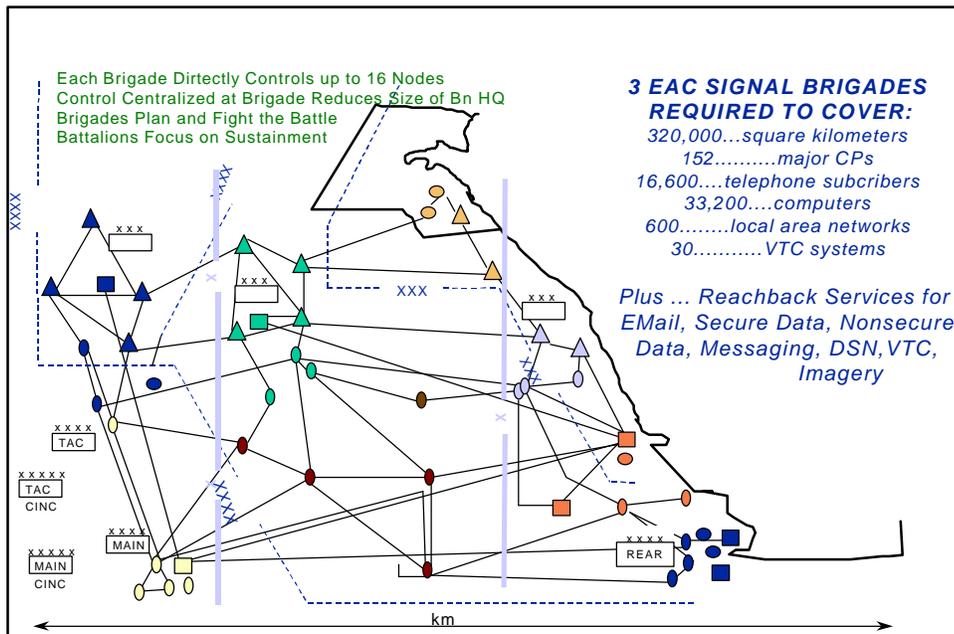
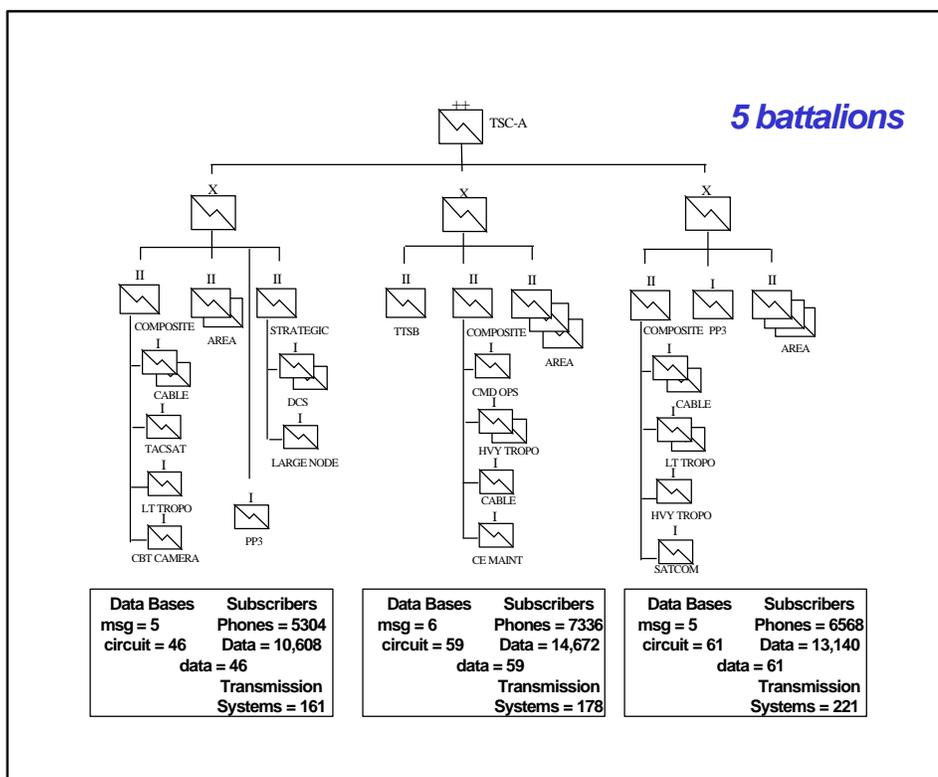


Figure 4-6. Notional Signal Brigade AOR



**Figure 4-7. Notional Signal Brigade Force Structure**

4-28. See Appendix B, paragraph B-38 for further information on this organization.

**POWER PROJECTION FOR ARMY COMMAND, CONTROL, AND COMMUNICATIONS (POWER PAC3) COMPANY, TOE 11600A**

4-29. The following paragraphs describe the mission and capabilities of the POWER PAC3 Company. Figure 4-8 shows the unit structure during the intermediate TOE life of the unit. Figure 4-9 shows the objective TOE structure (the desired end state configuration of the unit after all equipment upgrades have occurred).

# POWER PAC 3 COMPANY

(ITOE 11600A - MODULAR)

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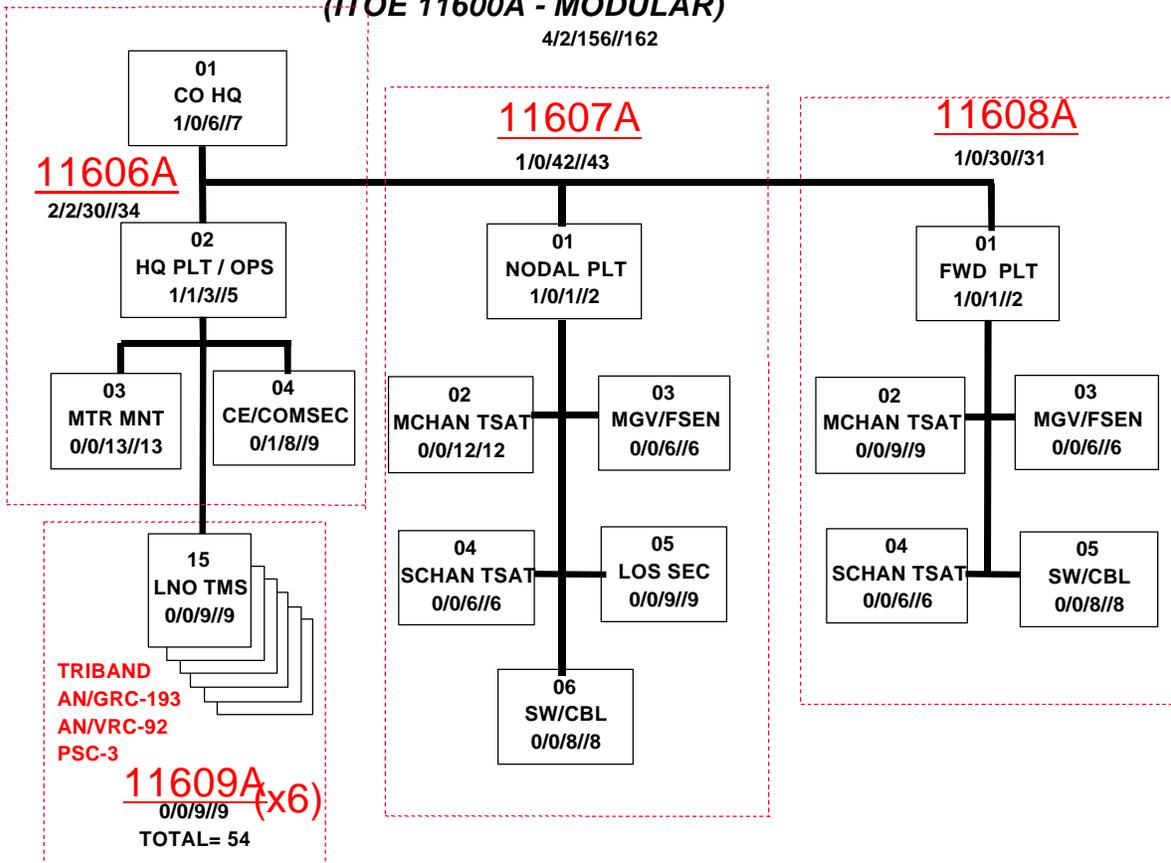


Figure 4-8. POWER PAC3 Company Intermediate TOE Structure

# POWER PAC 3 COMPANY

(OTOE 11600A - MODULAR)

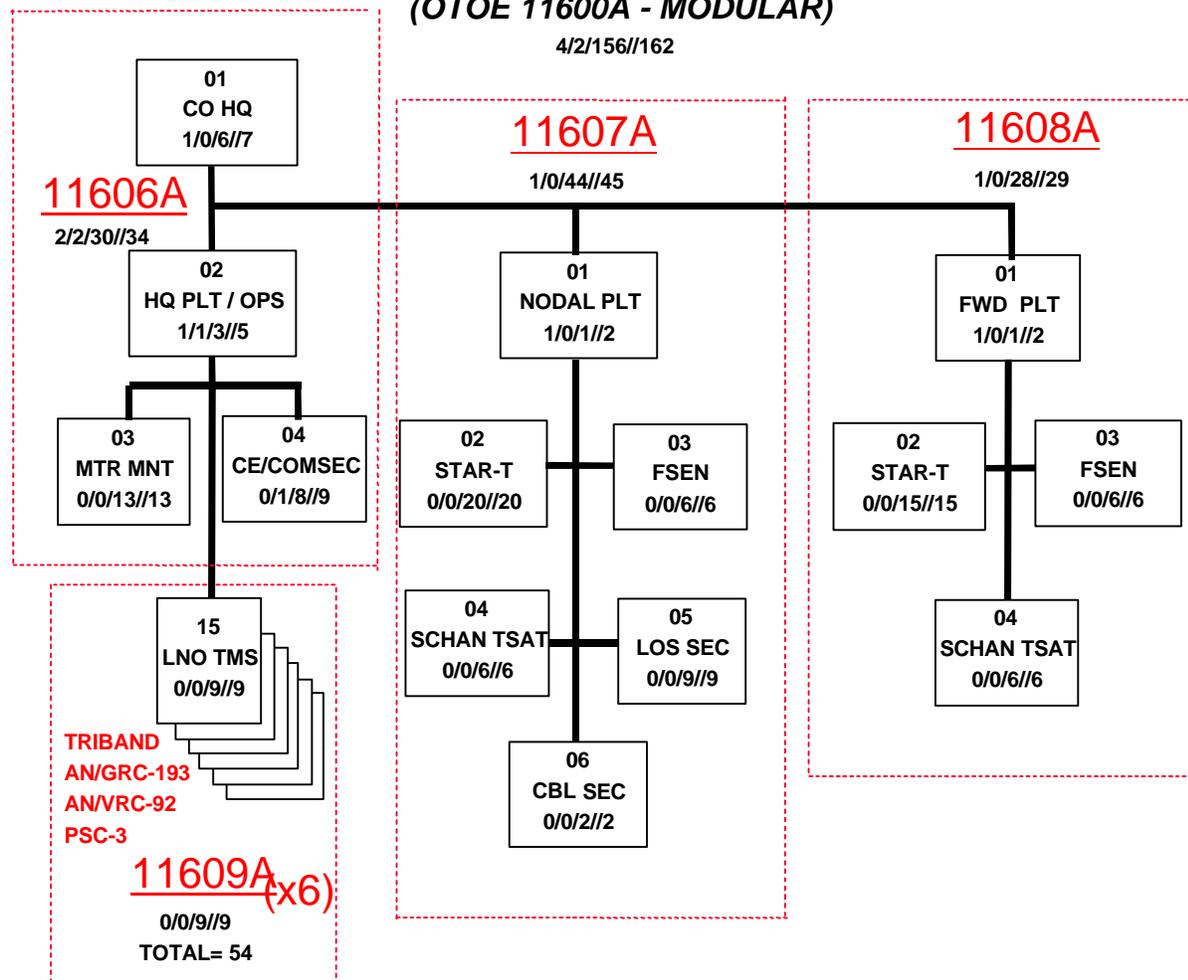


Figure 4-9. POWER PAC3 Company objective TOE Structure

4-30. The Power PAC3 mission is to rapidly deploy and support initial information service requirements of the ASCC. Working in concert with deployed Army Mobile Liaison Teams, the organizations are mutually supportive and capable of meeting the entire gamut of communications/information needs of the ground component commander until the arrival of the TSC. The company is capable of extending US strategic communications systems in support of an allied force.

4-31. The Power PAC3 Company is a critical C2 communications provider, which serves to ensure success during power projection operations. The unit is highly mobile and is tailored to any warfighting ground component commander's mission essential communications and information needs.

4-32. Power PAC3 Company is designed for deployment into a logistically austere theater with little or no communications infrastructure. The unit must be capable of sustaining itself for up to 45 days; therefore, the operator/maintainer must get maximum use of each piece of equipment.

4-33. Upon ARFOR deployment, Power PAC3 Company's configuration is determined by mission requirements. Generally, the Power PAC3 Company is broken down into three sections: the ARFOR Main Command Post (CP), ARFOR Forward Command Post, and six Liaison Officer (LNO) Signal Support Teams (LNO SST). Each section provides a variety of communications capabilities for the headquarters it supports. Assets from the LNO teams could extend the theater information infrastructure to support other or additional support missions, as required (see Figure 4-10).

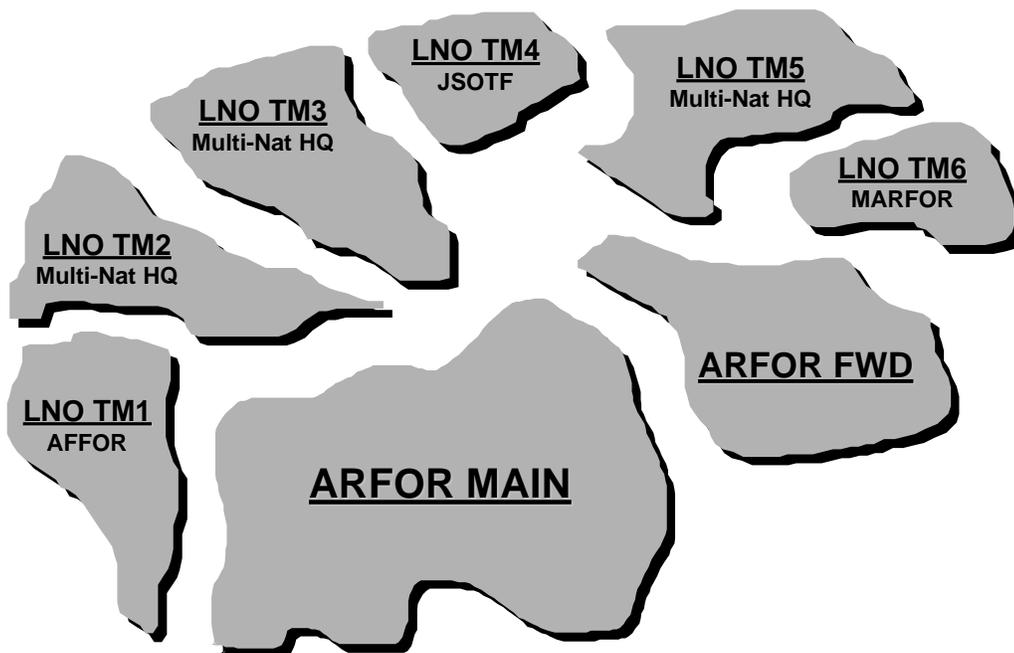


Figure 4-10. POWER PAC3 AOR Support Requirements

#### **Headquarters/Operations Platoon, TOE 11606A000**

4-34. The Headquarters/Operations Platoon consists of the company headquarters, network management, motor maintenance, C-E/COMSEC maintenance, and LNO sections.

4-35. This platoon is responsible for the command and control, management, network engineering, maintenance, supervision, and support of company personnel to include Liaison Officer (LNO) Signal Support Teams (SSTs) and any augmentation assets.

4-36. The operations section will engineer the installation of the communications systems required for the ARFOR, supervise and manage the operation of the network, and resolve technical problems.

#### **LNO Section, TOE 11609A000**

4-37. The LNO Section is composed of six signal support teams. Each signal support team is composed of a Super High Frequency Tri-Band Advanced Range Extension Terminal (STAR-T) section and a retrans/single channel TACSAT section. The SST is assigned to an Army LNO team and attached to a designated joint, coalition, or allied headquarters. The Power PAC LNO signal support team is responsible for installing, operating, and maintaining communications equipment and providing information services to the liaison team as required. This is done by satellite communications, digital voice switching, and commercial and host nation communications access. Each LNO signal support team is tailored to mission requirements and has organic to it a Standardized Integrated Command Post Shelter. Each team has the necessary equipment assigned to them for direct communications back to ARFOR Main and/or ARFOR Forward. As currently equipped, a typical support package provides thirty-two local secure terminal connections, one local LAN loop and connectivity to two extended LANs via X.25 ports which support access to the Tactical Packet Network. As an optimum planning for full scale Power PAC3 deployments, these SSTs should provide full information services to sixteen subscribers per site.

4-38. This unit is authorized an additional 12 Secure Telephones and 48 Nonsecure Telephones with appropriate Associated Support Items of Equipment (ASIOE) to provide service to those organizations who do not provide their own instruments.

#### **Nodal Platoon, TOE 11607A000**

4-39. The Nodal Platoon consists of the STAR-T section, retrans/single channel TACSAT section, Line of Sight (LOS) radio section, future SEN section, and cable and wire section. This platoon is responsible for the following information services (secure and non-secure) at the ARFOR Main Command Post (CP):

- Digital voice switching.
- Commercial and host nation communications access.
- LOS multi-channel radio.
- Satellite communications.
- Cable and wire operations; message processing.
- NIPIRNET (e-mail) access.

4-40. As currently equipped, a typical support package provides 128 local secure terminal connections, four local LAN loops, and connectivity to eight extended LANs via X.25 ports which support access to the Tactical Packet Network.

4-41. This unit is authorized an additional 70 Secure Telephones and 222 Nonsecure Telephones with appropriate Associated Support Items of

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Equipment (ASIOE) to provide service to those organizations who do not provide their own instruments.

**Forward Platoon TOE 11608A000**

4-42. The Forward Platoon consists of the STAR-T section, retrans/single channel TACSAT section, and future SEN section. This platoon is responsible for the installation, operation, and maintenance of the communications equipment at ARFOR Forward and providing information services (secure and non-secure) to include message processing and NIPIRNET (e-mail) access as required. This is done by means of satellite communications, cable and wire operations, digital voice switching, and commercial and host nation communications. As currently equipped, a typical support package provides 96 local secure terminal connections, three local LAN loops and connectivity to six extended LANs via X.25 ports which support access to the Tactical Packet Network.

4-43. This unit is authorized an additional 70 Secure Telephones and 222 Nonsecure Telephones with appropriate Associated Support Items of Equipment (ASIOE) to provide service to those organizations who do not provide their own instruments.

4-44. See Appendix B, paragraph B-49 for further information on this unit.

**SIGNAL TELECOMMUNICATIONS BATTALION (AREA), TOE 11635L0**

4-45. The mission of this unit is to install, operate, and maintain communications nodes. This unit provides two extension nodes to support medium-sized functional commands (such as the Medical Command (MEDCOM) or Personnel Command (PERSCOM)).

4-46. This unit can install area communications system facilities consisting of three or four area nodes, 12 small extension nodes, and two medium headquarters extension nodes with three organic area signal companies (see Figure 4-11).

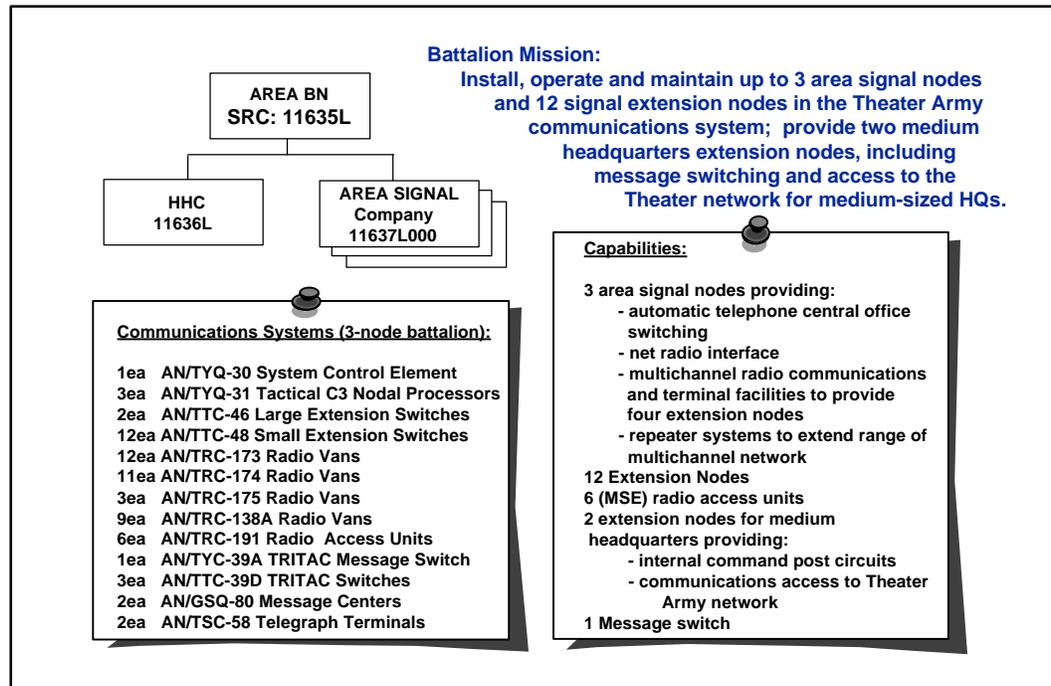


Figure 4-11. Signal Telecommunications Battalion (Area)

4-47. Figure 4-12 is an example of a doctrinal employment of three Signal Telecommunications Battalions.

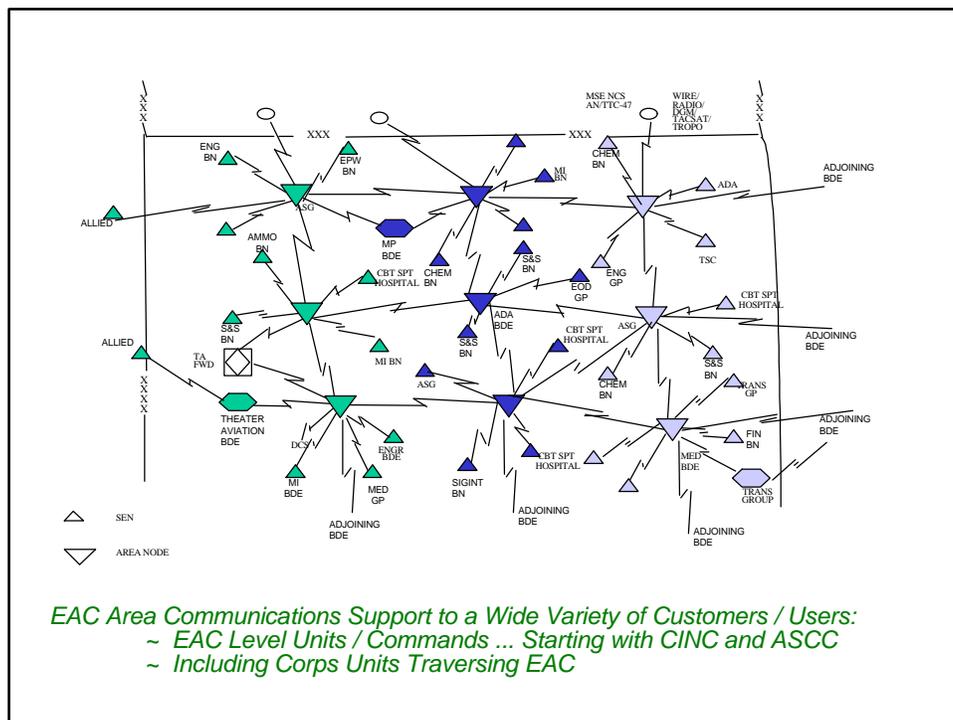


Figure 4-12. Doctrinal Employment of Telecommunications Battalions

### HHC, Signal Telecommunications Battalion (Area), TOE 11636L0

4-48. The mission of this unit is to provide the following (see Figure 4-13):

- Command, control, administration and logistical support for a signal telecommunications battalion (area).
- Install, operate, and maintain two medium HQ extension nodes for internal command post communications and access to the area communications system.

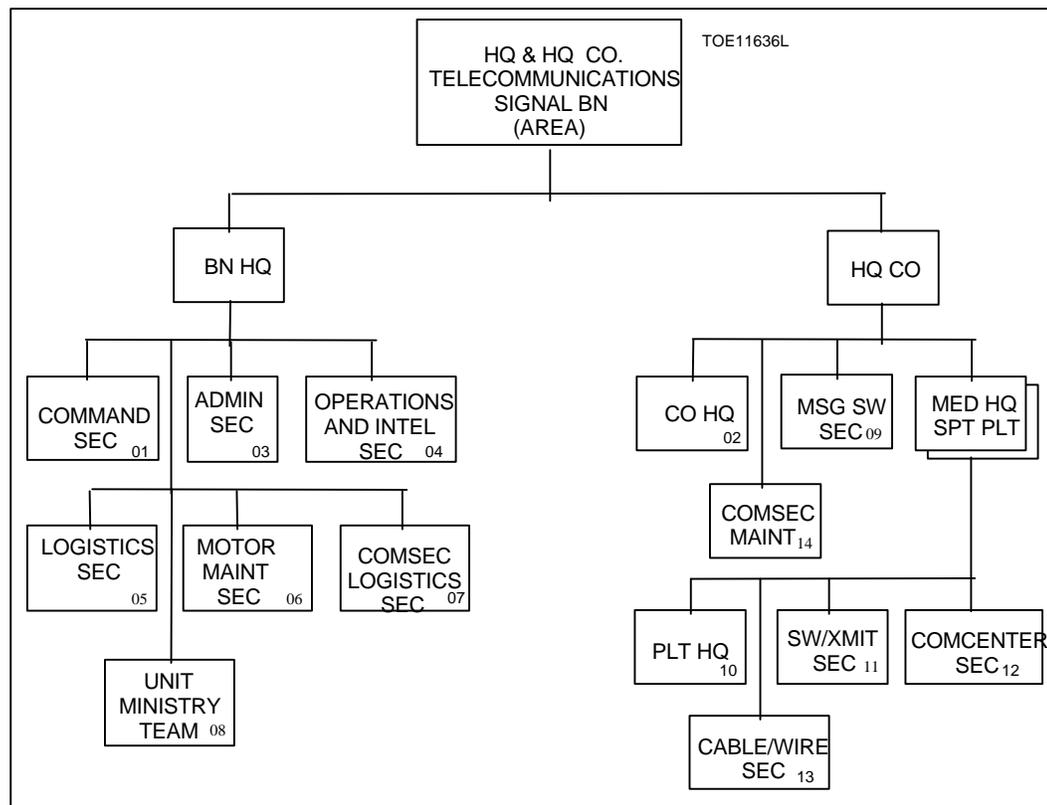


Figure 4-13. HHC, Signal Telecommunications Battalion (Area)

4-49. This unit provides the following capabilities:

- Command and control, staff planning, and supervision of the battalion.
- Administrative and logistical support for the battalion to include: unit administration for assigned or attached units; staff supervision of automotive, power generation, and air conditioning equipment maintenance; backup unit maintenance and vehicle recovery for organic companies; and bulk fuel resupply for units assigned to battalion, and COMSEC DS maintenance for the battalion.
- Two medium HQ extension node platoons to provide internal command post circuit and message switching, communications access, and over the counter service to the ASCC Area Communications

Systems for medium size HQ (for example, Theater Army Area Command (TAACOM), MEDCOM, Engineer Command (ENCOM), PERSCOM, TRANSCOM, and other comparable sized units).

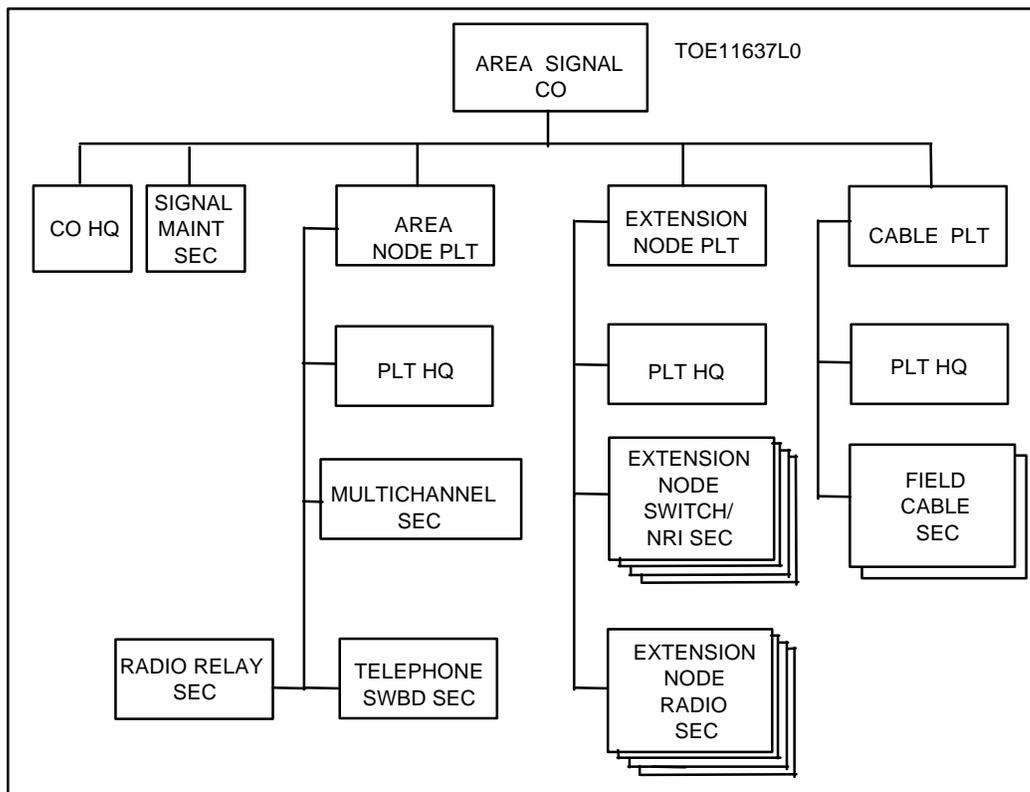
- Message switching facility for operation at one of three area nodal centers.
- Consolidated property book for assigned units.

4-50. This unit is authorized an additional 70 Secure Telephones and 100 Non Secure Telephones with appropriate ASIOE to provide service to those organizations who do not provide their own instruments.

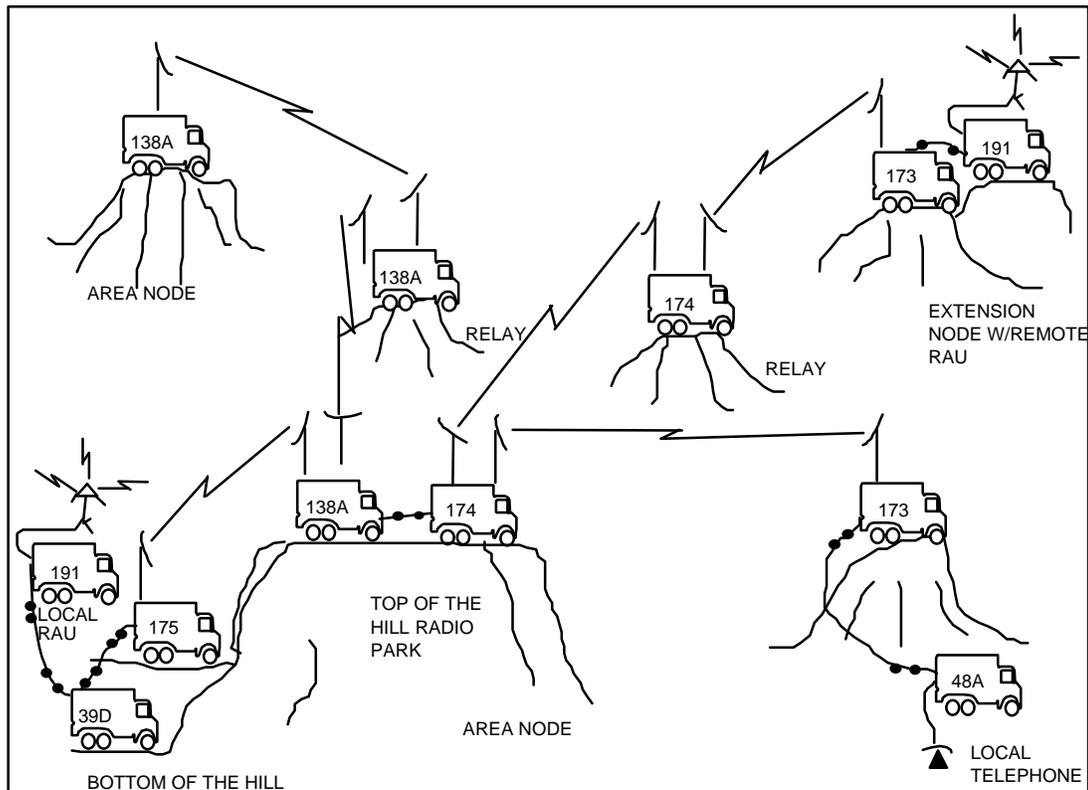
4-51. This unit depends upon appropriate elements of the ASCC for personnel; finance, legal, and administrative services; health services; supplemental transportation; and photographic and construction engineer support. It is co-located with an area signal company for Direct Support (DS) maintenance for CE communications equipment and food service support.

**Area Signal Company, TOE 11637L0**

4-52. The mission of this unit is to install, operate, and maintain an area node and extension signal nodes in the common-user area nodal system of the TCS (see Figure 4-14). Figure 4-15 illustrates the Area Signal Company site layout.



**Figure 4-14. Area Signal Company**



**Figure 4-15. Area Signal Company Site Layout**

4-53. An Area Signal Company area node provides the following services:

- Automatic telephone office switching facilities, AN/TTC-39D.
- A Net Radio Interface (NRI) for frequency modulated, voice radio access to the TCS.
- Multichannel radio communications facilities to terminate systems between the area node, adjacent area nodes, and extension nodes.
- Multichannel radio terminal facilities, AN/TRC-173, to provide four extension switching nodes for units requiring access to the TCS.
- Multichannel radio communications repeater stations, AN/TRC-174, to extend the range of the multichannel radio system.
- A Communications System Control Element (CSCE), AN/TYQ-31, for the management and control of the signal node facilities.
- Food service and unit level maintenance of organic equipment and DS maintenance on organic signal equipment.
- Two Mobile Subscriber Equipment (MSE) Radio Access units, AN/TRC-191, to provide subscriber access to the TCS.
- Food service and DS maintenance for CE equipment organic to HHC, Signal Telecommunications Battalion (Area), TOE 11636L0.

4-54. Each Telecommunications (Area) Company is authorized an additional 97 Secure Telephones and 168 Non Secure Telephones with appropriate

ASIOE to provide service to those organizations who do not provide their own instruments.

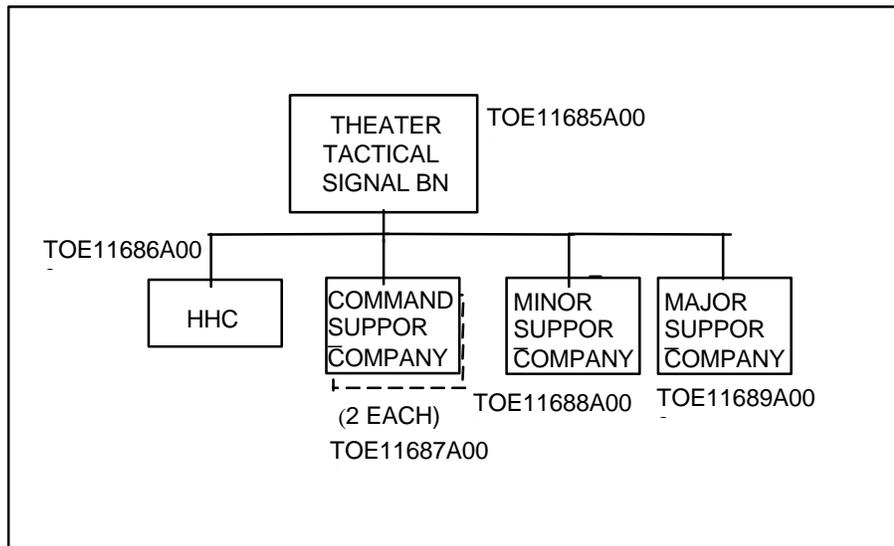
4-55. This unit depends on the Headquarters and Headquarters Company (HHC) Signal Battalion Telecommunications, TOE 11636L000, for refueling services, unit level administration, religious support, and DS for COMSEC equipment; and appropriate elements of the ASCC for health services, finance, legal, and transportation services.

**THEATER TACTICAL SIGNAL BATTALION, TOE 11685A000**

4-56. The following paragraphs describe the mission and capabilities of the Theater Tactical Signal Battalion.

4-57. The mission of this unit is to install, operate, and maintain nodal communications support for the commander of the ARFOR component to a CINC or JTF contingency operation or a Major Regional Conflict (MRC) deployment.

4-58. The battalion accomplishes its mission with a HHC signal battalion and four communications companies (two Command Support Companies, a Minor Support Company and a Major Support Company) (see Figure 4-16). A notional deployment of the Theater Tactical Signal Battalion is illustrated in Figure 4-17.



**Figure 4-16. Theater Tactical Signal Battalion**

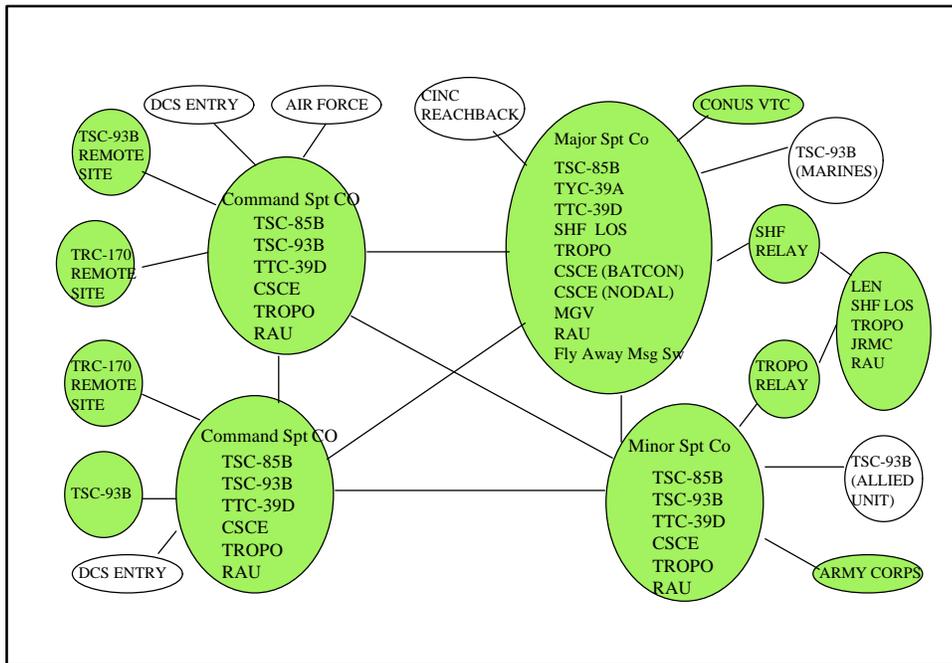
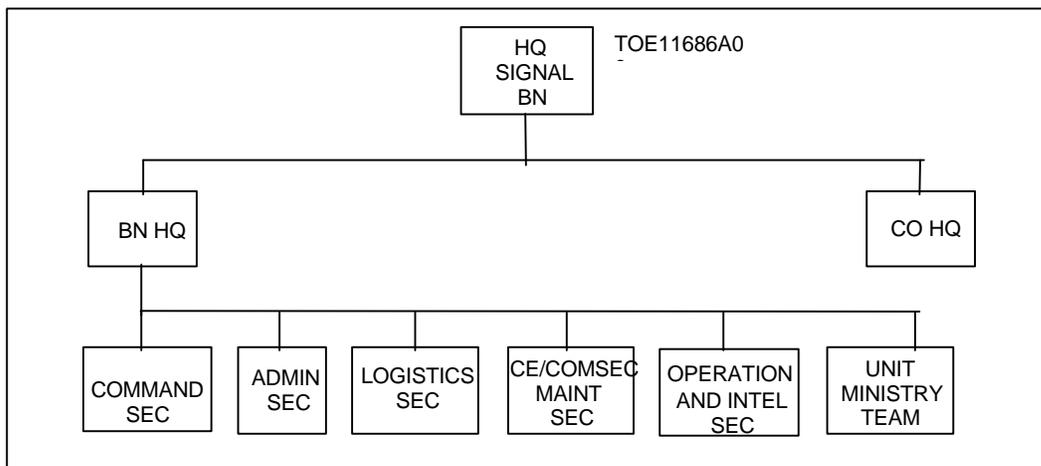


Figure 4-17. Notional Deployment of a Theater Tactical Signal Battalion

**HHC, Theater Tactical Signal Battalion, TOE 11686A00**

4-59. The mission of this unit is to provide the following (see Figure 4-18):

- HQ provides C2 of assigned or attached units.
- HQ provides logistics support and internal security to the HQ.



**Figure 4-18. HHC, Theater Tactical Signal Battalion**

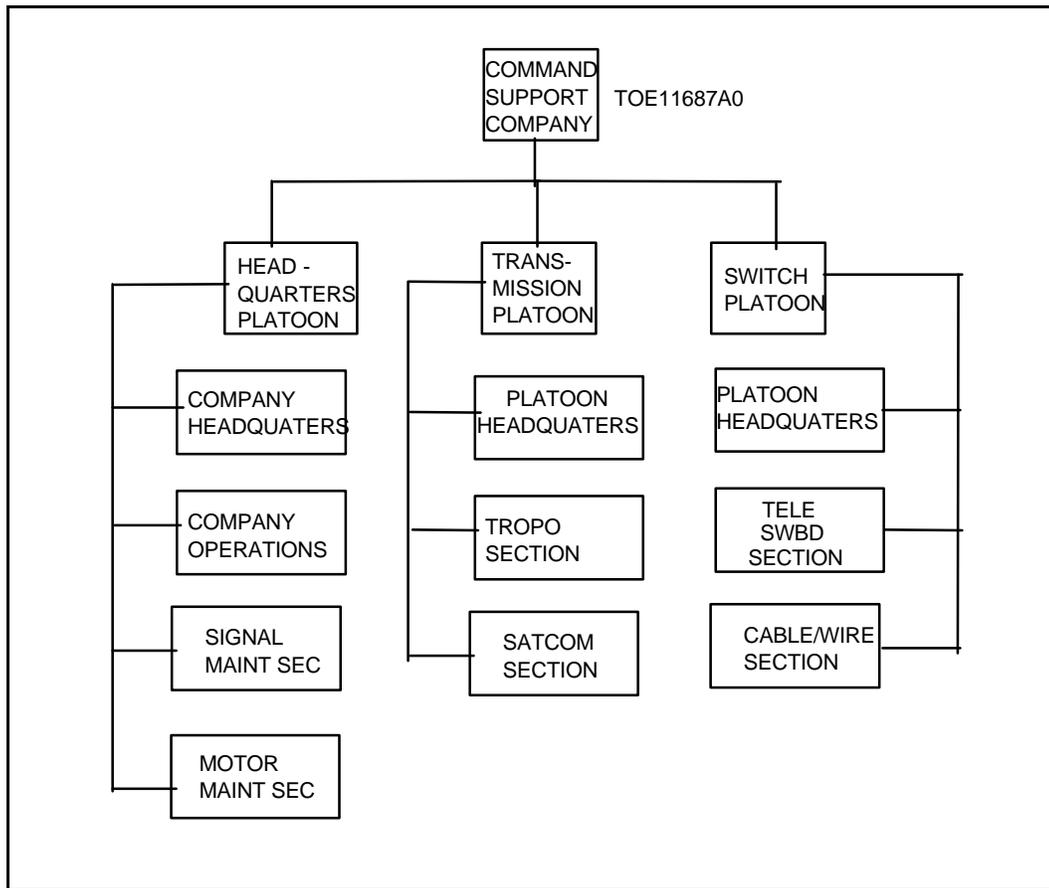
4-60. This unit provides the following capabilities:

- Provides C2, staff planning, and supervision of a signal battalion consisting of four companies.
- Maintains a consolidated property book for assigned units.
- Organic food service and unit maintenance support as well as DS maintenance of organic CE/COMSEC equipment.
- Provides religious support, food service support, and direct support of organization COMSEC equipment.

4-61. This unit depends upon assigned units for unit maintenance of wheeled vehicles, generators, and air conditioners. It also depends upon appropriate elements of the ASCC for unit level health services; legal, finance, personnel, and administrative services; food service; COMSEC maintenance; and supplemental transportation and vehicle recovery.

#### **Command Support Company, TOE 11687A0**

4-62. The mission of this unit is to provide nodal communication support for the ARFOR components to a CINC or JTF contingency operation or a MRC deployment (see Figure 4-19).



**Figure 4-19. Command Support Company**

4-63. This unit provides the following capabilities:

- Food service and unit level maintenance of organic equipment, as well as DS of organic CE/COMSEC equipment.
- Automatic telephone office switching facilities, AN/TTC-39D.
- Communications system control element (CSCE), AN/TYQ-31, for the management and control of the signal node facilities.
- AN/TSC-85B/93B Satellite Communication Terminals to provide secure, high data rate communication via satellite link.
- Installation, operation, and maintenance of two troposcatter radio systems, AN/TRC-170 V2. These systems can span a distance of up to 100 miles with maximum traffic channels.
- One MSE Radio Access unit, AN/TRC-191, to provide subscriber access to the TCS.
- Installation, maintenance, and repair of indigenous cable and wire systems.

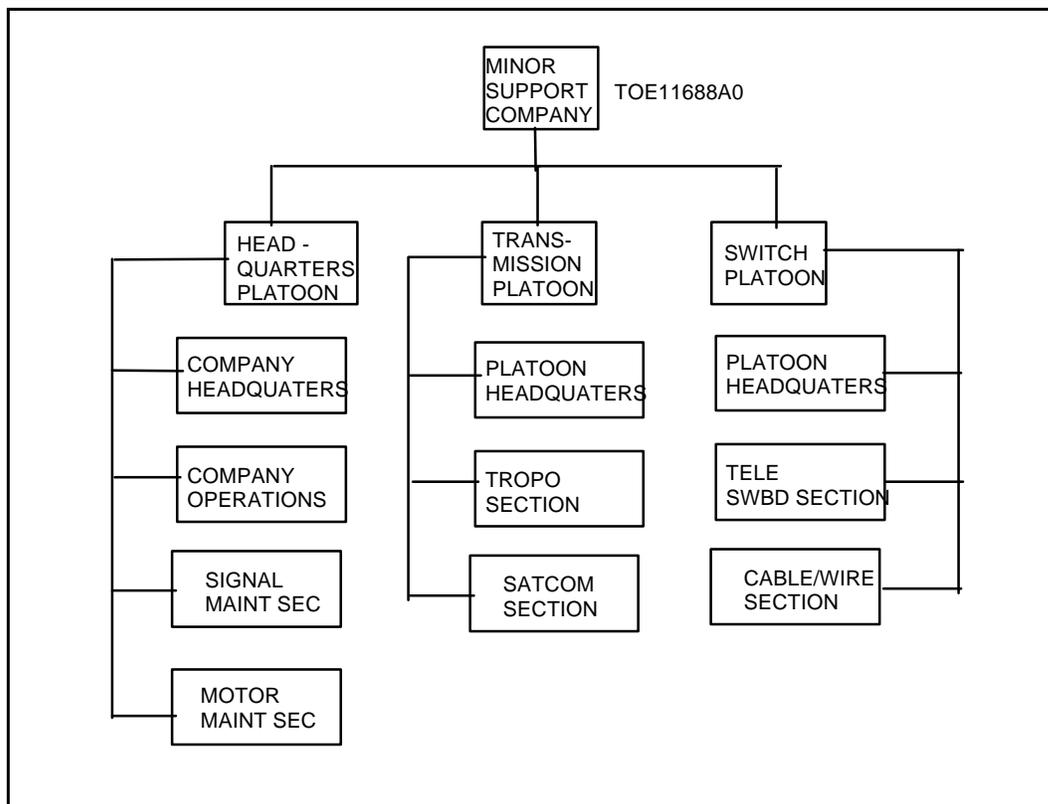
4-64. Each Command Support Company is authorized an additional 61 Secure Telephones and 210 Non Secure Telephones with appropriate ASIOE

to provide service to those organizations who do not provide their own instruments.

4-65. This unit depends on the Headquarters and Headquarters Company (HHC) Theater Tactical Signal Battalion, TOE 11686A00, for refueling services, unit level administration, religious support, and DS for COMSEC equipment; and appropriate elements of the TSC for health services, finance, legal, and transportation services.

**Minor Support Company, TOE 11688A0**

4-66. The mission of this unit is to provide nodal communication support for the ARFOR components to a CINC or JTF contingency operation or a MRC deployment (see Figure 4-20).



**Figure 4-20. Minor Support Company**

4-67. This unit provides the following capabilities:

- Food service and unit level maintenance of organic equipment, as well as DS maintenance of CE/COMSEC equipment.
- Automatic telephone office switching facilities, AN/TTC-39D.
- A communications system control element (CSCE), AN/TYQ-31, for the management and control of the signal node facilities.

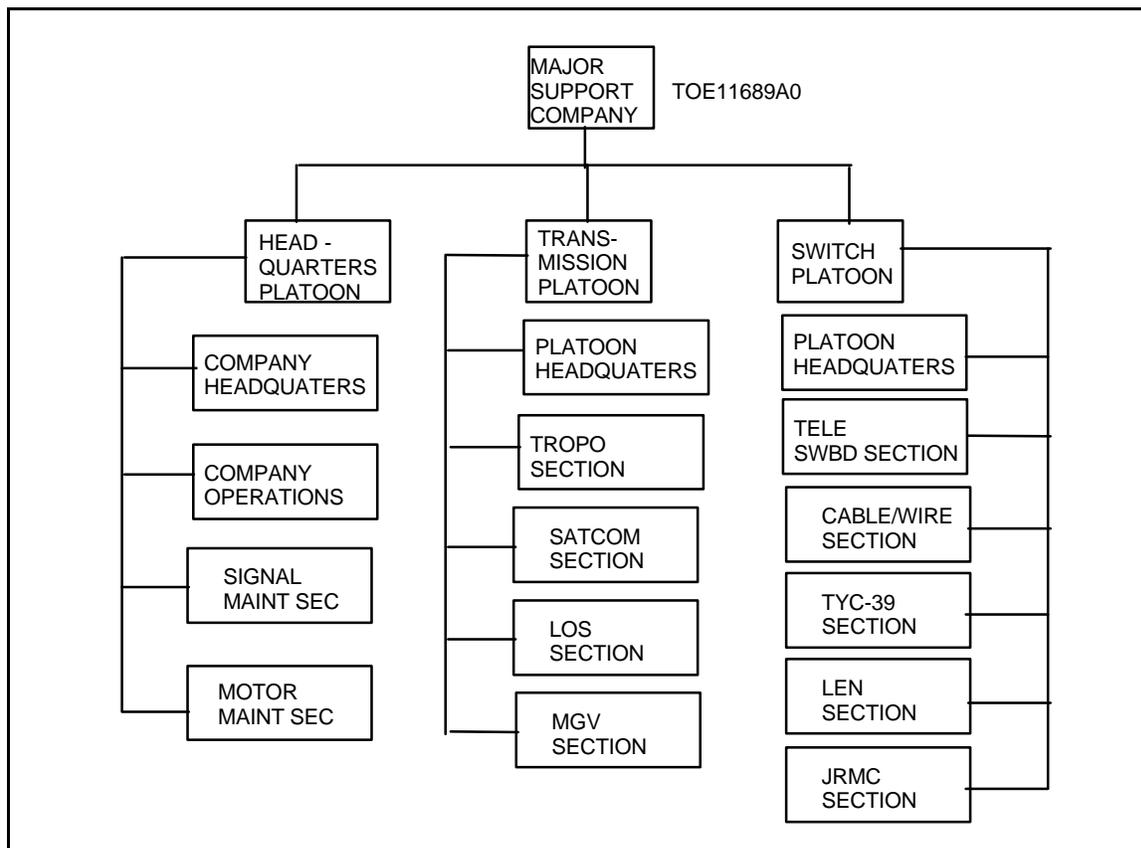
- 
- Two AN/TSC-93B Satellite Communication Terminals to provide secure, high data rate communication via satellite link.
  - Installation, operation, and maintenance of two troposcatter radio systems. These systems can span a distance of up to 100 miles with maximum traffic channels.
  - One MSE Radio Access unit, AN/TRC-191, to provide subscriber access to the TCS.
  - Installation, maintenance, and repair of indigenous cable and wire systems.

4-68. The Minor Support Company is authorized an additional 61 Secure Telephones and 210 Non Secure Telephones with appropriate ASIOE to provide service to those organizations who do not provide their own instruments.

4-69. This unit depends on the Headquarters and Headquarters Company (HHC) Theater Tactical Signal Battalion, TOE 11686A00, for refueling services, unit level administration, religious support, and DS for COMSEC equipment; and appropriate elements of the TSC for health services, finance, legal, and transportation services.

#### **Major Support Company, TOE 11689A0**

4-70. The mission of this unit is to provide nodal communication support for the ARFOR components to a CINC or JTF contingency operation or a MRC deployment (see Figure 4-21).



**Figure 4-21. Major Support Company**

4-71. This unit provides the following capabilities:

- Food service and unit level maintenance of organic equipment, as well as DS maintenance of CE/COMSEC equipment.
- Automatic telephone office switching facilities. One AN/TTC-39D, and one AN/TTC-46.
- A communications system control element (CSCE), AN/TYQ-31, for the management and control of the signal node facilities.
- A message switch, AN/TYC-39, equipped to provide secure automatic message switching service
- Two each AN/TSC-85B Satellite Communication Terminals to provide secure, high data rate communication via satellite link.
- Installation, operation, and maintenance of two troposcatter radio systems. These systems can span a distance of up to 100 miles with maximum traffic channels.
- One mobile subscriber equipment (MSE) Radio Access unit, AN/TRC-191, to provide subscriber access to the TCS.
- Installation, maintenance, and repair of indigenous cable and wire systems.

- Multichannel radio communications facilities to terminate systems.
- A Fly Away Message Switch to provide record data communications message support and over the counter service for both classified and unclassified customers.
- A Mobile Gateway Van (MGV) to provide an extension of the Non-classified Internet Protocol Router Network (NIPRNET) into the tactical deployed theater.

4-72. The Major Support Company is authorized an additional 105 Secure Telephones and 319 Nonsecure Telephones with appropriate ASIOE to provide service to those organizations who do not provide their own instruments.

4-73. This unit depends on the HHC Theater Tactical Signal Battalion, TOE 11686A00, for refueling services, unit level administration, religious support, and DS for COMSEC equipment; and appropriate elements of the TSC for health services, finance, legal, and transportation services.

**MAJOR SUPPORT COMPANY (SEPARATE)**

4-74. The mission of the Major Support Company (Separate) is to install, operate, and maintain nodal communications support for the commander of an ARFOR component to a CINC or JTF contingency operation or a MRC (see Figure 4-22). This unit can be assigned to a Strategic Signal Battalion, Tactical Theater Signal Brigade, or Theater Signal Command. The basis of allocation is as required in a MRC not to exceed one per TOE 11602L000.

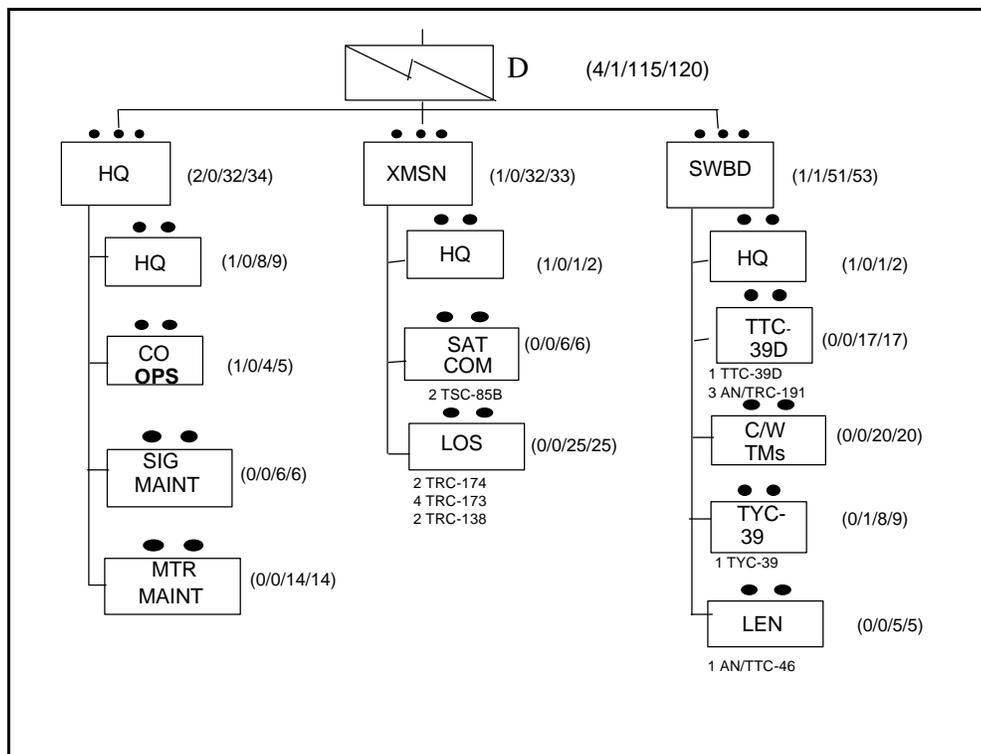
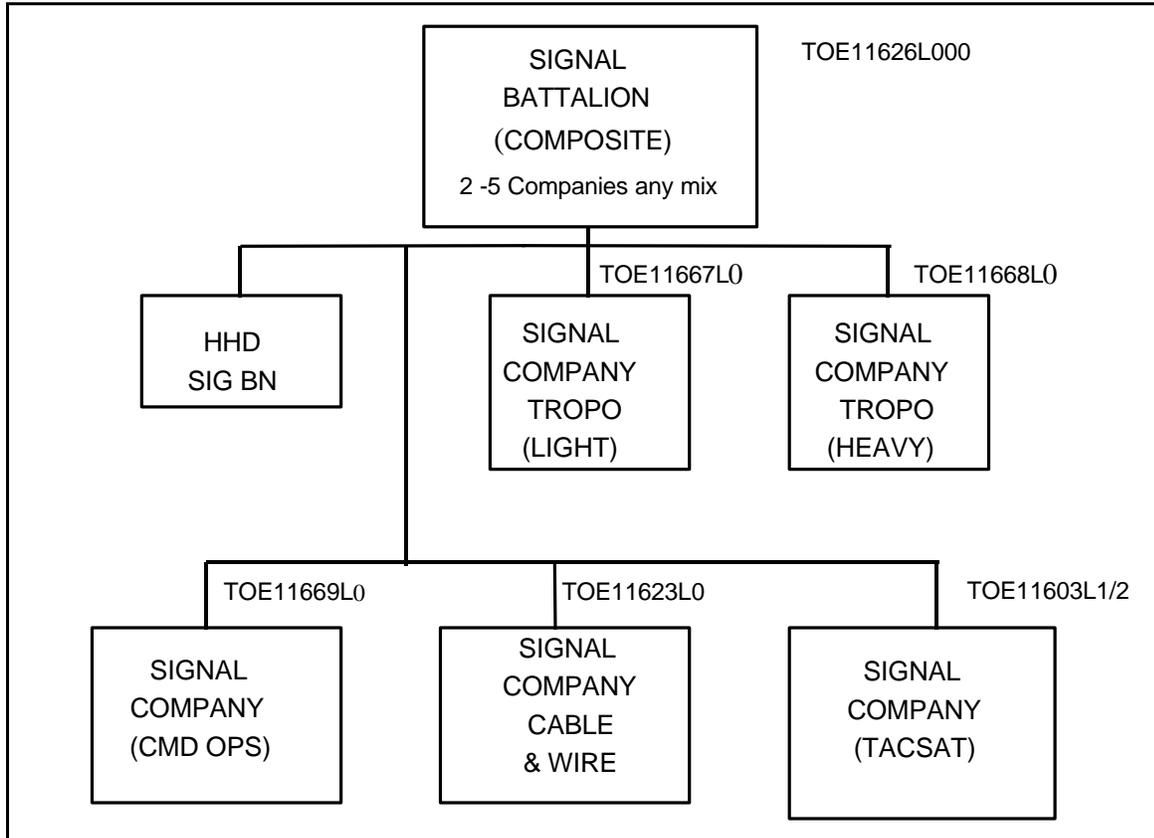


Figure 4-22. Major Support Company (Separate)

**SIGNAL BATTALION (COMPOSITE), TOE 11626L000**

4-75. The mission of Signal Battalion (Composite) is to install, operate and maintain long-haul communications as part of the Theater Signal Command and provide communications equipment in support of Joint Chiefs of Staff (JCS) operations as directed (see Figure 4-23).



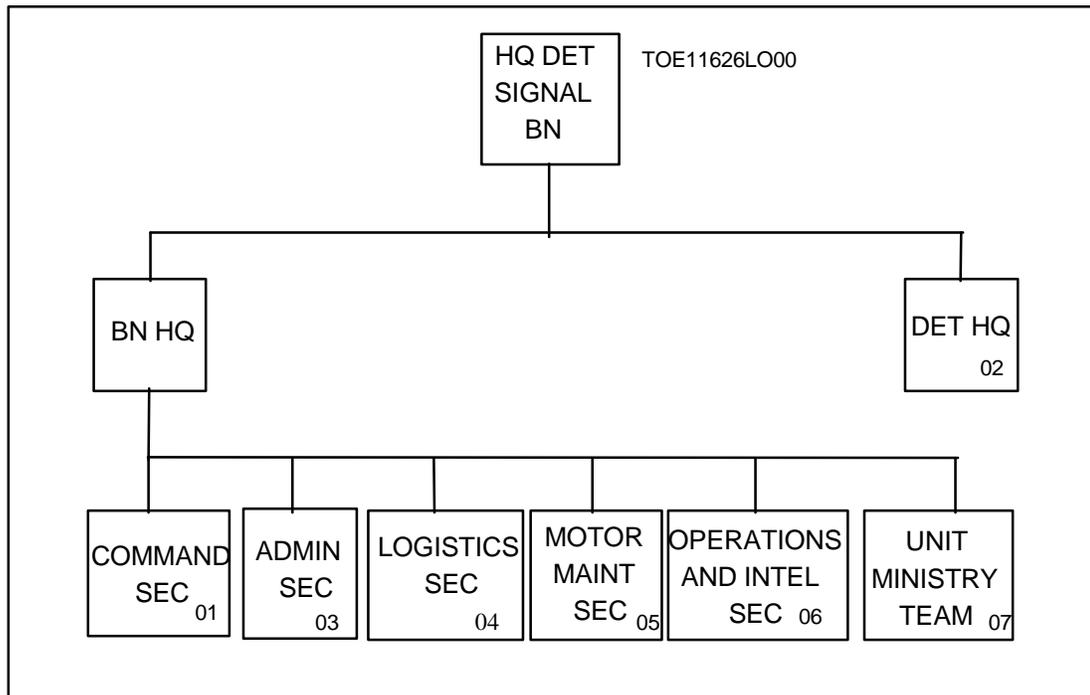
**Figure 4-23. A type of Signal Battalion (Composite)**

4-76. The battalion accomplishes its long haul mission with a Headquarters and Headquarters Detachment (HHD), Signal Battalion, and five unique signal communications companies.

**HHD, Signal Battalion (Composite)**

4-77. The mission of this unit is to provide the following (see Figure 4-24):

- HQ provides C2 of assigned or attached units.
- HQ detachment provides logistics support and internal security to the HQ.



**Figure 4-24. HHD, Signal Battalion (Composite)**

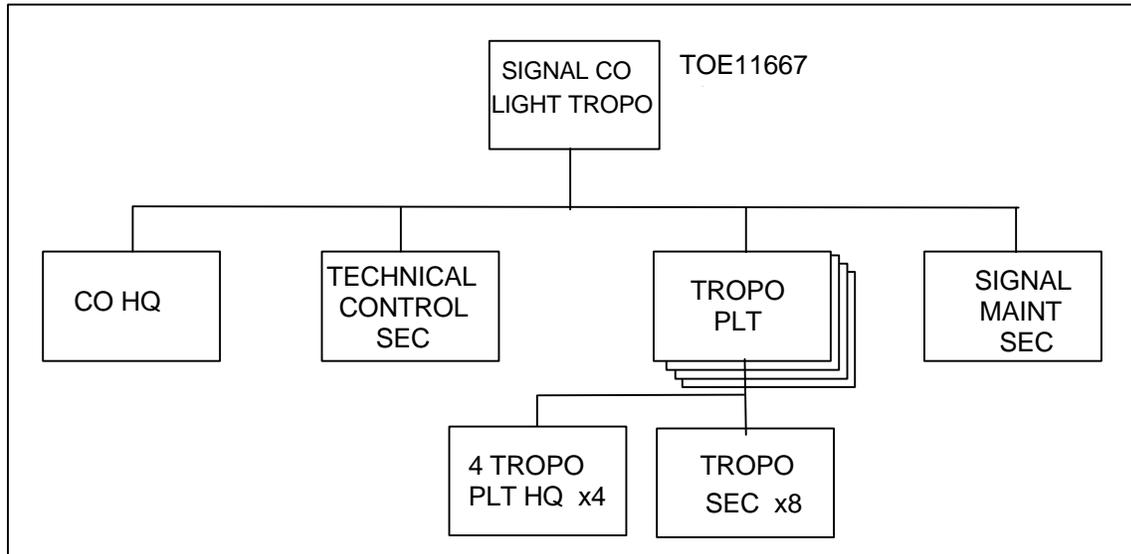
4-78. This unit provides the following capabilities:

- Provide C2, staff planning, and supervision of a signal battalion consisting of two to five companies.
- Maintains a consolidated property book for assigned units.
- Supplements an assigned unit with food service and motor maintenance support.
- Provides religious support for the battalion.
- Provides a Unit Maintenance Technician (Light) who is responsible for ensuring that maintenance is correctly performed in the unique communications companies.

4-79. This unit depends upon assigned units for unit maintenance of wheeled vehicles, generators, and air conditioners. It also depends upon appropriate elements of the ASCC for unit level health services; legal, finance, personnel, and administrative services; food service; COMSEC maintenance; and supplemental transportation and vehicle recovery. This unit depends on subordinate companies for DS of CE/COMSEC maintenance.

### **Signal Company, Light Troop, TOE 11667L0**

4-80. The mission of the Signal Company, Light Troop is to provide multichannel troposcatter radio communications links for long-distance communications (see Figure 4-25).



**Figure 4-25. Signal Company, Light Troop**

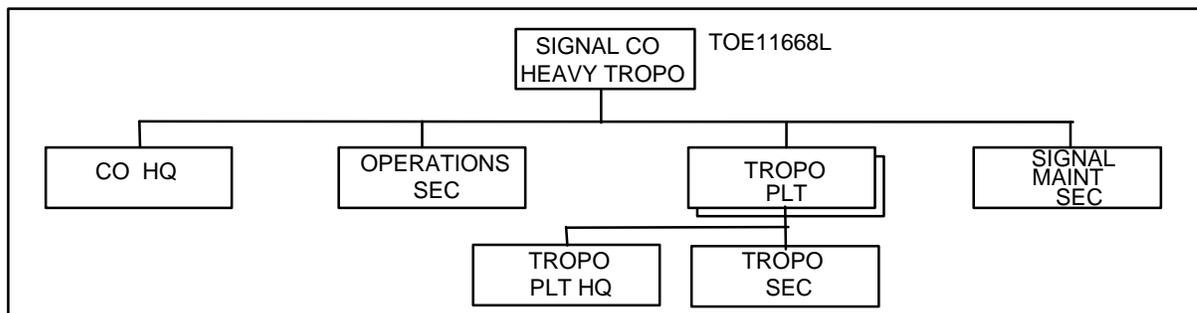
4-81. This Unit (AN/TRC-170 V3) provides the following:

- Installation, operation, and maintenance of eight troposcatter radio communications links (two terminals per link). These links can span a distance of up to 100 miles with maximum traffic channels.
- Circuit patching and limited test facilities to provide a limited technical control capability.
- Food service and performance of DS maintenance on all organic signal and COMSEC equipment and unit maintenance and vehicle recovery on organic equipment.

4-82. This company depends on appropriate elements of the ASCC for health services; legal, religious, finance, personnel, and administrative services; and supplemental transportation.

### **Signal Company, Heavy Troop, TOE 11668L0**

4-83. The mission of the Signal Company, Heavy Troop is to provide multichannel troposcatter radio communications links for long-distance communications in the COMMZ (see Figure 4-26).



**Figure 4-26. Signal Company, Heavy Troop**

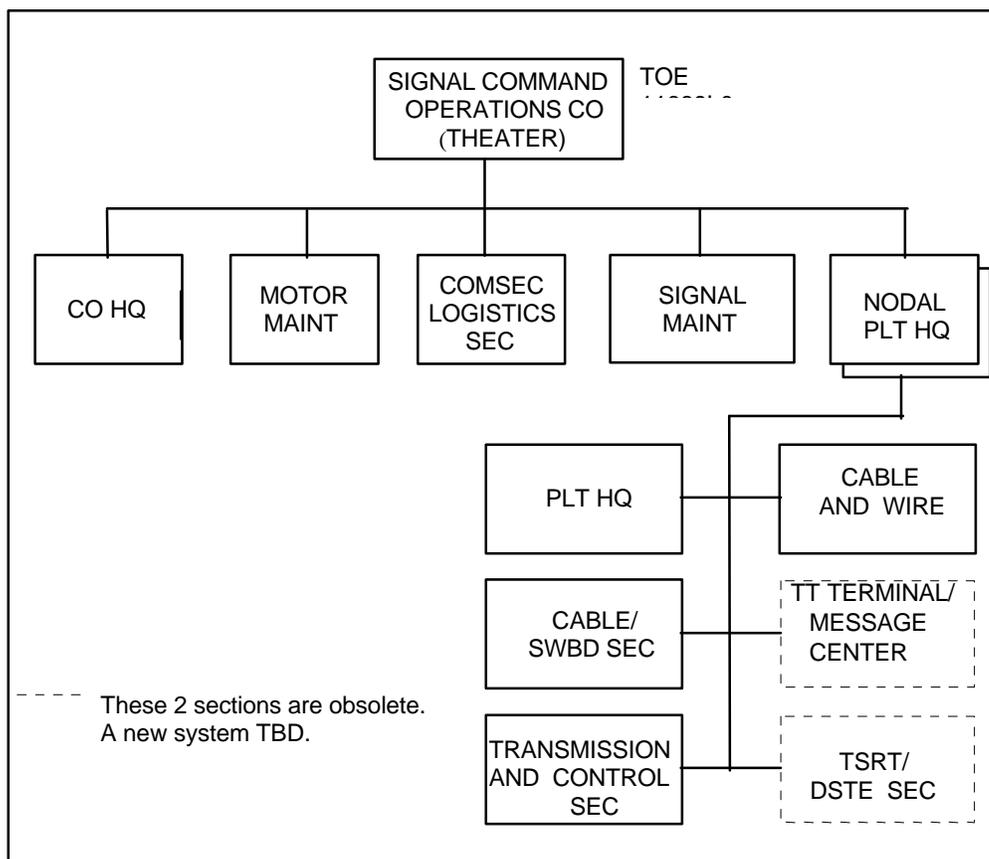
4-84. This unit provides the following capabilities

- Installation, operation, and maintenance of four troposcatter radio communications links (two terminals per link). These links can span up to 150 miles.
- Operation in dual or quad diversity mode (space and frequency).
- Food service and DS maintenance on all organic signal and COMSEC equipment and unit maintenance and vehicle recovery on organic equipment.

4-85. This unit depends on appropriate elements of the ASCC for health services; legal, religious, finance, personnel, and administrative services; supplemental transportation; communications systems engineering support, to include frequency allocation, transmission path determination, antenna or orientation survey, and communications plan layout; and logistics support of CE equipment.

### **Signal Company, Command Operations, TOE11669L0**

4-86. The mission of the Signal Company, Command Operations is to provide communications facilities in the TCS for an EAC MSC, ASCC headquarters or an equivalent size headquarters (see Figure 4-27).



**Figure 4-27. Signal Company, Command Operations**

4-87. The Signal Company, Command Operations provides the following capabilities:

- Installation, operation, and unit maintenance of communications facilities supporting a major headquarters which includes a main and rear or jump capability.
- Food service and unit level maintenance of organic equipment, as well as DS maintenance of CE/COMSEC equipment.
- Two circuit switches, AN/TTC-39D, providing service for up to 744 local telephones and one large extension switch providing service for up to 176 subscribers, both secure and nonsecure.
- Two Technical Control Centers (TCC) for circuit patching, testing, and controlling terminal communications facilities.
- Four high-capacity Line-of-Sight (LOS) radio repeaters.
- Two 96-channel multiplex terminals for terminating the connecting links between the headquarters and two separate TCS switching centers.
- Two message switches, AN/TYC-39, equipped to provide facsimile service, and normal message handling services to include over the

counter service and messenger services with limited motor messenger capability.

- Two antenna erection teams to assemble and disassemble the antenna towers, extending the LOS multichannel over natural and manmade obstruction.

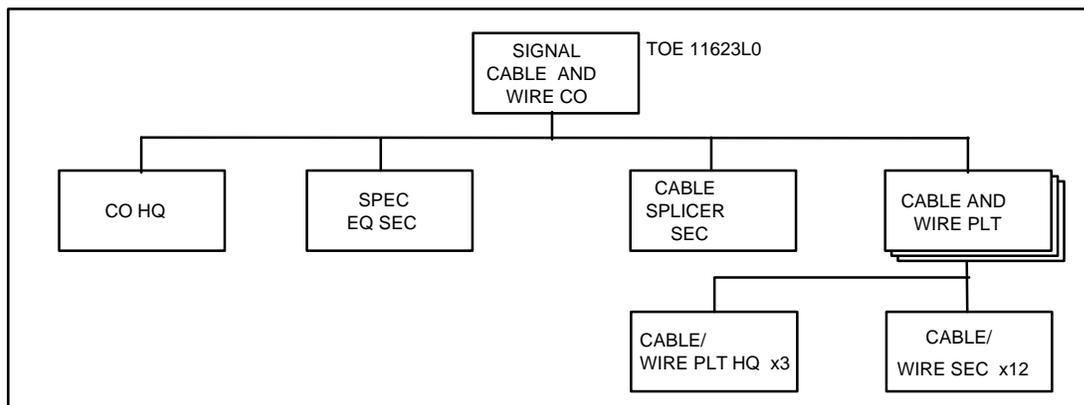
4-88. The Signal Company, Command Operations is authorized an additional 157 secure telephones and 290 nonsecure telephones with appropriate ASIOE to provide service to those organizations who do not provide their own instruments.

4-89. This unit depends on appropriate elements of the ASCC for health services; finance, legal, religious, personnel, and administrative services; engineer construction support; and supplemental transportation requirements. It also depends on a signal cable and wire company, TOE 11623L000, for construction of all external coaxial cable systems.

### Signal Company, Cable and Wire, TOE 11623L0

4-90. The mission of the Signal Company, Cable and Wire is to provide the following (see Figure 4-28):

- Cable and wire circuits between major headquarters and subordinate units.
- Cable and wire circuits from multichannel radio sites to terminating or switching equipment.
- Interconnecting cables and wire between area nodes and the TCS.



**Figure 4-28. Signal Company, Cable and Wire**

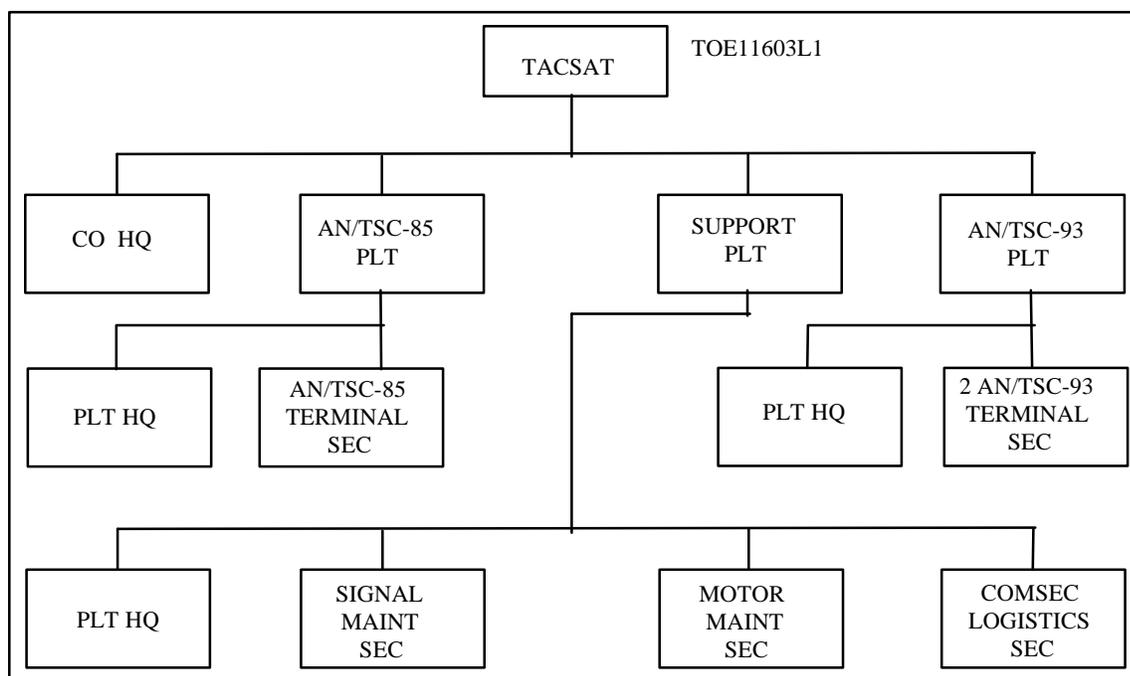
4-91. The Signal Company, Cable and Wire provides the following capabilities:

- Installation, maintenance, and repair on aerial, buried, or underground cable, wire, and Fiber-optic Transmission Systems (FOTSS).
- Repair and maintenance of indigenous cable and wire systems.
- Food service and unit maintenance on organic equipment.

4-92. This unit depends on appropriate elements of the ASCC for unit level health services; finance, legal, personnel, and administrative services; supplemental transportation; COMSEC maintenance; and vehicle recovery over five tons. It also depends on a HHD signal battalion for religious support.

### Signal Company, TACSAT, TOE 11603L100/11603L200

4-93. The mission of the Signal Company, TACSAT is to provide tactical satellite terminal facilities at major communications switching nodes and command posts in a TCS. The mission determines the type and quantity of TACSAT systems and identifies the tailoring of the TOE to support the requirement (see Figure 4-29).



**Figure 4-29. Signal Company, TACSAT**

4-94. The Signal Company, TACSAT provides the following capabilities:

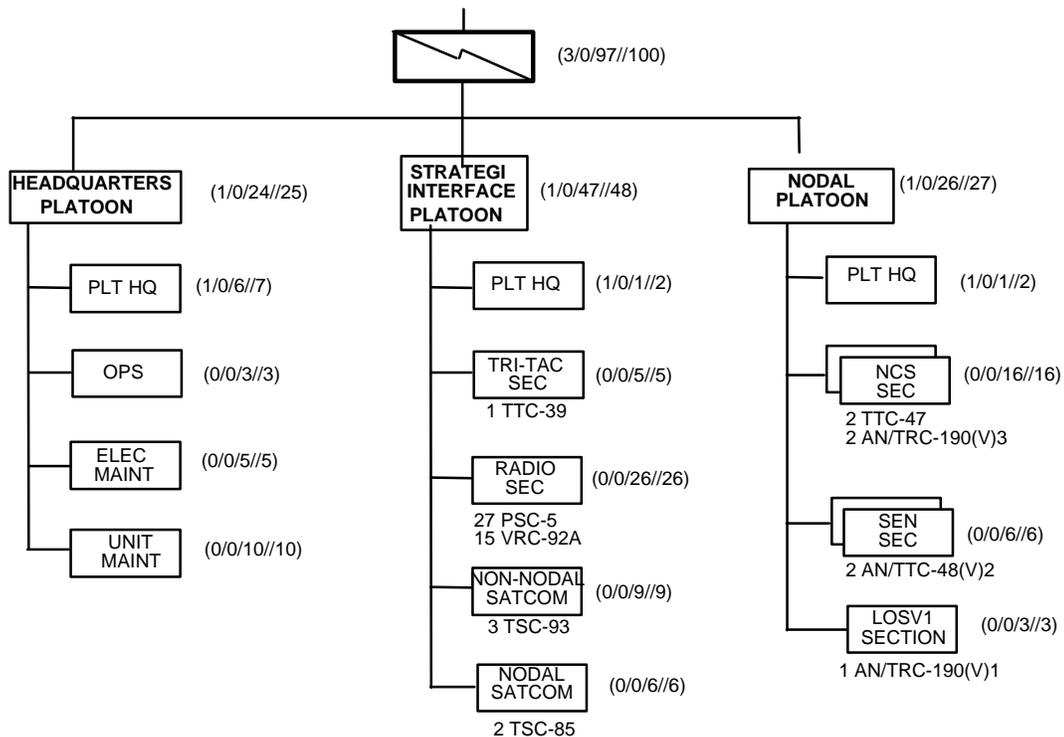
- Installation, operation, and maintenance of eight satellite communications terminals (AN/TSC-85) and eight satellite communication terminals (AN/TSC-93) (TOE 11603L100), or six satellite communication terminals (AN/TSC-85) and ten satellite communication terminals (AN/TSC-93) (TOE 11603L200).
- Multichannel TACSAT provides connectivity between key EAC headquarters based on distance, terrain, criticality of links, and the need to augment LOS relays.
- Unit maintenance on all organic equipment and DS maintenance on organic COMSEC and signal equipment.
- Supplemental food service support.

4-95. This unit depends on appropriate Army units for health services; religious, legal, finance, personnel, and administrative services; food service; bulk Petroleum, Oils, and Lubricants (POL) resupply; and supplemental transportation, to include aircraft support for maintenance contact teams and critical equipment evacuation.

**THEATER TACTICAL SIGNAL COMPANY (SEPARATE) (TTSC(SEP))**

4-96. The mission of the TTSC (SEP) is to install, operate, and maintain nodal communications support for the commander of an ARFOR component to a CINC or JTF contingency operation or a MTW. The TTSC (SEP), as a separate company, can be assigned to a Strategic Signal Battalion, Tactical Theater Signal Brigade, or Theater Signal Command. The unit may be forward deployed or CONUS-based and deployed in support of an ASCC, Joint Force Land Component Command (JFLCC), Subordinate Unified Command, JTF, Single Service Force, or Theater CINC (see Figure 4-30). The basis of allocation is as required in a MTW not to exceed one per TOE 11800A000.

**Theater Tactical Signal Company**



**Figure 4-30. Organization of the Theater Tactical Signal Company (Separate)**

4-97. The TTSC (SEP) provides the following information and signal support services:

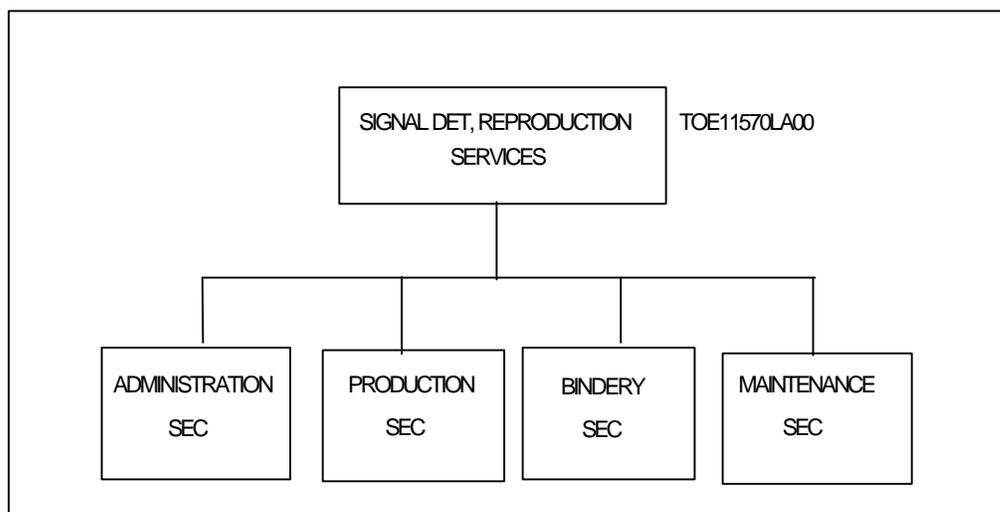
- Secure and nonsecure voice and data.

- Host nation/commercial telephone access.
- Increased theater connectivity.
- Combat Net Radio interface.
- Tactical Packet Network interface.
- Army Global Command and Control System connectivity.
- LAN technical support (systems management assistance).
- Multiple means of long range communications.
- Flood search routing.

4-98. The TTSC (SEP) is authorized an additional 79 secure telephones and 144 nonsecure telephones with appropriate ASIOE to provide service to those organizations who do not provide their own instruments.

### **SIGNAL DETACHMENT, REPRODUCTION SERVICES, TOE 11570LA00**

4-99. The mission of the Signal Detachment, Reproduction Services is to provide volume reproduction for all Army units at theater level. Individuals of these organizations can assist in the coordinated defense of the unit's area or installation (see Figure 4-31).



**Figure 4-31. Signal Detachment, Reproduction Services**

4-100. The Signal Detachment, Reproduction Services provides the following capabilities:

- Installation, operation, and maintenance of a reproduction facility to provide volume reproduction services to units serviced.
- Reproduction services include duplicating, collating, binding, and packaging.

4-101. This unit depends on appropriate elements of the ASCC for health services; legal, religious, finance, personnel, and administrative services; transportation; communications; and unit maintenance. This unit requires external support of truck tractors to deploy semi-trailers.