FM 10-27-3

TACTICS, TECHNIQUES, and PROCEDURES for QUARTERMASTER HEADQUARTERS OPERATIONS

OCTOBER 1990

Headquarters,
Department of the Army

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DEPARTMENT OF THE ARMY
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TACTICS, TECHNIQUES, AND PROCEDURES FOR QUARTERMASTER HEADQUARTERS OPERATIONS

FM 10-27-3, 30 October 1990, is changed as follows:

1. New or changed material is identified by a star (★).
2. Remove old pages and insert new pages as indicated below.

Remove pages:	**Insert pages:**
i through iv	i through v
1-1 through 1-13	1-1 through 1-13
2-1 through 2-18	2-1 through 2-25
3-7 and 3-8	3-7 and 3-8
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Glossary-1 through Glossary-3	Glossary-1 through Glossary-3
References-1 through References-5	References-1 through References-5
Index-1 through Index-4	Index-1 through Index-4

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Washington, DC, 30 October 1990

TACTICS, TECHNIQUES, AND PROCEDURES FOR QUARTERMASTER HEADQUARTERS OPERATIONS

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*This publication supersedes FM 10-14-1, 2 November 1984; FM 29-7, 29 May 1984; FM 29-146, 2 November 1984; Chapter 6 of FM 42-56, 29 September 1987; and Chapter 6 of FM 42-66, 30 September 1987.

★ CHAPTER 1

YOUR UNIT

Section I

THE HEADQUARTERS AND SUPPLY COMPANY

This section is for the company commander.

MISSION

The company mission involves both command and control and supply support. Headquarters personnel provide command and control to units assigned or attached to either the main or forward support battalion. Supply company personnel are responsible for planning and supervising the establishment and operation of supply and distribution points in their area of operation. As a rule, the main support battalion operates in the DSA, and the forward support battalion operates in the BSA.

Main Support Battalion

The command element of the MSB commands and controls units of the MSB in the light divisions. The supply element of the MSB supports the division by receiving, storing, and issuing Class I, II, III, IV, and VII supplies and by purifying nonpotable water and issuing potable water. Air assault division supply elements operate an ATP in the DSA. Airborne division supply elements provide airdrop training and guidance. Teams provide mortuary affairs services for all division soldiers. In the LID, the arctic support augmentation detachment provides the water needed to operate in an arctic environment. The QM hot/arid environment water team provides the water needed to operate in a hot or an arid environment.

Forward Support Battalion

The command element of the FSB commands and controls units of the FSB in the light divisions. The supply element of the FSB supports one of the maneuver brigades by receiving, storing, and issuing Class I, II, III, IV, and VII supplies and by operating an ATP in the BSA. Details on how your company operates in the theater are in FMs 10-27 and 10-27-2. Also, see FM 10-1 for an overview of supply and field service operations on the battlefield.

ORGANIZATION

Your company must meet mission requirements in changing situations. Your company is organized into a command section and a supply element, as shown in Figures 1-1 (page 1-2) and 1-2 (page 1-2).

ASSIGNMENT AND ALLOCATION

The headquarters and supply company is organic to a main or forward support battalion. This battalion is organic to the DISCOM of one of the light divisions. The three types of light divisions are the light infantry, the airborne, and the air assault divisions.

Main Support Battalion

The MSB, Figure 1-3 (page 1-3), has one headquarters and supply company. This company is usually located in the DSA near main lines of communication. It operates the supply and service system in the DSA. More details on the supply and service system in the DSA are in FMs 10-27 and 10-27-2.

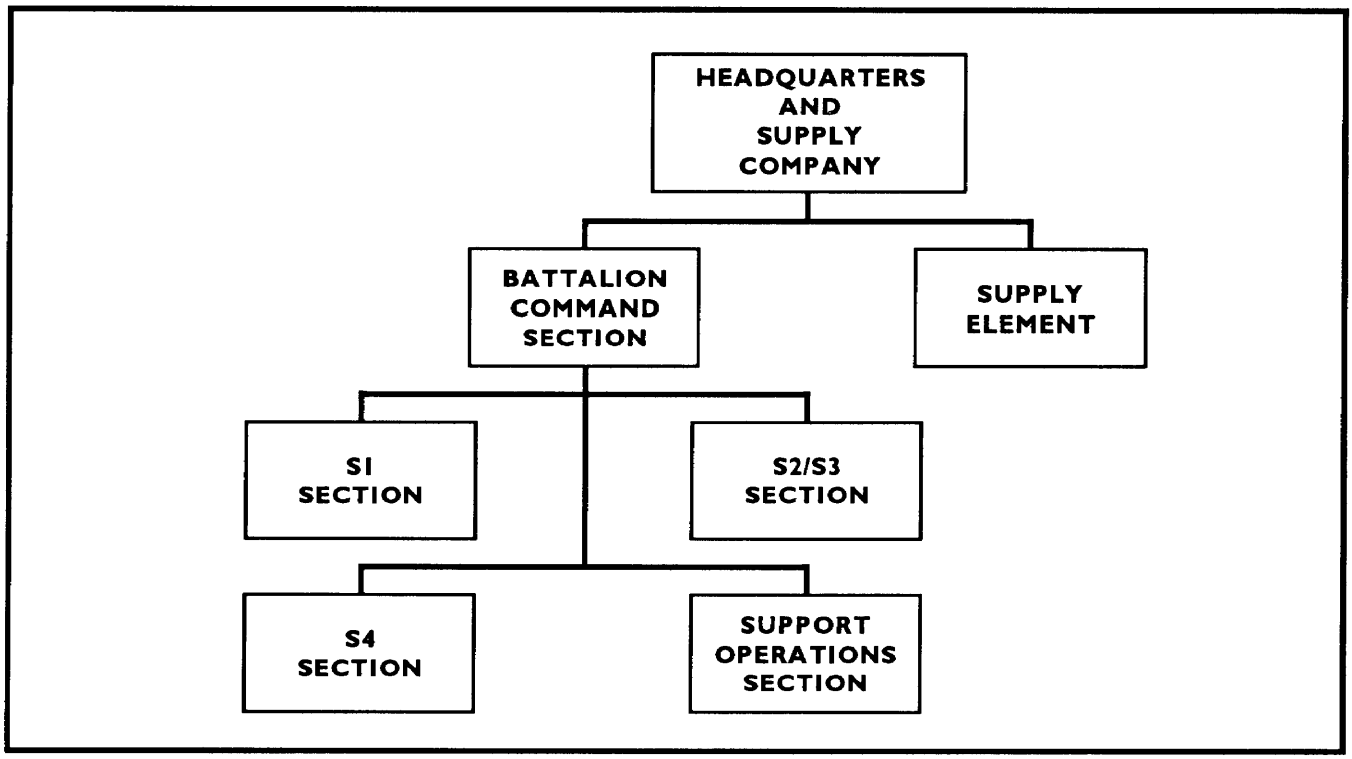


Figure 1-1. Headquarters and supply company, MSB or FSB, light infantry division

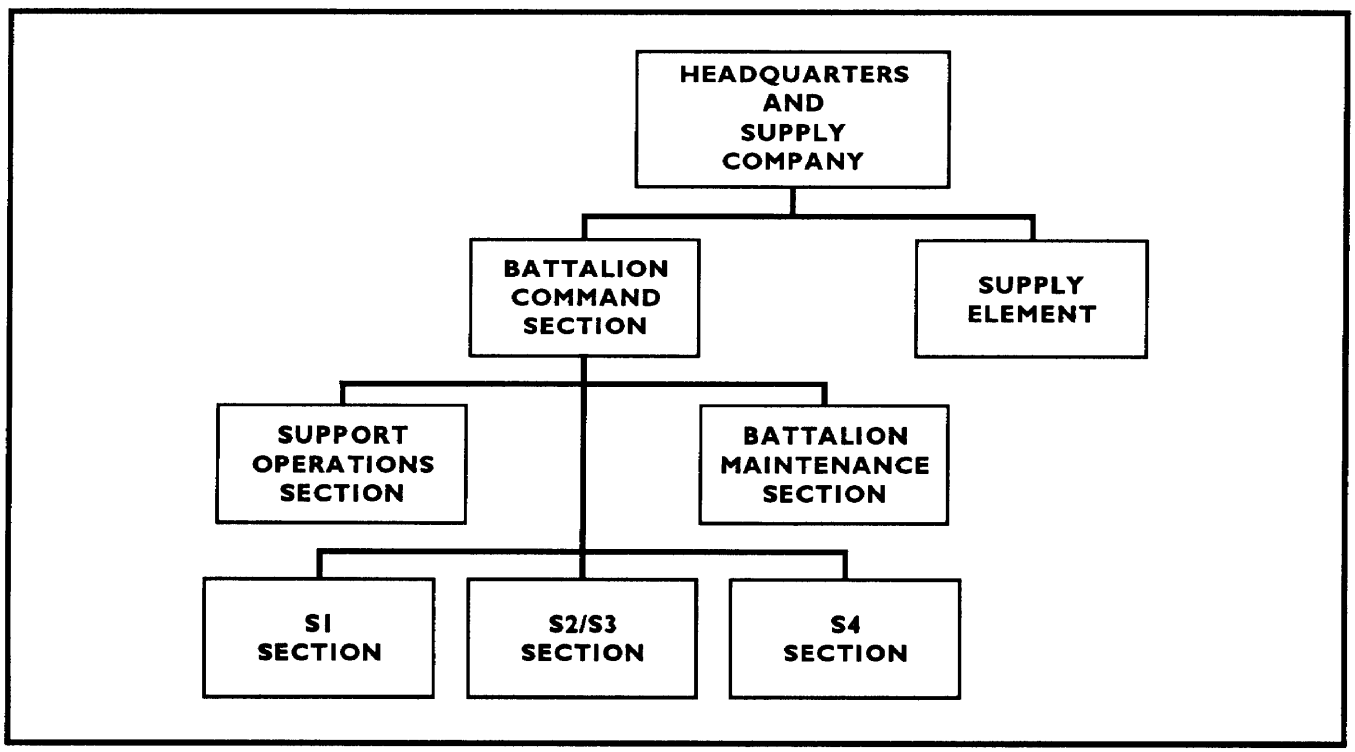


Figure 1-2. Headquarters and supply company, FSB, airborne or air assault division

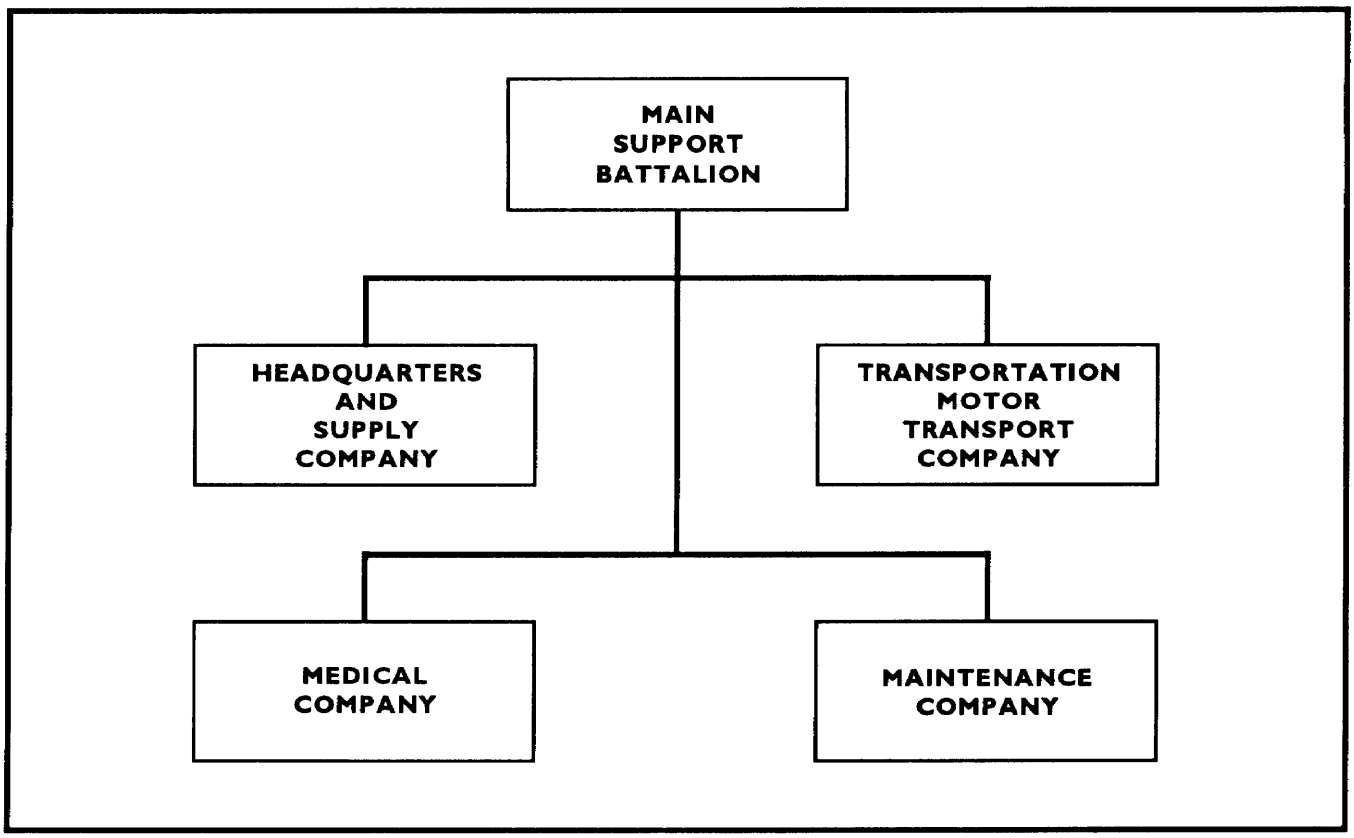


Figure 1-3. Main support battalion

Forward Support Battalion

The FSB, Figure 1-4 (page 1-4), has one headquarters and supply company. This company is usually located in the BSA near main lines of communication. It operates the supply and service system in the BSA. More details are in FMs 10-27 and 10-27-2.

CAPABILITIES

A unit's capabilities are altered by the personnel strength levels prescribed in its TOE. At TOE Strength Level 1, your company operates at 90 percent or greater. At Strength Level 2, your company operates at 80 to 89 percent capacity. At Strength Level 3, your company operates at 70 to 79 percent capacity. At Strength Level 4, your company operates below 70 percent capacity. For more on strength levels, see AR 220-1.

Main Support Battalion

The MSB headquarters and supply company can--

- Command and control organic and attached units.
- Plan, direct, and supervise DS maintenance, supply, transportation, health services, and field services support that the battalion provides to divisional units in the DSA.
- Provide advice and information to the DISCOM commander and supported units on the support capabilities that the battalion provides.
- Plan and supervise the establishment and operation of the supply points in the DSA.
- Receive, store temporarily, and issue supplies as shown in Table 1-1 (page 1-5). Your company does not supply classified maps, aircraft, airdrop or rail equipment, or COMSEC supplies.

At strength Level 1, the MSB headquarters and supply company can--

• Transload 250 short tons a day of high-usage ammunition from corps transportation to using unit vehicles when operating independently in one 12-hour shift. The ATP can transload 500 short tons (in the air assault division only) when operating on a 24-hour basis as part of a force larger than a brigade. The larger force would normally provide soldiers for a second shift. In the other light divisions, the ammunition supply company provides Class V.

• Purify and issue water at four (three in the LID) water supply points in the division and brigade support area.

• Store 24,000 gallons (51,000 in the LID) of potable water a day. Issue 72,000; 96,000; and 48,000 gallons a day using a freshwater source or 48,000; 72,000; and 36,000 gallons a day using a saltwater source in the LID, airborne, and air assault division, respectively.

• Distribute 7,200; 30,000; and 60,000 gallons of bulk petroleum a day in the LID, airborne, and air assault divisions, respectively. Fuel-dispensing vehicles must make two trips a day, and 75 percent of them must be available each day.

• Sling load supplies and equipment for which the company is responsible, (except in the LID). In the airborne division, you can also provide guidance and advice to units on matters relating to airdrop and provide staff supervision of technical training for personnel for the rigging and loading of supplies and equipment for airdrop.

• Provide unit-level administration for organic and attached units.

• Operate the supply points in the DSA and provide backup support to the supply points in the BSAs.

• Provide a nucleus to plan and supervise mortuary affairs when augmented.

• Provide food service support for the companies of the main support battalion and augmenters.

• Help to defend the company area.

• Provide POL resupply and unit maintenance on equipment of your company and the TMT company in the airborne and air assault divisions. Included are organic vehicles, generators, and radio and wire communications systems.

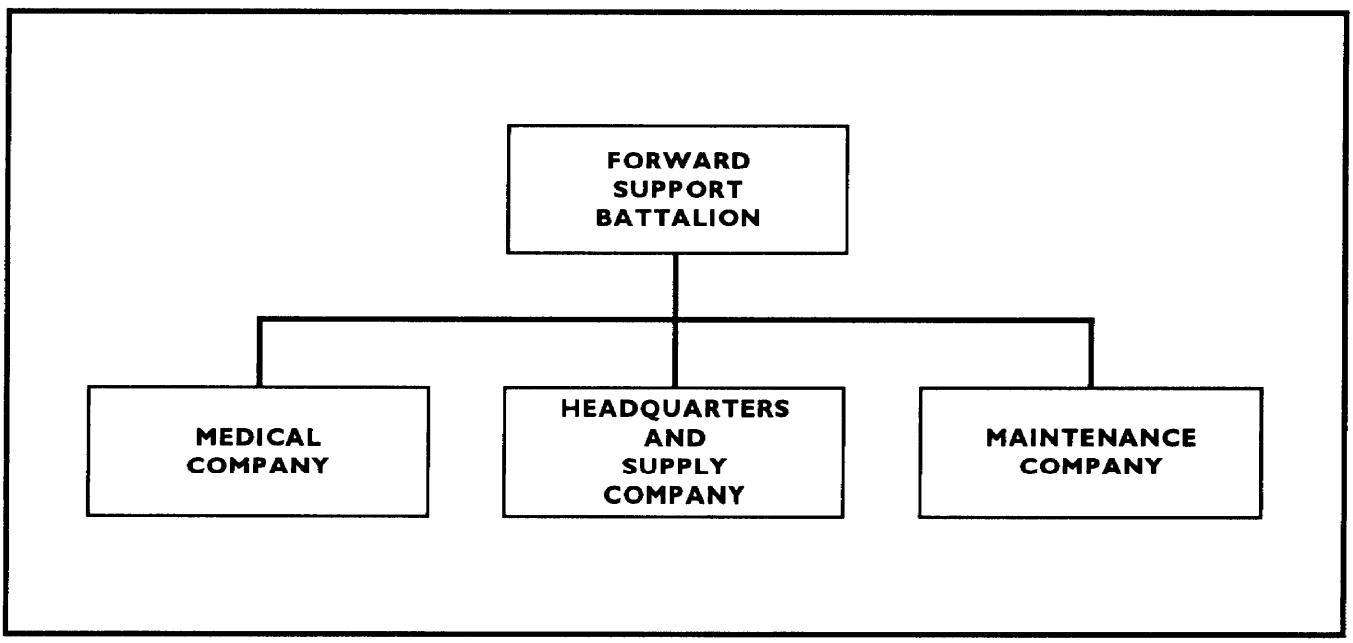


Figure 1-4. Forward support battalion

Table 1-1. MSB headquarters and supply company capabilities

SUPPLIES (CLASS)	LEVEL I CAPABILITIES PER DAY (SHORT TONS)		
	LIGHT DIVISION TOE 63226L	AIRBORNE DIVISION TOE 63266L	AIR ASSAULT DIVISION TOE 63156L
I	39.03	47.68	32.83
II	20.29	27.63	44.78
III (packaged)	3.26	8.20	9.71
III (bulk)	37,400*	89,600*	236,000*
IV	22.10	55.30	65.50
VII	9.62	9.88	52.56
* Gallons			

Forward Support Battalion

The FSB headquarters and supply company can--

- Command and control organic and attached units.
- Plan, direct, and supervise DS maintenance, supply, transportation, and health services that the battalion provides to the divisional units in the BSA.
- Provide advice and information to the DISCOM and the supported brigade commanders and their staffs on the support capabilities that the battalion provides.
- Plan, direct, and supervise administration, training, security, and logistics support for units in or attached to the battalion.
- Provide unit-level administration for the units of the battalion.
- Plan and direct BSA security and terrain management.
- Plan and supervise the establishment and operation of the supply points in the BSA.

At strength Level 1, the FSB headquarters and supply company can--

- Receive, store temporarily, and issue supplies as shown in Table 1-2 (page 1-6). Your company does not supply classified maps, aircraft, airdrop or rail equipment, COMSEC supplies, or ADPE.
- Transload 175 short tons a day, 375 in the LID, of highly used ammunition from corps transportation to using unit vehicles when operating independently in one 12-hour shift. The ATP can transload 350 short tons a day, in the airborne and air assault divisions only, when operating on a 24-hour basis as part of a force larger than a brigade. The larger force would normally provide soldiers for a second shift.
- Perform unit maintenance on battalion equipment in the airborne and air assault divisions.
- Provide food service support for units of the battalion.
- Provide a nucleus to plan and supervise mortuary affairs.
- Coordinate, in the LID, shower and laundry support and other field services provided to the brigade by elements of the MSB or the corps.

REQUIRED SUPPORT

Your company depends on various elements for support. The elements and the support they provide are as follows:

- The DMMC provides supply management of the division ASL.
- Appropriate elements of the division or corps provide finance, legal, personnel, administrative, and unit ministry support.

• The maintenance company, FSB, provides CE equipment maintenance in the FSB.

• The medical company provides health services support.

• In the airborne division, the QM airdrop equipment and support company provides airdrop rigging for deployment. Company soldiers pack parachutes and rig and load supplies and equipment for airdrop.

MOBILITY

The number of vehicles you have limits the mobility of your company and the amount of equipment and supplies you must move. If your company is in the MSB, it is 50 percent mobile. If your company is in the FSB, it is 100 percent mobile.

LIGHT DIVISION SUPPLY OPERATIONS

Your company has operating areas in the DSA of the LID for the receipt, storage, and issue of supplies. As a rule, your company is collocated with the TMT company near the DISCOM. Your company will be employed in the DSA near main lines of communication. It supports the DISCOM and other division units not assigned or attached to a brigade. It also supports the brigades with supplies when directed by the DMMC as backup to the forward support battalion's headquarters and supply companies. Your company has water points in the BSAs and in the DSA. Water points are collocated with Class I supply points, where possible. Your company has a nucleus for mortuary affairs. Expanded mortuary affairs will be provided when authorized by augmentation. Class III (bulk) supply operations must be isolated from other operations of the company for safety reasons. Class I, II, IV, VII, water, and map operations may be located in the same general area. Your company will issue supplies to units in the DSA and provide emergency support to the forward support battalion's headquarters and supply companies.

Table 1-2. FBS headquarters and supply company capabilities

SUPPLIES (CLASS)	LEVEL I CAPABILITIES PER DAY (SHORT TONS)		
	LIGHT DIVISION TOE 63216L	AIRBORNE DIVISION TOE 63256L	AIR ASSAULT DIVISION TOE 63146L
I	9.20	6.69	6.69
II	4.80	5.78	5.78
III (packaged)	.77	1.98	1.98
III (bulk)	28,400* (distribute 7,600*)	47,800*	47,800*
IV	5.20	13.39	13.39
VII	9.19	2.39	2.39
* Gallons			

Class I

Division units supported by the DSA supply points submit requests for Class I supplies daily to the supply point. The supply point consolidates the requests and forwards the consolidation to the DMMC. The DMMC Class I section converts the requests from the DSA and BSAs to line item and quantity and requisitions the supplies from the CMMC. The CMMC directs the QM supply company (GS) to ship the rations to the DSA Class I supply point. The DMMC also prepares consolidated issue slips for each supply point and sends them to the DSA Class I supply point. The corps general supply unit ships the rations to the DSA Class I supply point. The DSA supply point breaks down the rations and sends them with issue slips to the headquarters and supply companies of the forward support battalions. The DSA supply point also breaks down and issues rations for units in the DSA.

Class II

Some Class II supplies are provided automatically, while others are requested or requisitioned. Your company maintains a very limited Class II ASL, consisting only of items essential for combat operations. These items include limited special tools and NBC protective clothing. The headquarters and supply company provides normal administration and housekeeping supplies to supported units as they request them. As a rule, your company stocks three days of supply.

Class III (Packaged)

The DMMC submits requisitions for Class III (packaged) to the CMMC. Your company stocks one day of packaged Class III supply. Large quantities of packaged products are throughput to the forward support battalion's headquarters and supply companies.

Class III (Bulk)

The CMMC sends Class III (bulk) in tankers, based on forecasts submitted by the DMMC. Class III (bulk) is provided by supply point distribution. COSCOM provides resupply of bulk Class III on a throughput basis to the forward support battalion's headquarters and supply companies and to the combat aviation brigade. The headquarters and supply company maintains one day of supply of bulk Class III for DSA units.

Class IV

Your Class IV stocks are very limited. COSCOM stocks the majority of Class IV supplies. As a rule, COSCOM provides them by throughput to the engineer battalion when requested.

Class VII

The CMMC throughputs Class VII items to supported units as designated by the division commander. Types and quantities of items stocked are determined by the division commander and approved by corps. As a rule, only combat-essential critical items necessary to support the combat readiness of selected systems are stocked.

Water

Your company provides supply point distribution of potable water on an area basis for up to four (three in the LID) water supply points located in the division or brigade support areas. COSCOM delivers water to divisional water supply points when no water sources are available or when organic water capabilities must be supplemented. In emergency situations, your company can deliver up to 12,000 gallons per day, using TMT company or aviation assets, the ROWPU's 5-ton prime mover, and the FAWPSS. Water is transferred from the FAWPSS to 160-gallon pillow tanks. Units can pick up water from the pillow tanks. Details on water operations are in FM 10-52.

Section II
THE HEADQUARTERS AND HEADQUARTERS DETACHMENT

This section is for the headquarters detachment commander.

MISSION

The detachment mission is to command, administer, supervise work load, and provide technical expertise to the S&S units of the battalion that provide GS and DS to nondivisional units. The detachment also provides the supply and service battalion headquarters with logistical support and soldiers for various duties.

Under COSCOM

As a rule, when the battalion is assigned to a corps, it is part of a support group. However, it may fall under COSCOM without an intermediate headquarters. In the corps, the battalion may provide--

- General support supply to the direct support units of the division and to corps supply companies.
- Direct support supply and field services to units stationed in or passing through the corps area.
- Field services to divisional and nondivisional units.
- Parachute packing and rigging supplies and equipment for airdrop.

Under TAACOM

When it operates in the COMMZ, the battalion may be part of an area support group. As part of an area support group, the battalion provides DS supply and services to units located in or passing through the COMMZ. The battalion may provide backup general support to corps units, but the main function of its GS units is to supply its own DS units. The battalion is tailored for its DS role based on the environment and on the force structure within the COMMZ. The TAACOM MMC controls the battalion GS stocks. Its DS stocks are controlled by the supply-service operations office of the S&S company.

ORGANIZATION

The battalion is a tailored organization. Its structure varies according to the requirements of the theater to which it is assigned. More details on the theater are in FM 10-27. The two major elements that make up the detachment are the detachment headquarters and battalion headquarters. The battalion headquarters is organized as shown in Figure 1-5 (page 1-9). The units listed in Table 1-3 (page 1-10) may be attached to the battalion.

CAPABILITIES

Since the S&S battalion is a multifunctional task organization, it can be tailored by the assignment of different supply and service units to meet specific support requirements. Your unit provides command, control, staff planning, and technical supervision for two to five direct or general support nondivisional supply or service units. Your unit also provides supervision for administration, training, and operations, and technical staff supervision of assigned and attached units at unit-level supply and service operations. Your unit also provides consolidated unit maintenance of CE equipment to attached units. At Strength Level 2, your unit operates at 90 percent capacity. At Strength Level 3, your unit operates at 80 percent capacity. For more details on strength levels, see AR 220-1.

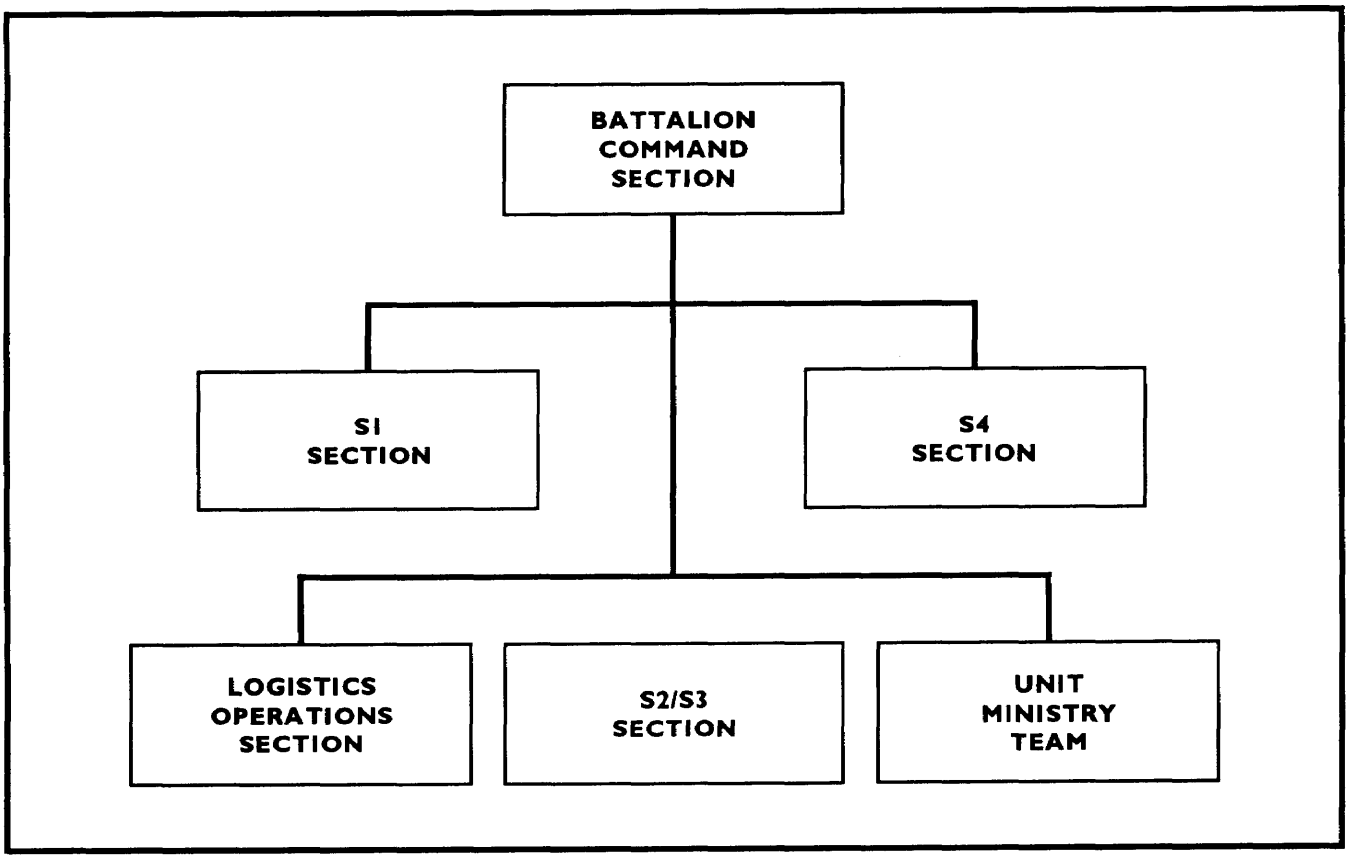


Figure 1-5. Battalion headquarters of the supply and service battalion

General Support

In its GS role, the battalion can provide most classes of supply. It can supply Class I, II, III, IV, VII, and IX repair parts, including aircraft and missile repair parts. It can also provide different services, such as airdrop rigging and personnel parachute packing, and airdrop equipment maintenance and supply. When assigned a graves registration company, it can provide for collection and evacuation of remains and temporary interment.

Direct Support

In its DS role, the battalion can provide most classes of supply. It can supply Class I (including water), II, III, IV, VI sundries, VII, and maps. It can also provide DS services, such as shower, laundry, and clothing repair, bath, renovation, and collection, evacuation, and temporary interment of remains.

REQUIRED SUPPORT

Your detachment depends upon various elements for support. The elements and the support they provide are as follows:

- Corps or theater area materiel management centers provide materiel management.
- Appropriate elements of the corps or theater provide medical, finance, personnel, administrative, and religious support.
- Corps and theater provide additional transportation as required.
- A subordinate unit provides unit maintenance.

Table 1-3. Units that can be attached to the supply and service battalion

UNIT	TYPE OF SUPPORT	MISSION
QM Heavy Materiel Supply Company	GS	Receive, store, process, issue, and perform unit maintenance on Class VII items (except aircraft and marine and railway equipment).
QM Repair Parts Supply Company	GS	Receive, store, and issue repair parts to divisional and nondivisional maintenance units.
QM Supply Company, GS	GS	Receive, store, and issue Class I, II, III (packaged), and IV supplies to DSUs.
QM Airdrop Supply Company	GS	Pack parachutes for personnel and equipment. Rig equipment and supplies for airdrop.
QM Airdrop Equipment Repair and Supply Company	GS	Receive, classify, and repair unserviceable parachutes and airdrop equipment from divisional and nondivisional units.
Laundry and Renovation Company	GS	Segregate incoming shipments of clothing and textiles. Clean, decontaminate, repair, store, and issue clothing and textiles.
QM Graves Registration Company	GS or DS	Establish and operate collection points and one temporary cemetery. Receive remains from divisional and nondivisional collection points.
QM Field Service Company	DS	Perform laundry services, CEB, and renovation services for soldiers from divisional and nondivisional units.
QM Supply Company, DS	DS	Receive, store, and issue Class I, II, III, IV, VI sundries, VII items, and water and maps to nondivisional units.

MOBILITY

If all of your detachment has to move at one time, you must arrange for transportation support. All equipment can be transported by USAF aircraft. Your detachment can have 33 percent of its TOE equipment and supplies transported in a single lift using its own vehicles.

OPERATIONS

The headquarters and headquarters detachment of the battalion provides command and control of the units attached to the supply and service battalion for direct support or general support operations. Based upon the support role assigned by the COSCOM or TAACOM, the battalion with its headquarters and headquarters detachment and various attached units will locate where it can best accomplish its mission. As a rule, attached units will number from two to five. The battalion relationships with the headquarters and headquarters detachment, the MMC, the MCC, maintenance units, and supported units are described in this paragraph.

Headquarters and Headquarters Detachment

The detachment receives logistical plans, estimates, and directives relating to supply and service support operations from the support command or group to which it is attached. The detachment receives and assists in the preparation of detailed plans and policies for the operation of units attached to the battalion, assigns missions to subordinate units, and determines general operational areas in concert with the COSCOM or TAACOM. It directs unit commanders to occupy specific operational sites, assists in the preparation of detailed plans and policies for the operation of units attached to the battalion, and directs, coordinates, and supervises the administration, training, security, and defense of subordinate units.

Materiel Management Center

The battalion receives instructions, directives, and information from the MMC. The supply units of the battalion serve as storage locations for the stocks managed by the MMC. The battalion supply units and the MMC communicate with each other by input and output devices compatible with the MMC data processing equipment. The MMC coordinates with the CMCC to determine overall supply distribution plans. The MCC programs the positioning of transportation assets to ensure maximum support to the supply units. Using this strategy, the MMC issues shipping instructions to the general supply units.

Movement Control Center

After receiving shipping instructions, the battalion coordinates with the MCC to arrange the exact time and place of pickup to which designated transportation assets should report. Close coordination is required between the battalion and the MCC to prevent delays in loading and unloading carriers.

Maintenance Units

One of the principal functions of maintenance units at the GS level is the repair of end items, assemblies, and major components or their return to supply stock. Supply elements and maintenance elements are the major operating elements of GS units and should have a close working relationship. The MMC directs the movement of equipment and supplies between maintenance units and supply units. Maintenance units place requisitions for repair parts with the MMC. The MMC directs repair parts supply companies to distribute repair parts to them.

Section III
YOU, THE COMMANDER

This section is for the unit commander.

RESPONSIBILITY

You are responsible for everything your unit does or does not do, and you cannot delegate this responsibility. You can delegate authority to your subordinates and make them responsible to you. However, you are responsible to your commander for everything done or not done by your unit. Only you are answerable for your unit. Specifically, you must--

- Make sure that the unit performs its mission.
- Train your soldiers.

• Prepare your soldiers for rear operations. This includes rear area security and damage control.
• Maintain discipline and esprit de corps.
• Provide a program to sustain the fitness of your soldiers.
• Ensure safety.
• Make sure the unit functions according to command regulations and policies.
• Keep higher headquarters and your soldiers informed.
• Maintain communications and electronic security.
• Prepare your unit to operate under intense media scrutiny.

MANAGEMENT

Use sound management practices in carrying out your command responsibility. Leadership and management are essential skills for command. FM 22-100 discusses leadership and the techniques you and your supervisors can use to accomplish the unit mission. Some actions to consider in managing your unit are listed below.

• Provide guidance to subordinate leaders in planning and executing training programs. Plan, participate in, and supervise training and operations as much as possible. Evaluate collective training, and ensure subordinate leaders provide needed individual training. Instruct and cross train subordinates in their duties.
• Make frequent inspections to ensure that your orders are being carried out. Make sure that living quarters are adequate and well-policed; that food is properly prepared, appetizing, and served on time; and that routine work is distributed fairly.
• Emphasize the proper maintenance and use of equipment, and inspect frequently (DA Pamphlet 750-1).
• Be available to counsel your soldiers (FM 22-101).
• Meet regularly with key personnel to pass on information, resolve problems, and make sure they know what is expected of them (FM 22-l00).
• Administer military justice (AR 27-10).
• Assign the right person to the right job (AR 600-200).
• Maintain a command information program (AR 360-81).
• Make sure that your soldiers practice supply discipline (AR 710-2).
• Delegate authority (FM 22-100).

RESOURCES

How well your company operates depends, in part, on how your resources are organized. Your resources are your soldiers and your equipment.

This paragraph implements the provisions of STANAG 2084.

Personnel

The Strength Level 1 column of your TOE prescribes the personnel you need to accomplish the mission during sustained combat operations. Due to the austere support structure of the light divisions, you must take advantage of every support asset. This includes taking advantage of host-nation resources through formal agreements and special measures and using captured enemy materiel. Captured enemy materiel must be handled strictly in accordance with STANAG 2084.

Equipment

The equipment your soldiers need is identified in several types of documents. These include your TOE, CTAs, TMs, and SBs. AR 310-49 shows how to request authorizations for more equipment which your unit requires.

Prescribed by TOE. TOE 42446L prescribes the equipment for the headquarters and headquarters detachment in the S&S battalion. Table 1-4 (page 1-13) shows which TOES prescribe equipment in the main and forward support battalions.

Authorized by other documents. You have to use other documents besides your TOE to make

sure all mission-essential equipment is on hand. Some items you need to accomplish your mission are low in cost or expendable. These items are not prescribed by your TOE. Examples are items of clothing and equipment, components of sets and kits, repair parts, and tools. These and expendable items are authorized by CTAs 50-909 and 50-970 and TMs. Check the reference list at the back of this manual for their titles. Other authorization documents include SBs and SCs.

AIDS TO COMMAND

The Army has issued a number of handbooks for unit personnel. These publications give concise overviews of areas affecting your unit. See Table 1-5 for the coverage of some of these publications.

Table 1-4. TOEs for the main and forward support battalions

DIVISION	MSB	FSB
Light Infantry	63226L	63216L
Airborne	63266L	63256L
Air Assault	63156L	63146L

Table 1-5. Useful command publications

PUBLICATIONS	COVERAGE
AR 710-2	Supply operations below the wholesale level.
DA Pam 600-8-20	Use of SIDPERS for effective personnel management.
DA Pam 710-2-1	Unit supply procedures.
DA Pam 710-2-2	Supply support activity procedures.
DA Pam 710-5	Handbook for commanders on supply.
DA Pam 750-1	Maintenance operations.
FM 3-100	NBC operations.
FM 10-23-1	Food service operations in the unit.
FM 10-52	Water support during combat operations.
FM 10-52-1	Water use in desert environments.
FM 10-63-1	Mortuary operations.
FM 21-10	Disease and nonbattle injury prevention.
FM 21-20	Physical training.
FM 21-26	Map reading and land navigation.
FM 22-100	Leadership.
FM 27-1	Military justice and administrative law within the unit.
FM 27-14	Military law and legal advice.
FM 46-1	Public affairs operations.
FM 100-5	Operations.
FM 100-10	Combat service support.
FM 101-5	Staff organization and operations.
FM 101-5-1	Terms and symbols.
FM 101-10-1/2	Planning data for supply and other types of support.
TC 21-3	Operations and survival in cold weather areas.
TC 26-1	Use of the organizational effectiveness process to perform assigned missions and increase operational readiness.

★ CHAPTER 2

ADMINISTRATION

This chapter is for the company commander.

Section I
COMPANY HEADQUARTERS

MISSION

Company headquarters soldiers support the unit elements. They are responsible for the effectiveness of company operations. They perform a variety of functions, which are explained in various sections of this manual. You plan, direct, and supervise the operations and employment of the company. You command the company so that its mission is carried out. You are responsible for unit readiness, site establishment, communications, defense, unit administration, supply, maintenance, and training of the company. You are also responsible for food service support of certain units. The first sergeant is your principal assistant. He calls formations, manages the command post, and represents the enlisted soldiers of the company. He oversees unit-level administration, advises you on personnel actions, and supervises replacement activities. He also performs strength and personnel accounting. He prepares personnel reports. Other personnel and their duties are as follows:

- The food service sergeant manages food service operations. His assistants are the cooks assigned to the company. However, the S&S battalion depends on an attached company for food service support.
- The supply sergeant requests, receives, stores, safeguards, and issues supplies and equipment. His assistant is the armorer, who controls and maintains all weapons, and the supply specialists.
- The combat signaller team chief and wire installer install and maintain your communications.
- The chemical NCO advises you on NBC defense. This includes NBC warning and reporting, NBC protection, and decontamination. He helps you assess NBC readiness and advises you on training strategies.
- The light wheeled vehicle mechanics maintain wheeled vehicles and trailers.
- The vehicle driver drives the truck for you.

ORGANIZATION

Organize your headquarters so that it functions smoothly and effectively and so that soldiers and equipment are used in an efficient, mission-supportive manner. One way to organize is to group your food service soldiers into one element, your supply soldiers into a second, and the rest of your headquarters soldiers into a third. Personnel resources change. Check the latest TOE for current staffing.

OPERATIONS

Your headquarters provides supervision and directs the overall operation of the company. To do this, you and your staff operate the command post and oversee support functions, including defense and communications. Coordinate all movement with higher headquarters.

Coordination

Upon arrival at a new site, inform higher headquarters that the move has been made and of the time operations will begin. Report encoded location grid coordinates for both the command post

and an alternate command post by messenger or other secure means. Confer with supervisory personnel about the administrative and operational condition of the company. If necessary, brief higher headquarters on overall unit capability. Stress personnel strength and equipment availability.

Command Post

Your elements usually operate in separate areas. To provide continuous command and control, set up the CP in a central place in your company. The command post tent, a small GP tent, can be pitched by four soldiers in about 30 minutes. Camouflage the tent as well as headquarters vehicles. Sandbag generators to reduce noise. In a village or town, you may setup the CP in any building. Park vehicles in a garage or barn or hide them beneath overhanging roof edges. If vehicles are parked beneath roof edges, hide vehicles further beneath camouflage nets or behind crates or boards. Hide cable and wire among telephone or electrical wire.

Maintenance

Make sure that operators perform maintenance on equipment as soon as they are able to do so. They should record all required maintenance and deficiencies on equipment inspection and maintenance work sheets. Make sure the need for maintenance above operator level is reported to the maintenance supervisor.

Support Functions

Set up a procedure for processing captured enemy personnel and materiel. Follow procedures in FM 19-40. FM 27-10 outlines how the Geneva/ Hague Conventions apply. Coordinate first aid requirements. Shortly after occupation of the bivouac area, have headquarters personnel inform all supervisory personnel, who will in turn tell their soldiers the--

- Location of field kitchen and time, method, and sequence of feeding.
- Laundry pickup schedule.
- Religious services schedule.
- Bath schedule.
- Time, place, and method of mail call.
- Location of medical treatment facility and time of sick call.
- Location of latrines.

Communications

Get the telephone circuits and radio nets operational. The wire lines should have been laid by a quartering party and should be ready for use when you arrive at the new site. Key personnel should enter the wire net as quickly as possible.

Defense

Complete perimeter defense and camouflage. Send copies of the defense layout with overlays to the battalion S2/S3, to the base cluster operations center, or to the base defense operations center, as appropriate. Overlays should show the specific location of all machine guns, minefield, concertina wire, observation posts, and listening posts. Make sure all location information is encoded. Supervise establishment of the company defense while subordinate elements are preparing to occupy designated areas. Specify the company response to ground and air attacks. Supervise camouflage activities once all elements have established defense and operating sites. See STP 21-1-SMCT for camouflage details.

Section II
PERSONNEL SERVICE SUPPORT

APPLICABILITY

The battalion S1 and the PAC provide personnel service to your company. Make sure their capabilities and the means to secure support are in the battalion administrative SOP, letters of instruction, or the unit administrative SOP. TC 12-16 has the doctrine on battalion PAC operations. The company needs only a limited number of administrative regulations, pamphlets, and field manuals.

MANAGEMENT

The company's primary battlefield responsibilities are listed below. Company headquarters personnel will be supported by the battalion PAC and other battalion personnel as they --

- Maintain personnel accountability.
- Report casualties.
- Receive and process replacements.
- Initiate request for personnel actions, to include awards, decorations, promotions and reductions, transfers and discharges, classification, evaluations, emergency leaves, and UCMJ actions.
- Coordinate and provide mail and morale and welfare support.
- Coordinate with the unit ministry team for religious support.
- Provide for physical conditioning and relief from battlefield stress.
- Initiate requests for financial actions.

SAFETY

Make sure that your soldiers are aware of all safety hazards at work and that they practice safety precautions. Table 2-1 (page 2-3) lists safety program topics and related publications. You have to work at achieving safety consciousness. When an accident occurs, get the facts, complete the forms, and take corrective action. Emphasize safety at all times and in all activities. Your supervisors should be interested in what the accident rate does to efficiency. Maintain their interest by providing facts and figures to show how accidents can affect productivity and, conversely, how increased demands for productivity can increase accidents.

MORALE SERVICES

Morale support activities are designed to enhance the physical and psychological health of your soldiers. They help you maintain a higher level of morale.

Table 2-1. Safety program topics and related publications

TOPIC	REFERENCES
Accident Reporting	AR 385-40 DA Pamphlet 385-1
Fire Prevention	TM 5-315
Tools and Equipment	Equipment technical manuals and bulletins
Protective Clothing and Equipment	DA Pamphlet 385-3
Contaminated Items	FM 3-3 FM 3-4 FM 3-5
Petroleum Products	FM 10-69
Weapons and Ammunition	AR 385-63 FM 9-13 FM 10-14 FM 22-6

Field Sanitation

Your responsibility for sanitation includes training your soldiers in preventive medicine measures, providing necessary sanitation equipment and supplies, and establishing and enforcing field sanitation procedures. AR 40-5 directs that you set up and train a unit field sanitation team. After becoming operational, the team should supervise the construction of field sanitation facilities and supervise daily field sanitation operations and procedures. Make sure that your soldiers follow proper sanitation procedures and that field sanitation standards comply with Army regulations. For more information on field sanitation operations, see AR 40-5, Chapter 14 and FM 21-10.

Health Service Support

Coordinate with higher headquarters for health service support, and make sure it is available during operations. Plan for emergency medical treatment to be available during day-to-day operations. Your responsibility also includes providing for the training of all your members in self-aid and first aid procedures. To survive on the battlefield, each soldier must be able to give first aid. Make sure at least one soldier per squad is trained as a combat lifesaver. See FM 21-11 for more details on first aid procedures.

Shower and Laundry Support

In the field, your soldiers will require periodic shower and laundry support. Coordinate with the battalion S4 for support. Shower and laundry personnel may also provide delousing services.

Mortuary Affairs

Mortuary affairs can have a direct and sudden morale impact on soldiers and the public. As a rule, mortuary affairs support is provided on an area basis. All units are responsible for recovery and evacuation of their own dead to the nearest collection point.

Responsibilities. As commander, you are responsible for searching for, recovering, initially identifying, and evacuating the remains of your deceased soldiers from your area of responsibility to the nearest collection point. These remains include those of members of your own unit, other units and services, allies, and enemies and any other remains that may be found in the area. As commander, you must ensure that the recovery and evacuation is conducted in a respectful manner.

Search and recovery. When your soldiers recover remains, they must preserve all items that may be used to establish an identity. They check to see if there are identification tags on the remains, and they make sure that the tags are left with the remains. When they find identification tags anywhere but around the neck of the remains, they place them in a personal effects bag. If they find DD Form 1380, they must attach it securely to the remains and protect it from body fluids. Unit recovery personnel put all equipment with the remains. They search the immediate area to be sure all effects and portions of remains have been recovered. The soldiers shroud the remains with any suitable material, such as a human remains pouch, poncho, or poncho liner. The remains are then evacuated to the nearest collection point.

Emergency burials. Emergency burial of remains should be conducted only as a last resort when the tactical situation does not allow evacuation or when remains are NBC-contaminated and cannot be decontaminated. More details on emergency burials are in FMs 10-1 and 10-63.

Casualty reporting. Unit commanders are responsible for casualty reporting They must report casualties according to AR 600-8-1, Chapter 6.

Personal effects. Unit commanders must ensure that property left in unit, hospital, or rear storage areas by persons deceased, missing, missing in action, or captured by the enemy are collected, safeguarded, inventoried, and shipped to the theater effects depot.

Financial Management. Corps or TAACOM provides unit-level support. You provide individual financial management assistance as needed. Good money management can contribute to individual and unit morale. Designate individuals within the company as financial counselors, and set aside time for them to counsel soldiers. Make sure each unit member has a copy of TC 21-7. Soldiers may draw pay during hostilities. The dollar amount will be authorized by the theater commander.

TRAINING

In a war, the purpose of the Army is to win the battle. Soldiers and units are trained to fight or to support the fighting. Each soldier is trained to perform a job. The unit is trained to accomplish its mission. As training manager of your company, train your soldiers so that they can perform their peacetime and wartime missions. See FMs 25-100 and 25-101 for more details.

Responsibility

You are responsible for developing performance-oriented training programs tailored to missions and resources. AR 350-1 gives details of Army training policy and the part you play in the Army training system. See STP 21-1-SMCT for the common tasks your soldiers have to master. Monitor and evaluate your company's individual and collective training. Observe training, evaluate test results, and use your AMTP to assess your company's ability to perform its mission. Your AMTP lists training and evaluation outlines and standards pertaining to specific missions. It gives guidance on how to use this information. It also serves as the basis for formal testing. Evaluators use it to assess the readiness of your company.

Requirements

You need to find out how well newly assigned soldiers can do their jobs. Service schools train soldiers at the apprentice level. They cannot be expected to know how to perform all tasks required in their jobs. You must provide training that will bring them to journeyman level. You are assisted in your training mission by the training officer, the training NCO, trainers, first-line supervisors, and your first sergeant, who acts as a career counselor for your soldiers.

Publications

Just about every subject on which you have to train is in one or more US Army publications. Table 2-2 lists publications that identify and describe aids and other publications. Table 2-3 (page 2-6) lists training publications.

Table 2-2. Locator publications

PUBLICATION	COVERAGE
DOD 5040.2-C-1	Lists and describes motion pictures and audiovisual training aids.
DA Pamphlet 25-30	Lists Armywide publications and blank forms.
DA Pamphlet 25-37	Lists and describes graphic training aids.
DA Pamphlet 350-100	Lists extension training materials (except correspondence subcourses) for your company.
DA Pamphlet 351-20	Describes correspondence courses, identifies subcourses, and gives enrollment procedures.

Table 2-3. Training publications

PUBLICATION	COVERAGE
AR 350-28	Field training policies.
FM 10-1	Quartermaster principles.
FM 23-9	Rifle training.
FM 25-4	Training exercises.
FM 25-5	Training for mobilization and war.
FM 25-50	Nuclear training.
FM 25-51	Nuclear training.
FM 25-100	Training doctrine.
FM 25-101	Battle focused training.
TC 25-6	Simulated weapons training.

Needs

To determine training needs for your company, compare its training status to its mission. AR 350-37 will help you do this. You should also use STPs and input from subordinates to determine training needs. In the STPs, note tasks that have been left to the unit to train. The STPs give tasks and performance objectives for each skill level. Review SDT and common task test results. Note those tasks on which soldiers received NO GO. Make a survey of your company MOSs. Make up a table showing the number of soldiers on hand by MOS and skill level. See Figure 2-1. Review both informal and formal results of AMTP evaluations. Review records kept by the training NCO to determine when training was last offered. Determine whether refresher training will be needed before the next formal evaluation.

Proficiency

Your company should practice field skills even when training for a specific technical operation. Some things your company can do routinely to increase the value of any technical training are as follows:

- Keep equipment working.
- Use equipment.
- Go to the field.
- Practice survival skills.
- Practice performing tasks while in MOPP gear.

MOS	SKILL LEVEL				
	1	2	3	4	5
00Z					1
31G				1	
31K	2	1			
31V	1				
52D	1	1			
54B	1			1	
57F			1		
62B		1			
63B	4	2	1		1
63J	3	1			
63S	2	1			
71D	1				
71L	1	1			
75B	2	1	1		
75Z				1	
77F	8	2	2	1	
77L	2				
77W	8	4		1	
88M	4				
88Z					1
92A	17	3	1	1	1
92A5					2
92Y	4		1	1	
94B	3	2	2	1	
96B		1			

Figure 2-1. MOS training table

Assistance

There are many places outside the unit where training can be conducted or training assistance can be provided. This paragraph describes some of them.

Service schools. Service schools have subject matter experts and training expertise. The schools provide resident courses (DA Pamphlet 351-4), field support (DA Pamphlet 350-100), and mobile training teams. The schools also develop training materials, which they use on site and send to units in the field. From these, the trainer can select the needed materials. Service schools do not provide Armywide training publications and aids, such as field manuals and training films. You have to get them through normal distribution or loan channels. Mobile training teams instruct, update, and qualify soldiers in technical skills at their unit locations.

Army Training Support Center. The Army Training Support Center coordinates the worldwide development of Army training materials. It can give you help with correspondence courses. To enroll in a correspondence course, complete DA Form 145. DA Pamphlet 351-20 has enrollment instructions.

USARF schools. USARF schools provide training for Reserve and National Guard units and their soldiers in their various MOSS. Many USAR schools also provide training for active Army soldiers, if space and facilities permit.

TASE. The TASC provides training aids and audiovisual support to all authorized users within a geographical area. DA Pamphlet 350-100 lists support centers worldwide. Use DA Form 4103-R to borrow items. Use DA Form 3903-R to request the center to make a nonstocked training aid or device.

Learning centers. Learning centers are training facilities at which soldiers can improve their skills. See TC 25-5 for more on learning centers.

Regional training sites for maintenance. State National Guard organizations operate regional training sites for maintenance for National Guard and USAR soldiers. Active component soldiers in low-density MOSs may also receive sustainment training at these sites. US Army readiness groups provide training and assistance to RC units in the local area.

NBC Training

Choose an officer, an NCO, and an enlisted alternate to be your NBC defense trainers. Your NBC defense officer and NCO should advise you on all NBC defense matters about the company's assigned mission. Make sure they receive training in an official NBC course. They should also advise your soldiers on NBC equipment maintenance. They should train your soldiers how to operate and maintain the assigned NBC defense equipment. Officers and NCOs must be able to apply all principles of NBC defense as outlined in FM 3-4 and FM 3-100. Your SOP on NBC operations must include the decontamination priority for each of the unit functions. This will lessen the time the decontamination unit must spend in your area. Cover supplies to the maximum extent possible, since this will reduce the amount of contamination to stocks.

Section III
COMMUNICATIONS

SERVICES

Communications help you carry out administrative duties, maintain contact with higher headquarters, transmit tactical information, and defend your company. Your soldiers must communicate with higher headquarters, adjacent units, and both supporting and supported units. They use multiple subscriber equipment for communicating outside the unit. They use the telephones and switchboard to communicate within the unit. Your company's modes of communicating include--

- Area common user systems.
- Teletypewriter and radio-teletypewriter.
- Tactical satellite communications.
- Net radio interface.
- Audiovisual, facsimile, data, and tactical automatic switching systems.

See FM 24-1 for a description of the main features, strong points, and weak points for each mode.

METHODS

There are many methods of communication. Use the methods that offer maximum continuity, security, versatility, and simplicity. Do not depend on only one method. Use them to complement each other. Signal equipment, particularly when connected to cables or antennas, can be damaged by electromagnetic pulses. Therefore, alternative means of communications should always be available in case of nuclear warfare, directed energy attack, lightning strike, or equipment failure. FM 24-1 has more details on the various methods of communication.

Wire

Wire systems use field wire and cable, telephones, and a switchboard to provide person-to-person conversations. Wire is more secure than radio. If you use radio links in your system, the enemy can intercept your conversations. Make sure your soldiers know this and practice COMSEC. One of the wire systems shown in Figures 2-2 through 2-8 (pages 2-9 through 2-15) supports your headquarters. The wire net is installed and operated by the wire installer. See TC 24-20 for information on field wire activities and the general characteristics of equipment used with field wire systems.

Radio

Figures 2-9 through 2-15 (pages 2-16 through 2-22) show proposed radio nets. Radio is your main method of communication with your elements that are mobile or do not have access to the telephone system. However, radio is the least secure communications method. Radios can be severely damaged by the electromagnetic pulse resulting from a nuclear detonation. If your company is in or expects to be in a nuclear environment, protect your radios. Put both security and protective measures in your SOP. When setting up operating sites, your soldiers should enter the net using procedures in FM 24-18, Chapter 8. See FM 24-19 for daily operational procedures.

Messenger

Use your soldiers for messengers as much as possible. They provide the most secure method of communication.

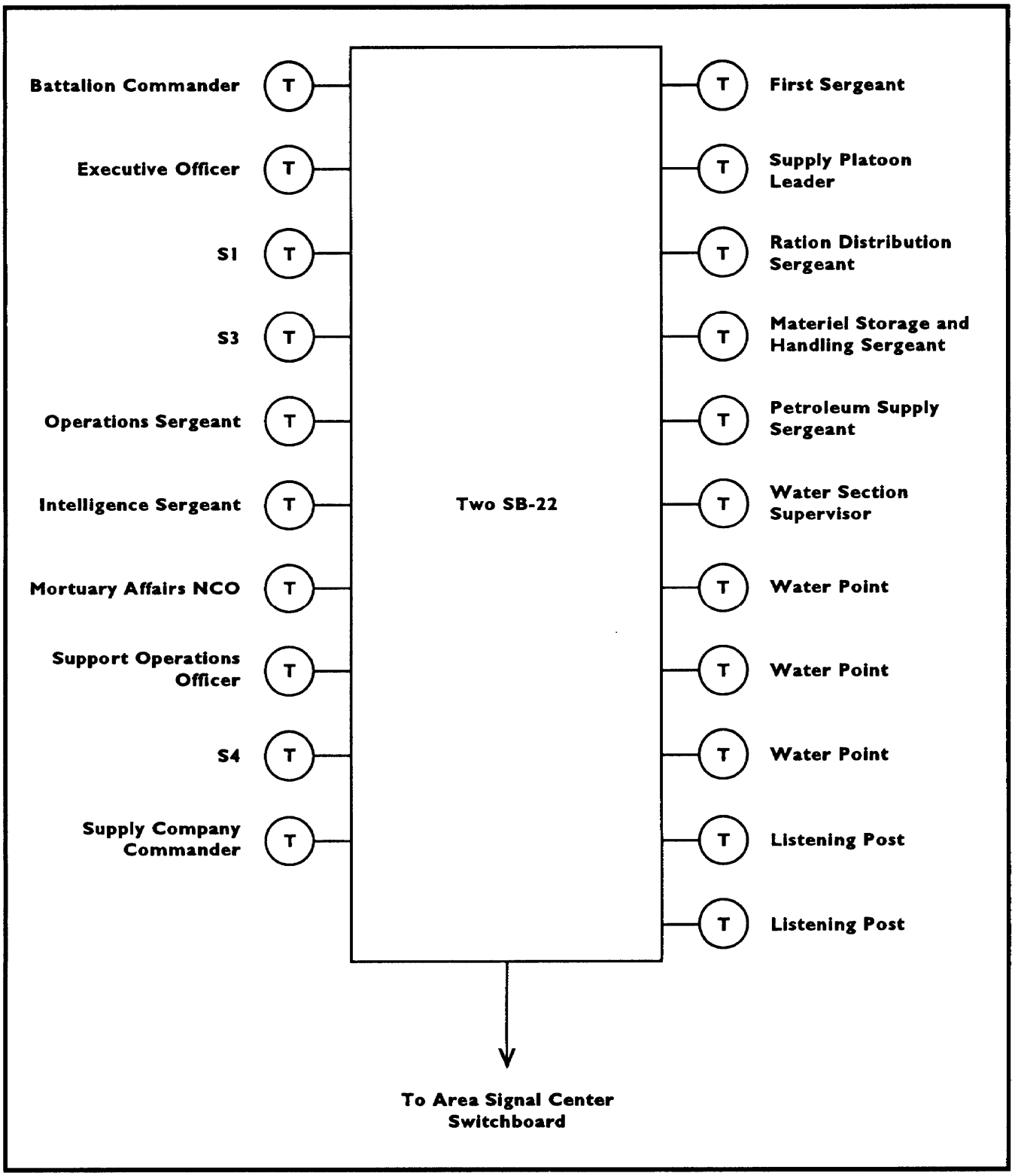


Figure 2-2. Wire net diagram of a headquarters and supply company, main support battalion, light infantry division

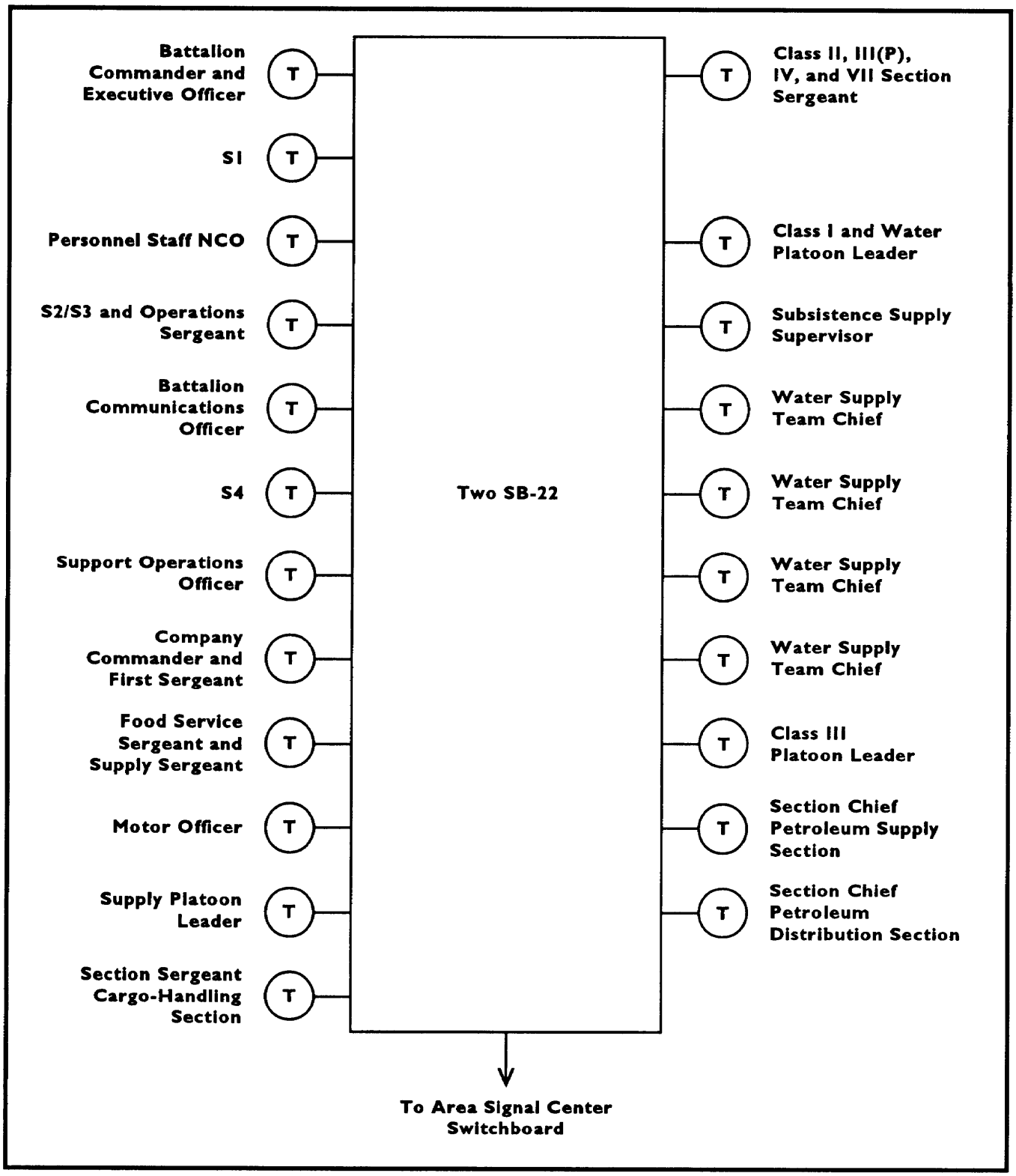


Figure 2-3. Wire net diagram of a headquarters and supply company, main support battalion, airborne division

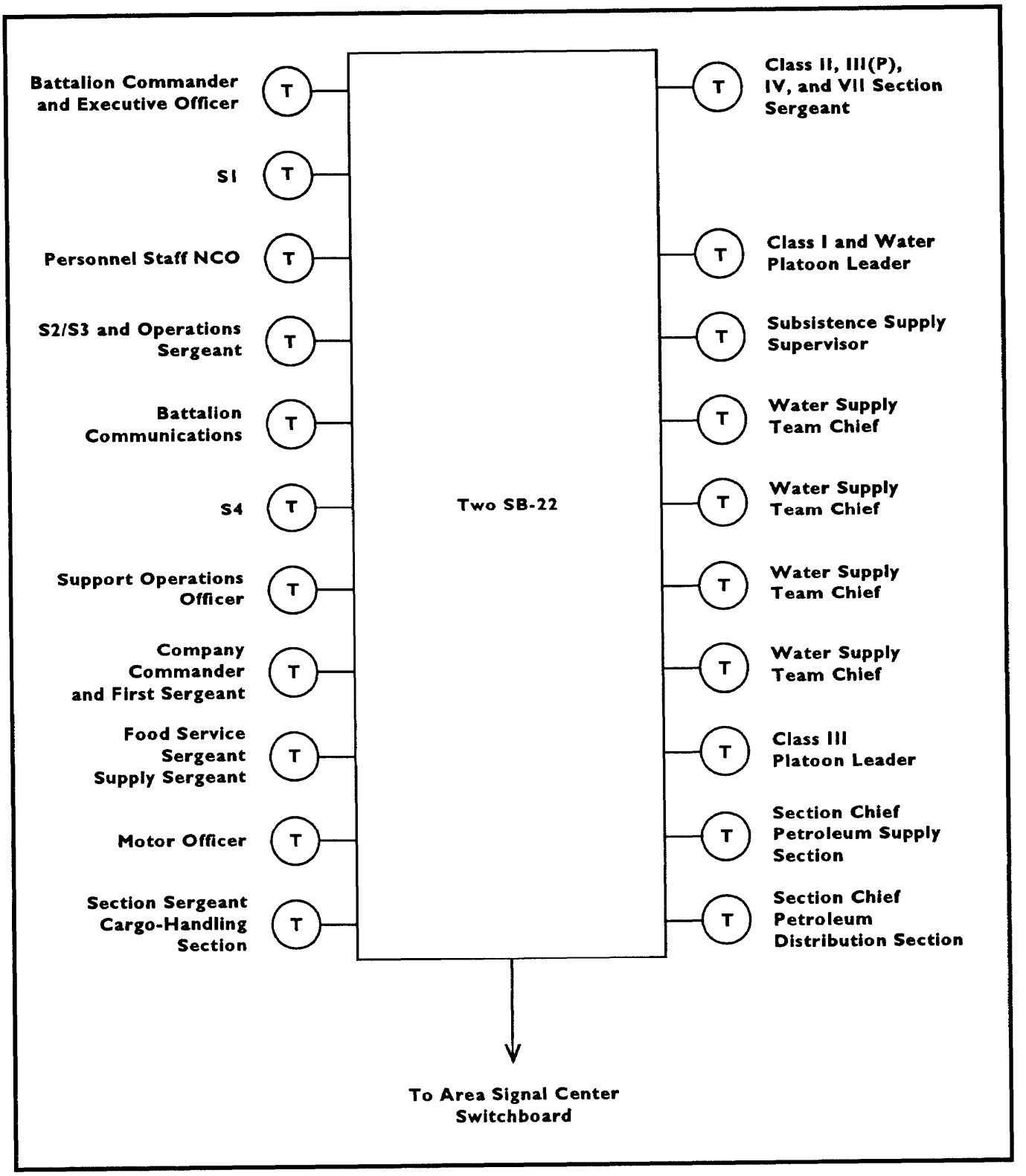


Figure 2-4. Wire net diagram of a headquarters and supply company, main support battalion, air assault division

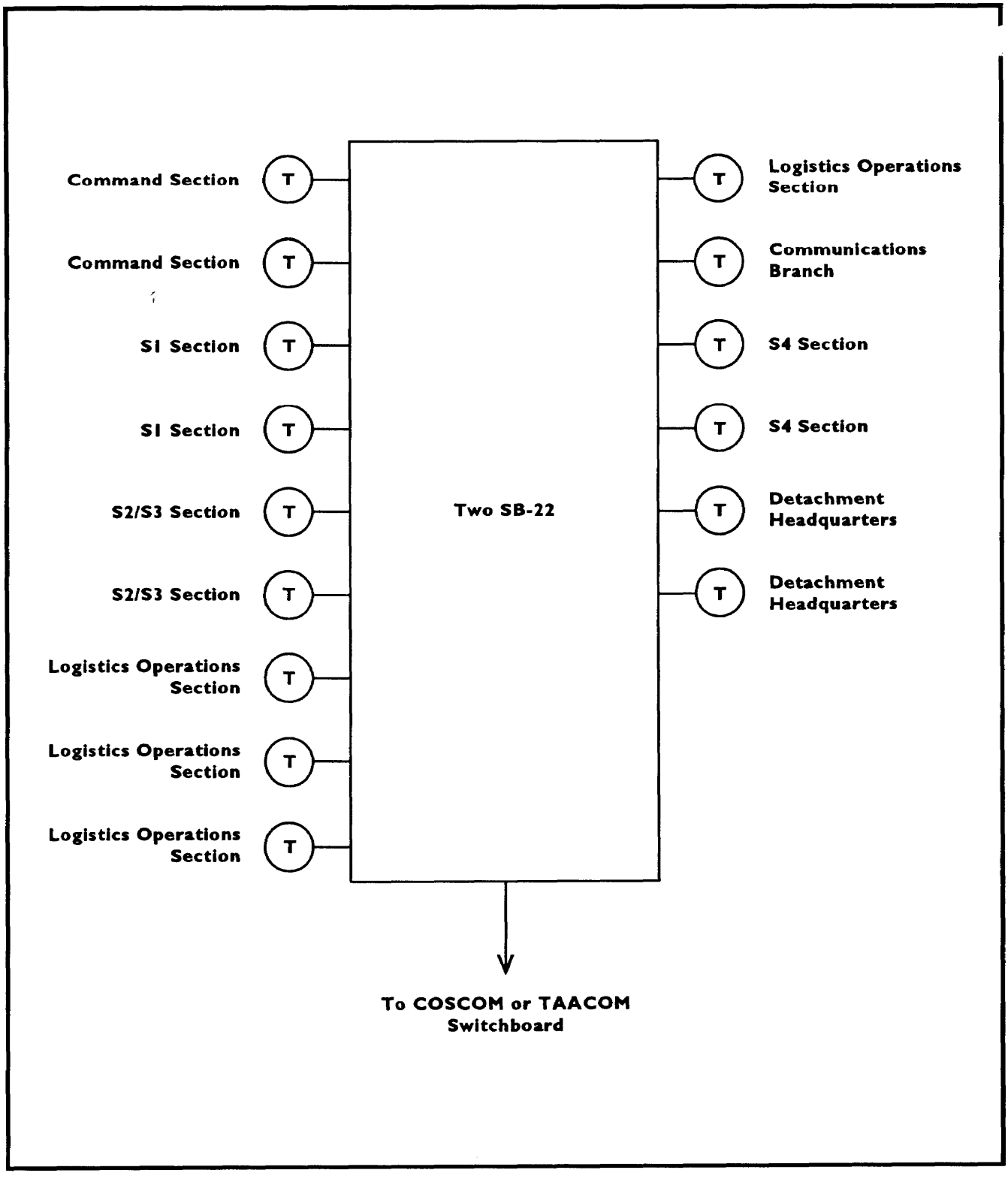


Figure 2-5. Wire net diagram of a headquarters and headquarters detachment, S&S battalion

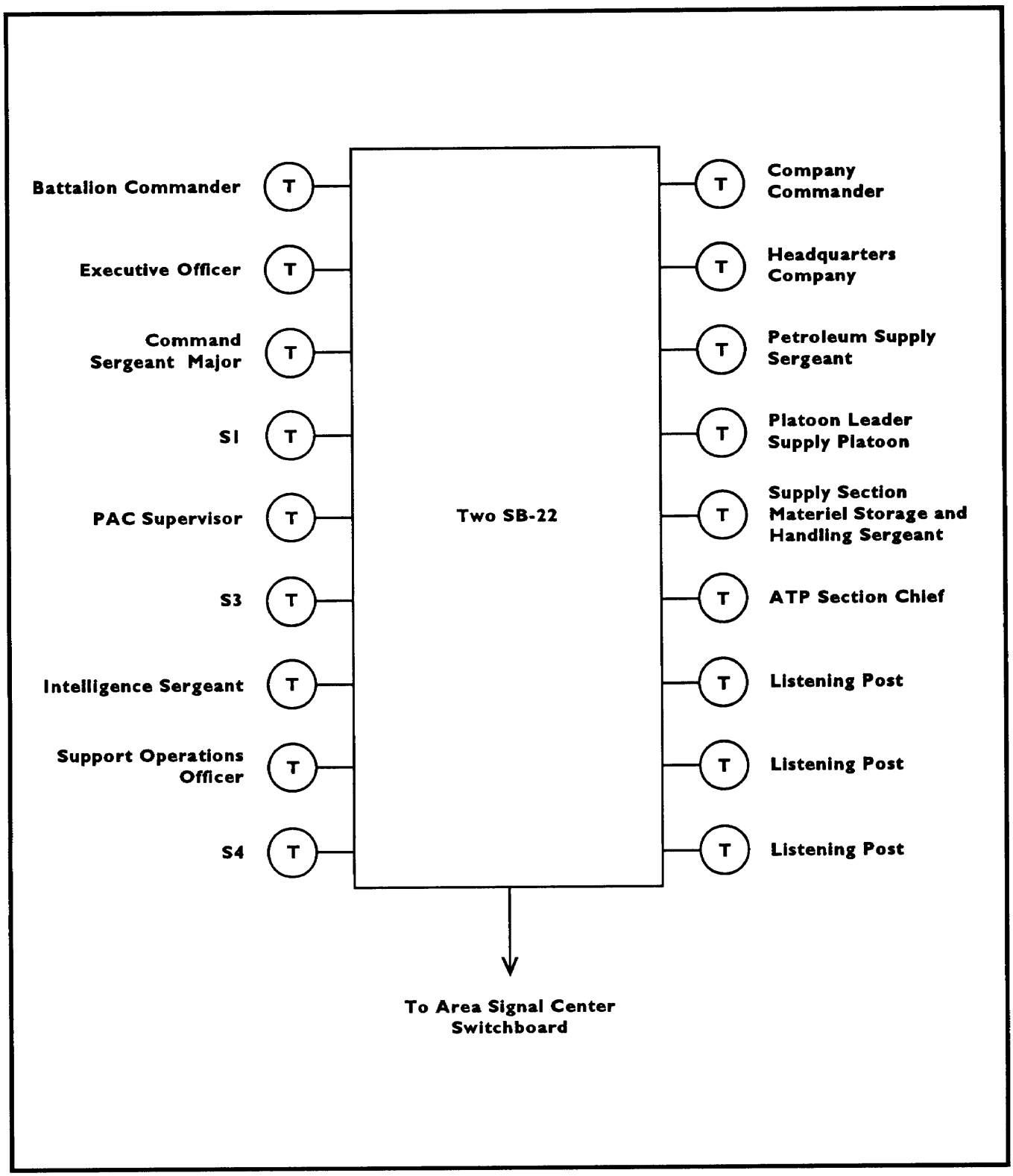


Figure 2-6. Wire net diagram of a headquarters and supply company, forward support battalion, light infantry division

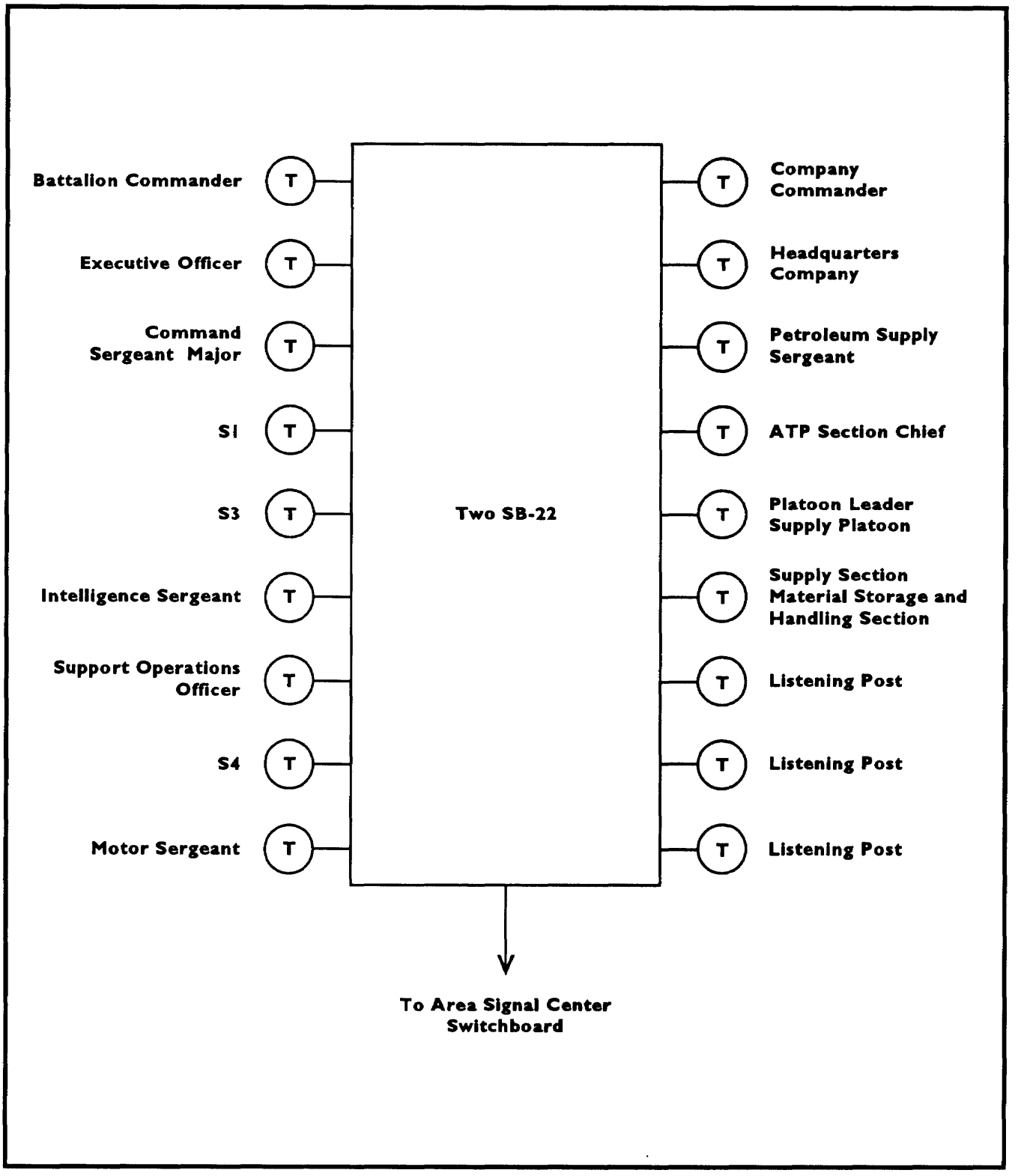


Figure 2-7. Wire net diagram of a headquarters and supply company, forward support battalion, airborne division

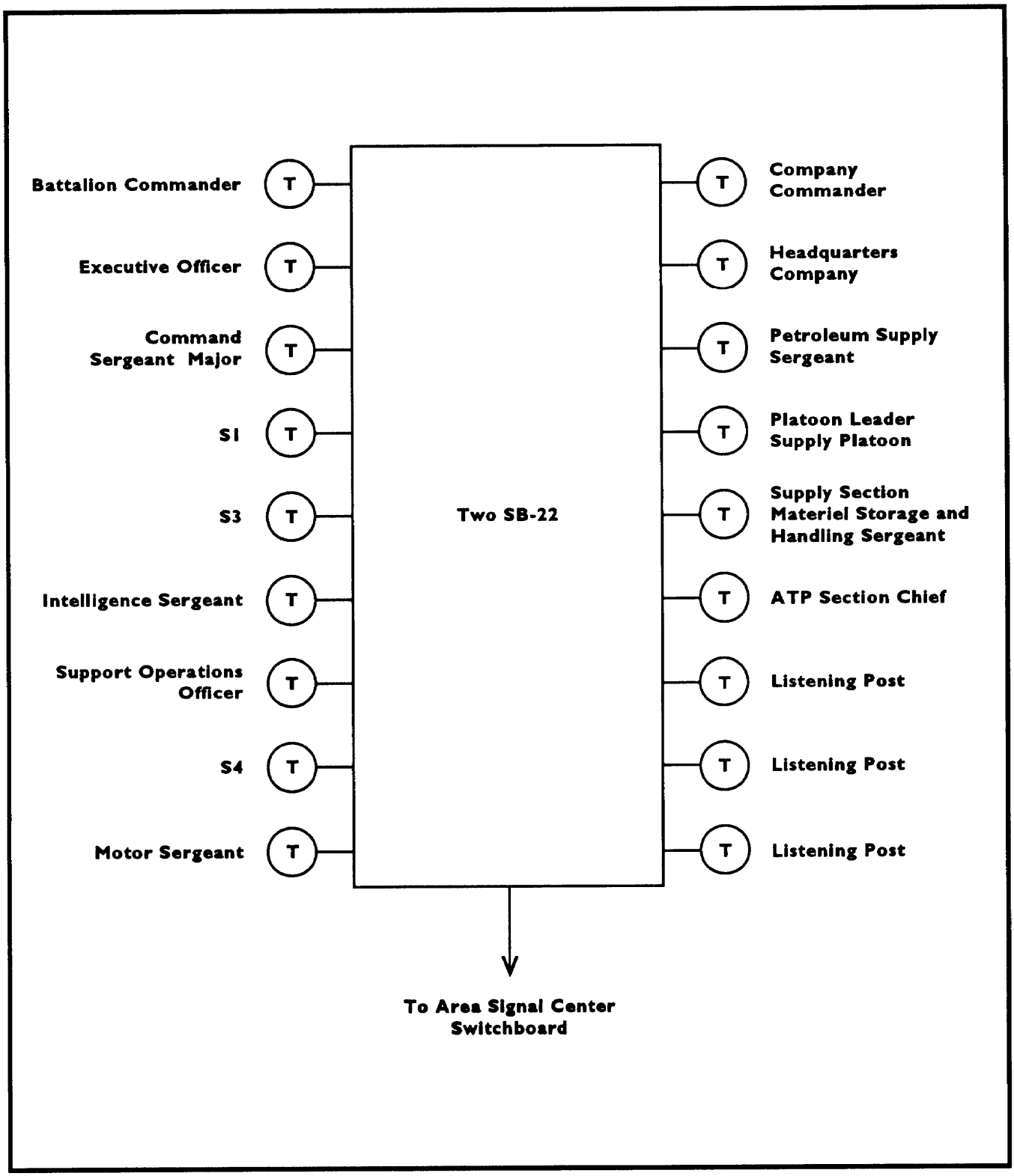


Figure 2-8. Wire net diagram of a headquarters and supply company, forward support battalion, air assault division

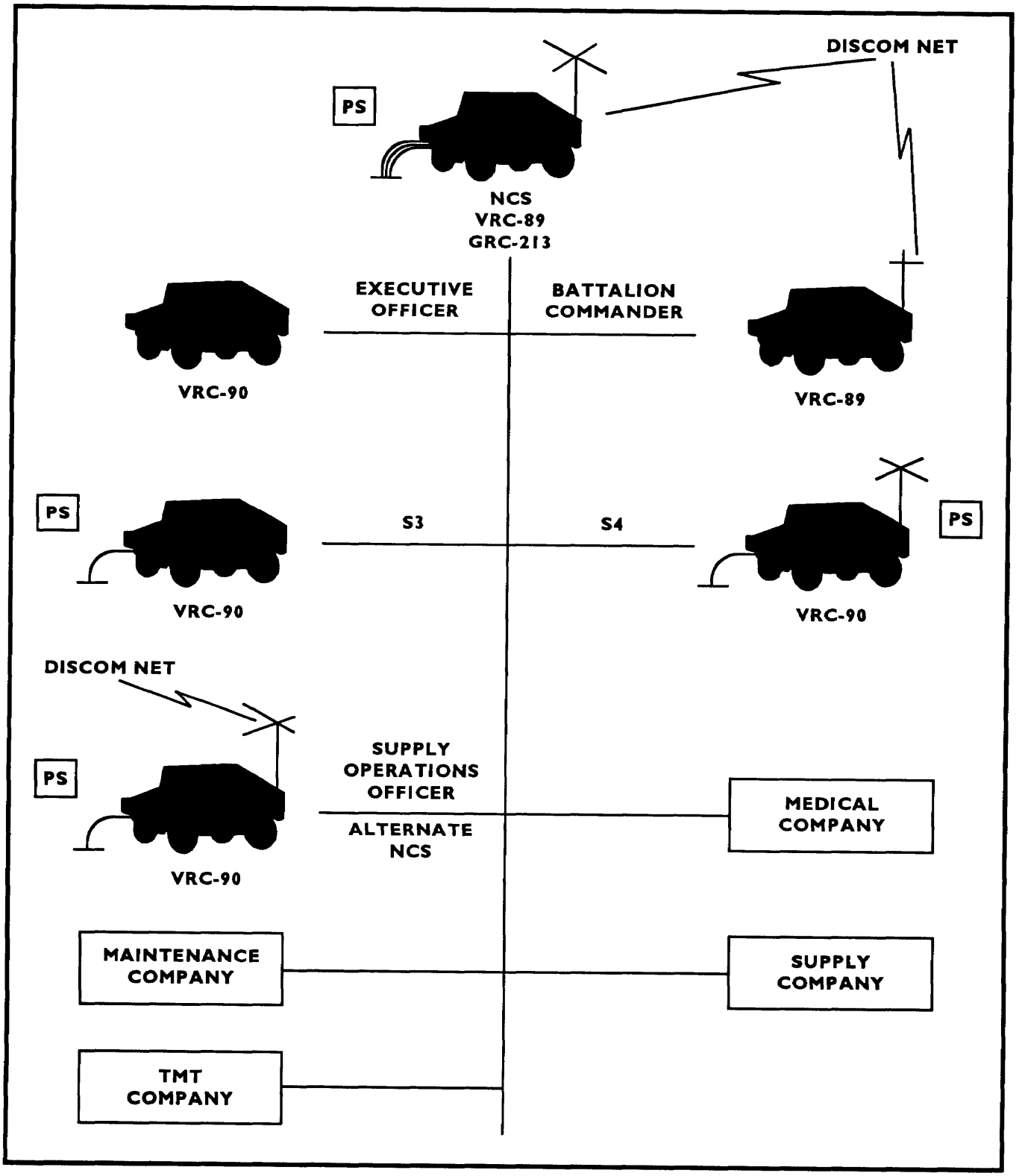


Figure 2-9. Battalion radio net of a headquarters and supply company, main support battalion, light infantry division

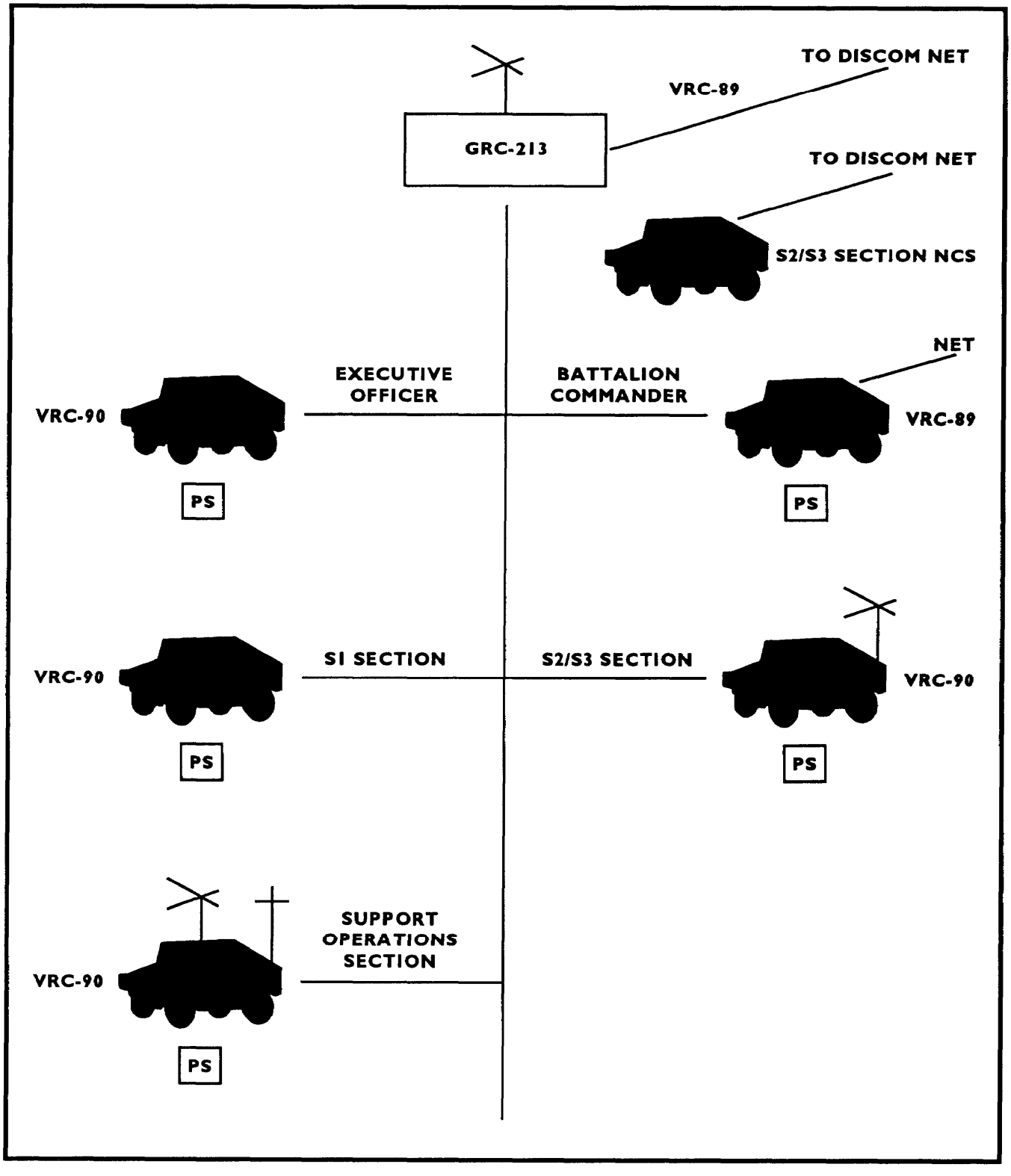


Figure 2-10. Battalion radio net of a headquarters and supply company, main support battalion, airborne division

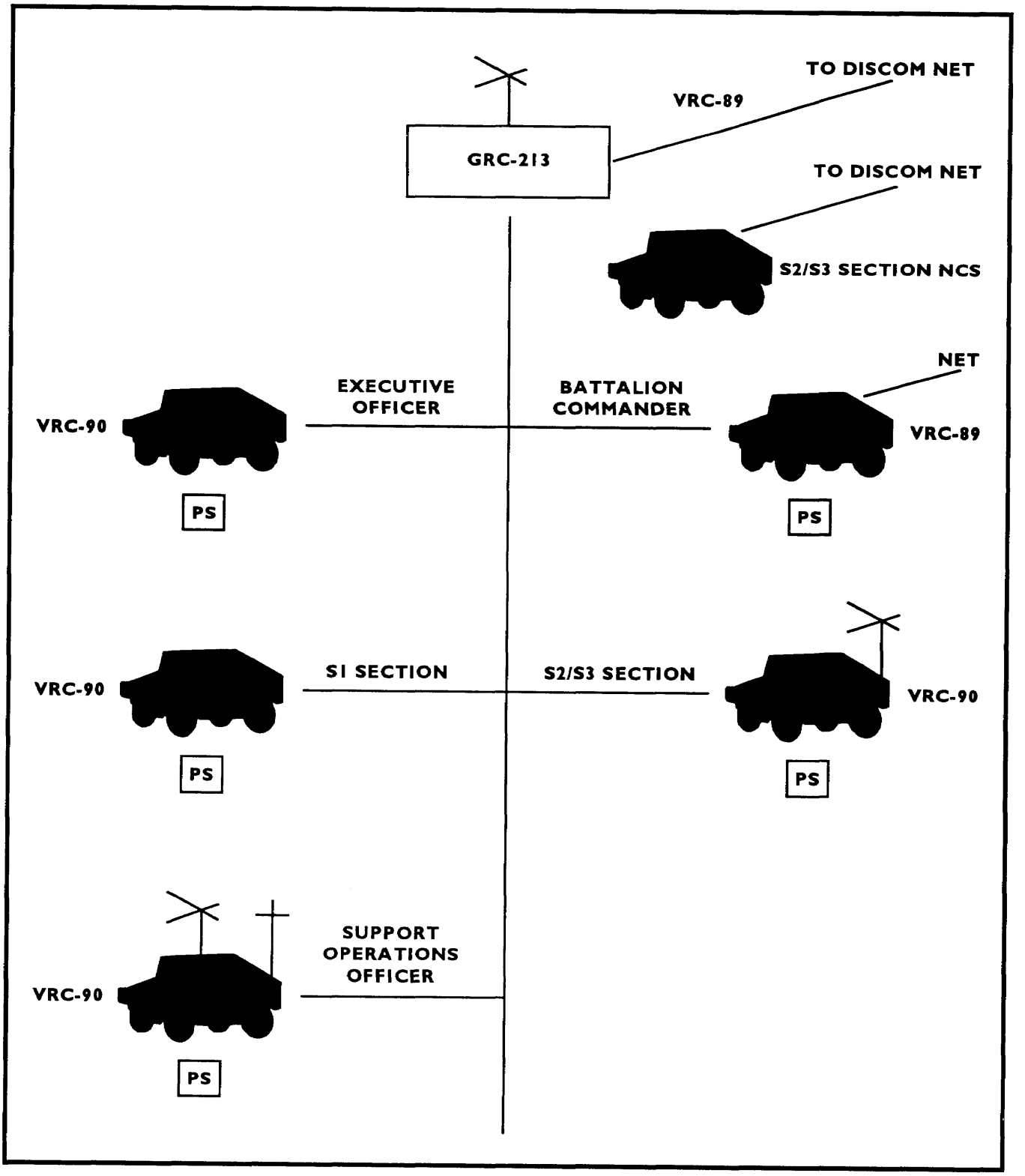


Figure 2-11. Battalion radio net of a headquarters and supply company, main support battalion, air assault division

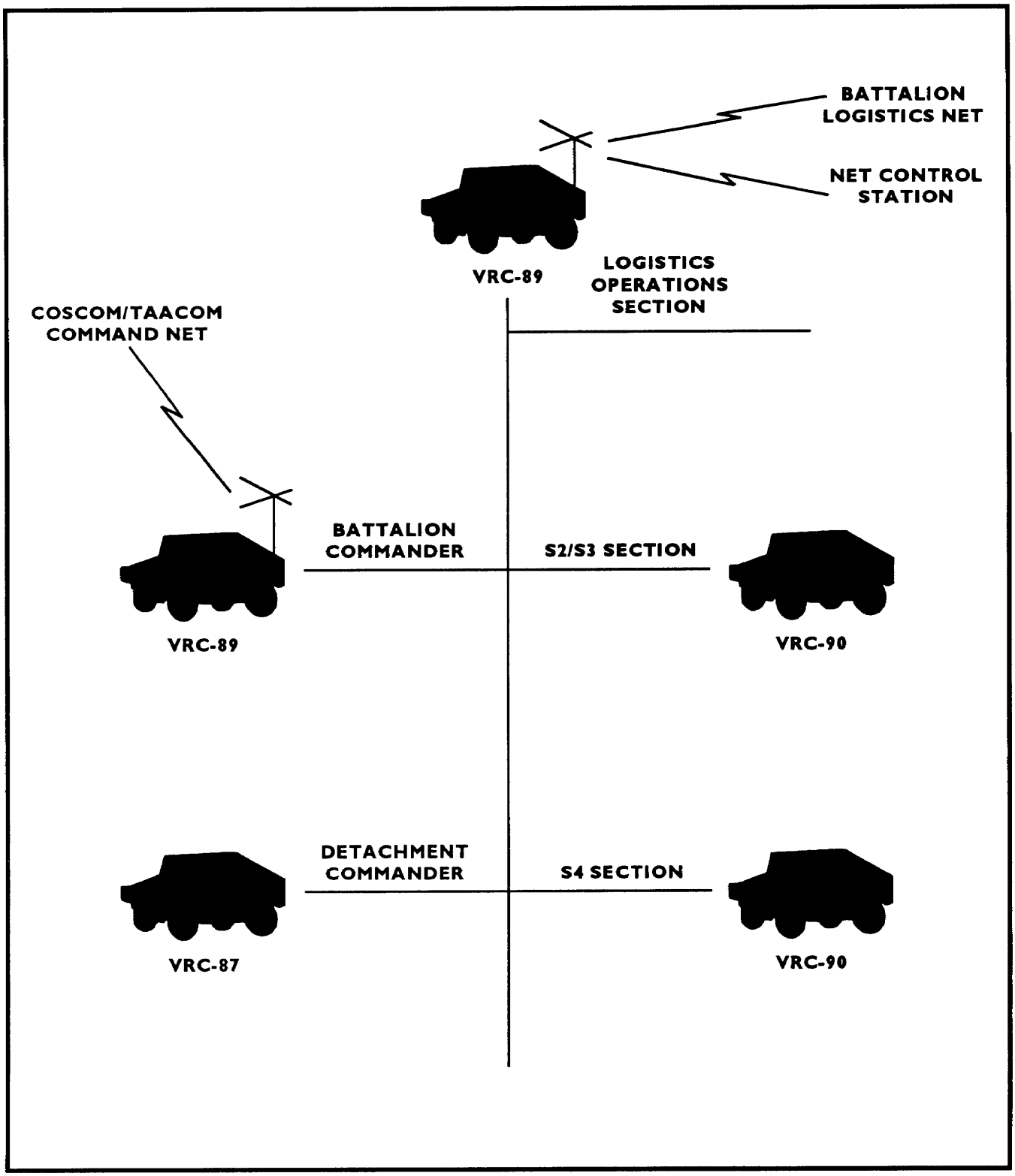


Figure 2-12. Battalion radio net of a headquarters and headquarters detachment, S&S battalion

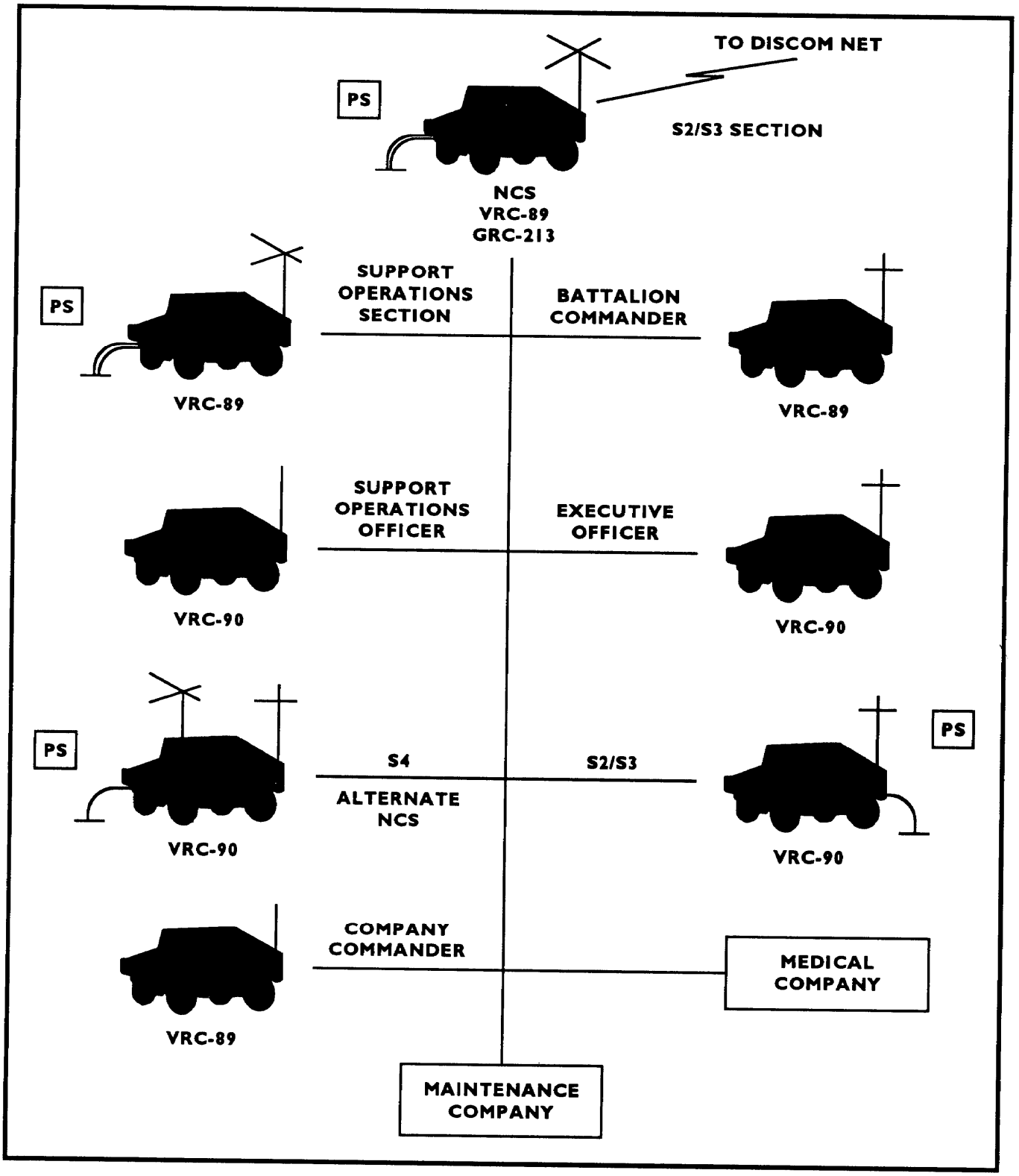


Figure 2-13. Battalion radio net of a headquarters and supply company, forward support battalion, light infantry division

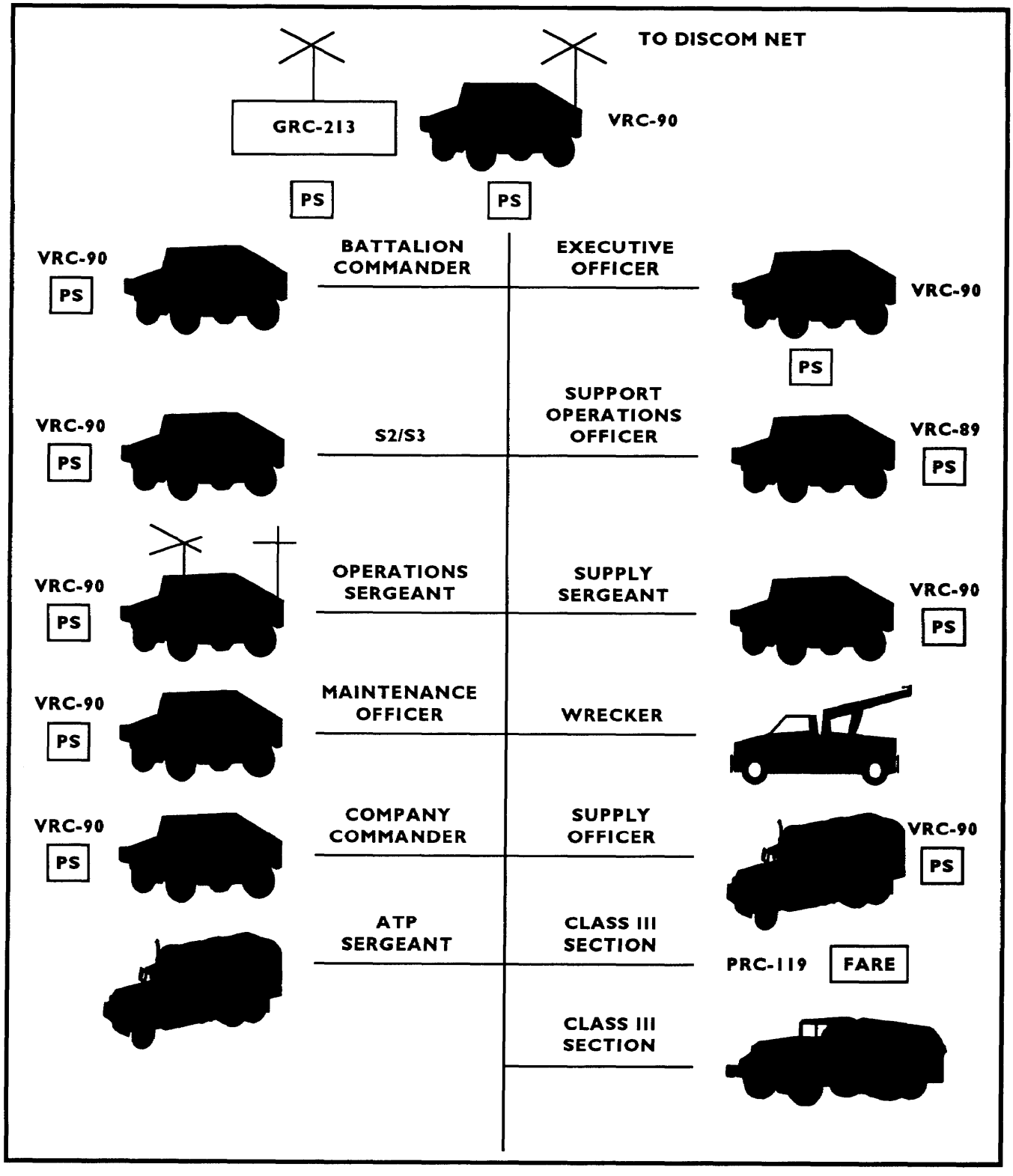


Figure 2-14. Battalion radio net of a headquarters and supply company, forward support battalion, airborne division

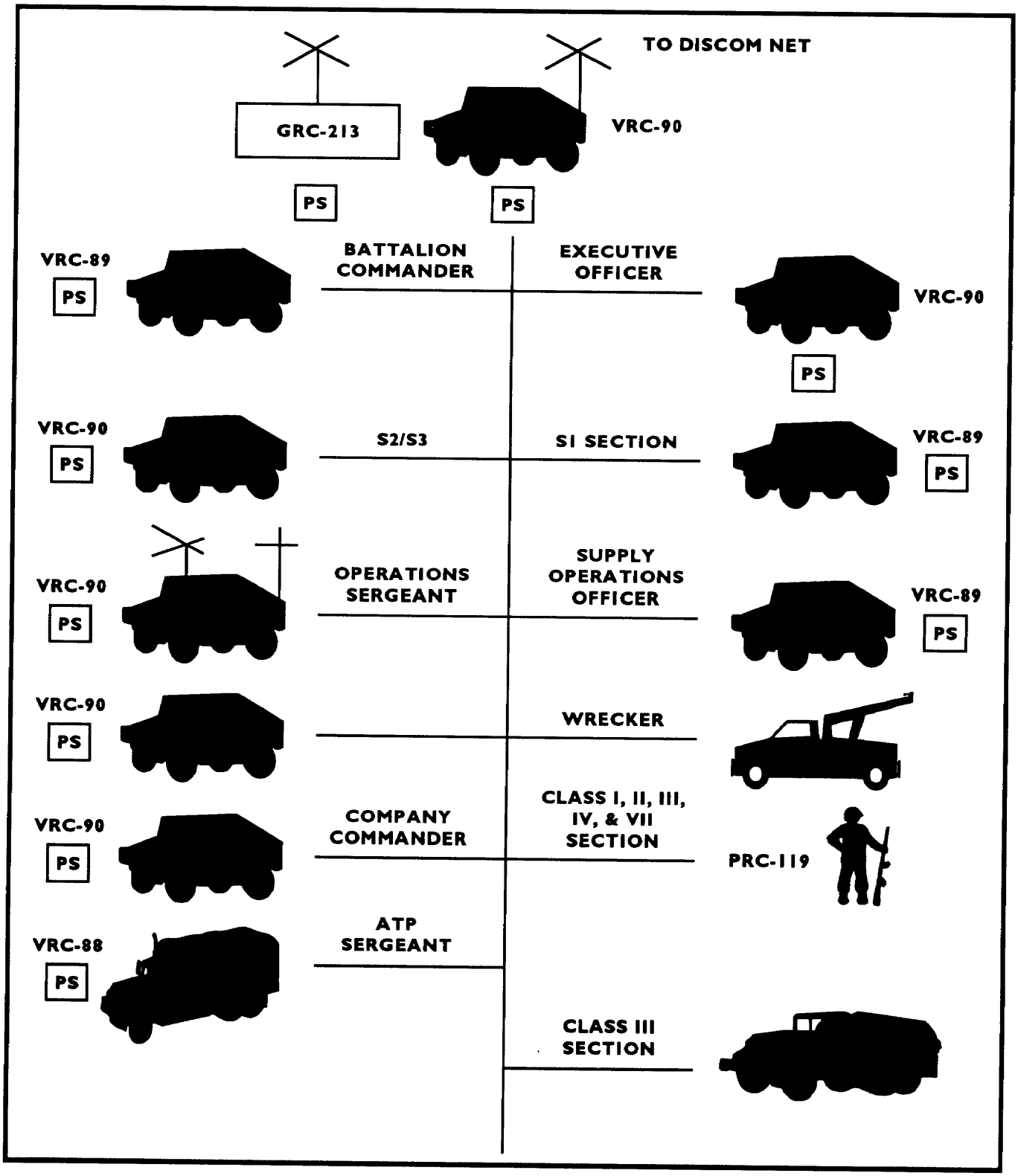


Figure 2-15. Battalion radio net of a headquarters and supply company, forward support battalion, air assault division

Visual and Sound Signals

You can use visual and sound signals to send messages over short distances. These signals are especially useful during periods of radio silence. They are used as alarms or warnings, especially of enemy attack, or as a means of sending prearranged messages. Messages transmitted by visual or sound signal are easily misunderstood. Take care when selecting the method and the message to be conveyed. See Table 2-4 for publications on visual and sound signals.

COMMUNICATIONS SECURITY

COMSEC consists of measures taken to keep unauthorized persons from getting information from the communications system. Your soldiers should practice transmission security and physical security.

Transmission Security

The SOI governs all transmissions. The SOI is a type of classified combat order issued by higher headquarters for the technical control and coordination of communications. See FM 24-35 for more information on the SOI. As a rule, you receive only an extract of the SOI, that part you need to manage your nets. Also, the SOI may give you a list of essential elements of friendly information which must not be transmitted. Your operators should have a copy of this list. They should monitor transmissions to see if information on the list is being passed. They should report any violations to their supervisor. Other ways you can make transmissions more secure are listed below:

- Choose the most secure means of communication according to the urgency of the situation.
- Transmit only when necessary.
  Use low transmitting power when possible.
- Be wary if a radio station's signal strength suddenly changes.
- Use directional antennas and terrain masking when possible.
- Plan your message. Keep the message as short as possible.
- Maintain total radio silence when directed.
- Use only authorized codes and ciphers.
- Avoid identifying yourself or others.
- Demand authentication. Do not talk to anyone who will not authenticate.

Physical Security

Impress your operators with the need to protect communications equipment from abuse, damage, or capture. Make sure they guard against disclosing the locations of equipment. Make sure phone wires are inside the defense perimeter and along frequently traveled routes. Bury wire and cables when possible. This protects against magnetic pulses during nuclear attacks. Site radios in well-defended locations. Instruct your operators to move transmitters frequently. Be sure to rotate your operators so that an enemy will not associate an operator with a specific unit or operation.

ENVIRONMENT

The environment can have a significant impact on communications. Your soldiers must know how to install, operate, and maintain communications equipment in all environments. Cold weather, desert, jungle, mountain, nuclear, biological, and chemical environments create special problems.

Table 2-4. Visual and sound signal publications

PUBLICATION	COVERAGE
FM 3-100	Sound alarms
FM 5-36	Road signs
FM 21-60	Flags, lights, panels, arm and hand signals
FM 21-305	Traffic control signals
FM 23-30	Pyrotechnics
FM 55-312	Convoy warning devices, flags, hand signals

Cold Weather

For operations in severe cold weather, special arctic training is needed. See FMs 9-207, 24-1, 31-70, and 31-71 for details on operations in cold weather.

Desert

Dust and extreme heat are two major problems in desert operations. FM 24-1 lists their effects on communications. See FM 90-3 for details on desert operations.

Jungle

Humidity and heat create the biggest problems for combat communicators in the jungle. Good operator maintenance is the key to keeping equipment in shape. FM 24-1 has details on the jungle environment.

Mountain

In mountain areas, you may find it difficult to move, to find a communications site, and to ground equipment in rocky soil. You may also have problems with operating generators and carburetors at high altitudes. See FMs 24-1 and 90-6 for more details on mountain operations.

Biological and Chemical

Combat communicators will find it difficult to retain continuity of communications in a biological or chemical environment. Manual dexterity is degraded when they wear MOPP gear. Voice distortion from the protective mask will make radio and telephone conversations difficult. Personnel decontamination is time-consuming and will take CE operators away from their duty positions. To overcome these problems, train your soldiers in full MOPP gear in a simulated biological or chemical environment. See FMs 3-3, 3-4, 3-100, and 24-1 for more details on operations in a biological or chemical environment.

Nuclear

Nuclear detonations from great distances degrade signals as a result of changes in the medium characteristics (a transient effect of electromagnetic pulse). They damage systems by radiation or intense fields generated by gamma pulse.

ELECTRONIC COUNTERMEASURES

ECM may hinder, confuse, or prevent radio reception. Your soldiers should report all ECM according to SOI supplemental instructions. Before reporting ECM, the operator should disconnect the receiving antenna to determine whether or not the signal is from an outside source. The operator should follow the procedures in FM 24-33, Chapter 2, to determine the nature of the ECM.

Interference

Electromagnetic signals caused by sources other than the enemy may interfere with your radio reception. These sources include friendly radio signals, faulty electrical components, weather conditions, and nearby generators.

Intrusion

Intrusion is the insertion of electromagnetic energy into friendly signal paths so that operators are deceived or confused by it. The enemy may try to enter the communications system by imitating a friendly unit or station. Train your operators to counter intrusion by using correct operation codes, brevity lists, and operating signals. Make certain your operators require authentication and that they observe transmission security.

Jamming

Jamming is the deliberate effort to prevent the passage of or to degrade the reception of information. It can disrupt a single frequency or an entire frequency spectrum. All radio frequencies can be jammed. An operator hearing unusual noise on the radio must try to determine its source. If he

cannot trace the noise to a friendly source, the radio is probably being jammed. The operator should try to identify the kind of noise and report it to you. He should not let the enemy know that jamming efforts are successful.

Reports

An operator suspecting ECM should notify you at once. He should then make a report according to the SOI supplemental instructions and in the format shown in FM 24-1, Appendix H. He should make the report whether or not he is successful in working through the ECM. After you receive the report, send it to higher headquarters. This is required by the SOI.

Training

Train your operators in procedures to follow so that they can act to restore communications or set priorities for transmissions. Train your soldiers equally in all communications methods. Your company will then be able to continue operations during periods when one or more methods are knocked out. Make sure all users, not only prime operators, are trained. These include officers, NCOs, and other soldiers. Train them to operate communications equipment correctly and to maintain COMSEC. Train backup operators to take over when prime operators are absent.

Directed Energy Weapons

Weapons using directed microwave radio energy and lasers safe to the human eye may be fielded in the near future. At low power, these can jam CE equipment. At higher power, they can induce excess electric currents into sensitive components, causing burnout, damage, or destruction.

Countermeasures

Include in your SOP methods of installation and operation of CE equipment which best protect soldiers and equipment. CE equipment in your inventory generally will not be designed to withstand the effects of EMP. Take steps to harden your equipment, or use hardened equipment designed to resist EMP. Plan to give communications priority to hardened systems in an EMP environment. In training situations, emphasize compliance with EMP-related directives. Use smoke generators, pots, or grenades to absorb and reflect the directed energy of most directed energy weapons.

CHAPTER 3

COMPANY LOGISTICS

Section I
UNIT SUPPLY

This section is for the supply NCO.

MISSION

The unit supply element supports the company with certain supplies and TOE equipment. You are responsible to the commander for internal supply operations. The most important publications to use are in the Unit Supply UPDATE. You also need your company's MTOE. To provide proper support to a CSS unit, you must understand its mission. Make sure you and your soldiers understand the mission of supported units.

Required Information

To manage unit supply operations, you have to know the—

- Requirements and authorization of your company.
- Desires of the commander regarding unit supply.
- Size and physical characteristics of the unit supply element.
- Location and layout of the element.
- Type and amount of support needed to run an element.
- Number, types, and particular needs of soldiers in the company.
- Impact of operations on internal supply operations.
- Request and issue cycle of higher headquarters.
- Location of each supply support activity furnishing support.

Unit Supply SOP

Develop a unit supply standing operating procedure. It may be a separate SOP or part of the unit SOP (Appendix). The SOP should include—

- Responsibilities for company supply operations (Table 3-l).
- Hours of operation of the supply element.
- Procedures for securing the supply room or tent.
- Procedures for controlling durable items.
- Measures for controlling issued property.
- Procedures for controlling expendable items.
- Types of records, reports, and forms required.
- Detailed procedures for requesting, receiving, storing, inventorying, issuing, and turning in supplies and equipment.

Table 3-1. Responsibilities for unit supply operations

PERSON	RESPONSIBILITIES
Company Commander	Is responsible for the proper use, care, custody, and safekeeping of all government property within his command. Ensures that all authorized equipment is on hand or requested. Determines, by frequent inspections, if property is complete and serviceable. Ensures that supply specialists are properly trained. Ensures that all soldiers are instructed in proper maintenance of property. Ensures that all property is inventoried annually and that all sensitive items are inventoried monthly. Ensures that excess property is turned in. Starts action to account for property which has been lost, damaged, or destroyed. Develops a company SOP for security of property. Assigns subhand-receipt holders.
Supply NCO	Prepares and maintains supply records. Safeguards supplies and property stored in the supply room and other storage areas. Processes laundry. Handles issue and turn-in of property between the company and personnel. Assists personnel with supply matters. Requests and receives supplies. Supervises the supply specialists. Trains subordinate supply specialists. Directs arms room functions.

Table 3-1. Responsibilities for unit supply operations (continued)

PERSON	RESPONSIBILITIES
Platoon or Section Leader	Ensures that soldiers maintain property under their control. Ensures that his soldiers are trained in preventive maintenance procedures. Ensures that his soldiers have the supplies necessary to do required maintenance. Inspects property to make sure it is in a serviceable condition and is on hand or on request. Reports property that is lost, damaged, or destroyed to the commander or supply NCO for preparation of adjustment documents. Stores property not being used.
Armorer	Performs unit maintenance and repairs on small arms. Performs duties assigned by supply NCO. Maintains a master authorization list. Checks, prior to issuing a weapon, the soldier's weapon card (DA Form 3749 (Equipment Receipt)) with the list to ensure there is no unauthorized issue of weapons.

- Procedures for adjusting records for lost, damaged, or destroyed items.
- Procedures for safekeeping property of absentees.
- Guidelines and directions for maintaining equipment and supplies.
- Procedures for laundry service.
- Safety, fire, and emergency procedures.
- Information on supply training.
- Tables of measurement equivalents (FM 10-13).
- Procedures for operating in a nuclear, biological, or chemical environment.

Responsibility

Property responsibility is the obligation of a person to ensure that government property entrusted to his possession, command, or supervision is used properly and cared for and that proper custody and safekeeping are provided. Although you run the unit supply element, all soldiers have certain responsibilities for property. These include supervisory and personal responsibility according to AR 735-5.

Accountability

Accountability is the obligation of a person to keep an accurate record of property. It has to do with maintaining formal records that contain item identification data, debits and credits, available balances on hand or in use, and locations of property. The property book officer issues property to the commander on hand receipts. You assist the commander, who must—

- Ensure that all property is posted correctly to property records.
- Know what property is on hand through physical inventories.
- Take action to resolve shortages or overages.

SETUP AND CLOSEDOWN

If you house the unit supply element in a building, use FM 10-14, Chapter 7, for layout

information. In the field, though, buildings are seldom available. As a rule, you will use tents.

Setup

To set up the supply element in the field, you need—

- To develop a layout plan (Figure 3-l).
- To pitch the supply tent.
- To camouflage the supply tent.
- To off-load and position supplies.
- To man and secure the supply tent.

Preparation for Movement

When the company has to move, the commander will issue a warning order telling you when to close down supply operations and prepare for

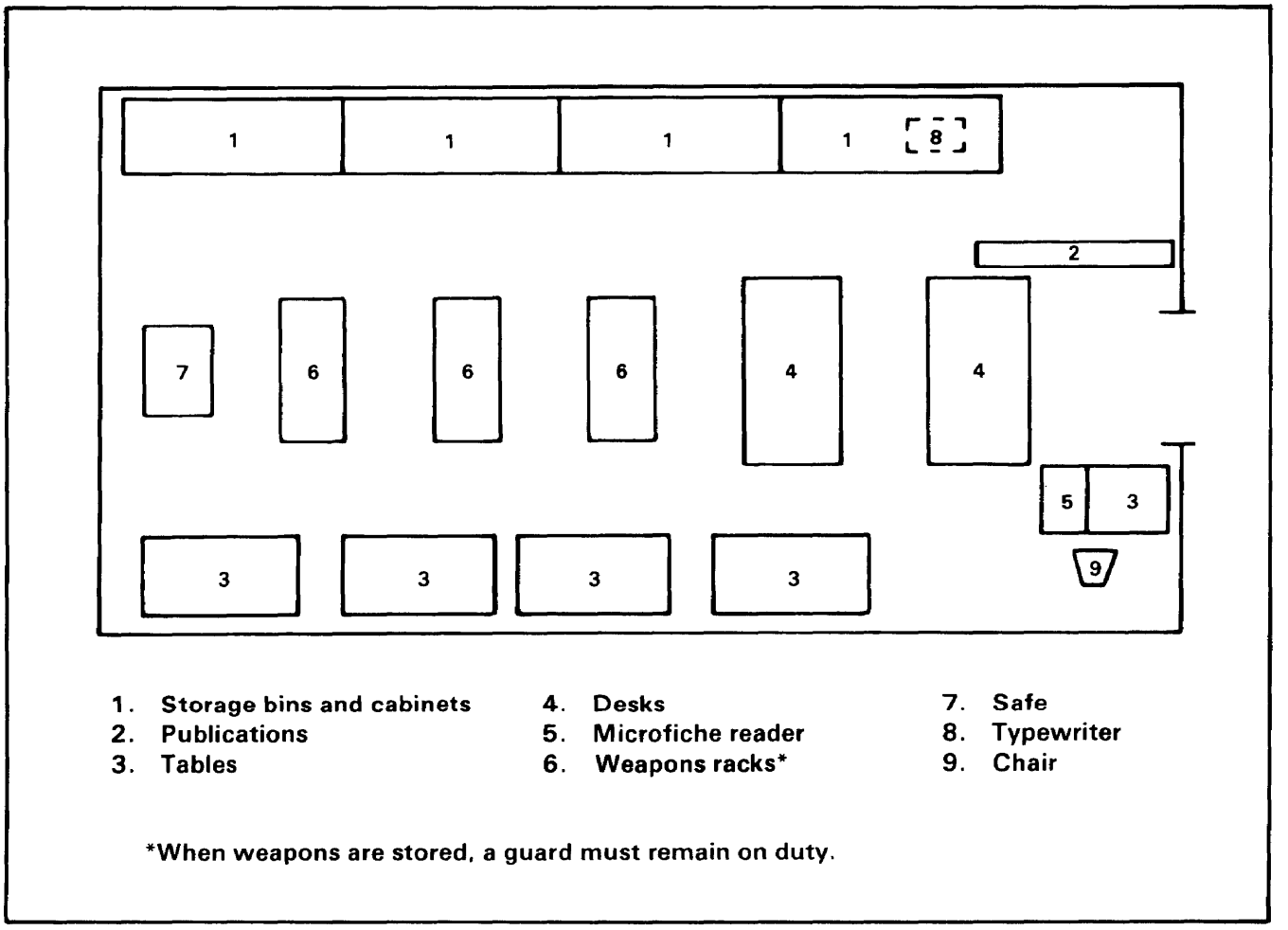


Figure 3-1. Sample layout plan in a medium GP tent

movement. The answers to the following questions will help you plan for the move:

- By what date must the company be ready to move?
- What types of operations are expected?
- What is the latest information on the location of threat forces and equipment?
- How many soldiers will move to the new area? Will some soldiers continue to operate at the old area?
- When will equipment be deployed?
- Does the company need any special equipment for operations?
- Is special maintenance required for equipment before or on arrival in the new area?
- Will advance elements require any special supply support?
- What are the climate and terrain like in the new area?
- Will more soldiers or details be necessary to perform the unit supply mission?
- How will contaminated supplies be handled?

Closedown

The commander will tell you when it is time to move. When you receive the order to close down, take the actions below.

- Set up issue and cutoff times for supported activities.
- Load supplies and office equipment.
- Strike the supply tent.
- Secure the basic ammunition load.

OPERATIONS

As supply NCO, you request, receive, store, protect, inventory, issue, and turn in supplies. You may also have to obtain laundry support for the company.

Requests

See Table 3-2 for authorization documents which list items you may request. Have a consolidated company request prepared, and send it to the battalion S4. See Table 3-3 for request and

Table 3-2. Authorization documents for property

TYPE OF PROPERTY	AUTHORIZATION DOCUMENT
Organization Property	MTOE CTA 50-900, Section II CTA 50-909, Appendix C TDA Joint Table of Allowance AR 840-10
Installation Property	CTA 50-909
Expendable Supplies Repair Parts	Technical manuals containing repair parts and special tool lists
Other Expendables	CTA 8-100 (medical) CTA 50-970 (all except medical, ammunition, repair parts, and heraldic items) AR 385-32
Personal Clothing	AR 700-84 CTA 50-900

turn-in forms. Check the request for accuracy and completeness before it leaves the company. Initiate follow-up action if supplies are not received on schedule, and periodically review the current need for requested supplies. See DA Pamphlet 710-2-1, Chapter 2, for details.

Table 3-3. Request and turn-in forms

FORM	USED TO REQUEST OR TURN IN
DA Form 581 (Request for Issue and Turn-in of Ammunition)	Ammunition and explosives.
DA Forms 2765 and 2765-1 (Request for Issue or Turn-In)	Expendable, durable, or nonexpendable single line item with NSN listed in the AMDF.
DA Forms 3161 (Request for Issue or Turn-In) and 3161-1 (Request for Issue and Turn-In (Continuation Sheet))	Ten or more line items of expendable supplies normally provided by self-service supply center. Five or more line items of packaged Class III products or other supplies normally ordered on a recurring basis.
DD Form 1348-6 (DOD's Single Line Item Requisition System Document (Manual Long-Form))	Non-NSN single line item. NSN single line item when the NSN is not listed in the AMDF. Modification work order and modification kit. Classified item. Any exception data item.
See DA Pamphlet 710-2-1, Chapters 2 and 3, and FM 9-13, Chapter 8, for preparation directions.	

Receipts

The commander uses DA Form 1687 (Notice of Delegation of Authority—Receipt for Supplies) to designate those authorized to sign for supplies. This form is sent to the support activity. The commander remains fully responsible for the supplies. (See DA Pamphlet 710-2-1, Chapter 2.) Upon receipt of an item, take the following actions:

- Check quantities and national stock numbers.
- Check the serial numbers when you receive items with serial numbers. Check each item's serial number with the one recorded on the receipt document. If there is no serial number listed on the receipt document, enter it.
- Inventory components of end items against applicable technical manuals or supply catalogs to make sure all components have been received.
- Report discrepancies to the supply support activity according to AR 735-5.

Storage and Protection

The supply element may be required to store and protect certain items. See AR 190-51.

Ammunition. Operational situations may prevent storage of ammunition in magazines or special storage rooms. If so, the unit commander may be authorized to store the basic load of ammunition on vehicles or trailers or in other ways demanded by the situation. See AR 190-11.

Weapons. The armorer controls and protects stored weapons. Make sure he performs these functions according to FM 10-14, Chapter 7.

Lubricants and oils. Store containers on dunnage or pallets. See DA Pamphlet 746-1 for details on pallets. Inspect all cans for leaks before storing them. Store empty containers separately. Make sure the proper type extinguishers are available and that sand barrels are nearby.

★ ***Rations.*** Store the basic load of rations on dunnage under tarpaulins. This prevents damage from moisture.

Expendable items and housekeeping supplies. You may store small items, such as soap, beneath the issue counter. Store other items in bins or on shelves. Store items in frequent demand in the most accessible places.

Organizational clothing. You may store a few items of clothing (to be used in emergencies) on shelves in the company supply tent. See FM 10-14, Chapter 7, for storing clothing.

★ ***NBC protective items.*** Store replacement stocks of individual MOPP gear so they are ready for issue in the event of nuclear, biological, or chemical warfare. Be prepared to replace defective items or items that are incorrectly sized. You should have at least one extra overgarment for each soldier in your company. The battle dress overgarment will provide adequate protection for up to 30 days as long as it is not ripped, torn, soaked with petroleum, or contaminated. It will protect the wearer for 24 hours after contamination by a liquid chemical agent. It should be exchanged as soon as tactically possible. See FM 3-4 for more details.

Inventories

Be prepared to help take inventories of property. Make sure property records are always ready for inspection. Policies for inventories and inspections are in AR 710-2. Specifics are covered in DA Pamphlet 710-2-1, Chapter 9.

Issues

You are responsible for issuing three types of supplies or property: nonexpendable, expendable, and durable. Make sure you accurately account for these issues. Usually, make issues directly to the user identified on the authorization document. Use DA Form 2062 (Hand Receipt/Annex Number) to subhand-receipt items from the commander, to the supervisor, to the user. DA Pamphlet 710-2-1 gives procedures for posting transactions to DA Form 2062. To prevent frequent postings, the unit commander may authorize that DA Form 3161 (Request for Issue or Turn-In) or DD Form 1150 (Request for Issue or Turn-In) be used as a change document. Post the change documents to the hand receipt at least every six months, counting from the oldest change document in effect (AR 710-2).

Property book items. Issues of property book items must be recorded on DA Form 2062, DA Form 3161, or DA Form 3749 (Equipment Receipt). The hand receipt holder must sign the form.

Weapons. ADA Form 3749 must be turned in to the supply specialist each time a soldier draws a weapon. He must maintain a control log of weapons issued (if for more than 24 hours) and a master authorization list.

Expendables. Expendables are not carried on the property book or on hand receipts. Enforce supply discipline to prevent loss, misuse, or pilferage of items. To prevent an excessive demand for expendable items, set up a control sheet so that normal requirements can be determined. If demand exceeds these levels, take action to find out why.

Turn-In

Turn in supplies and equipment when they are in excess of authorized allowances, unserviceable, uneconomically reparable, or are found on the installation. Use DA Form 2765-1 (Request for Issue or Turn-In) to turn in these items to the supply support activity that usually issues them.

★ Laundry

Laundry service support will depend on whether fixed permanent laundries are available in a host nation. In contingency areas, laundry and renovation support is provided as soon as the tactical situation permits. Field service companies provide service for divisional and nondivisional units. Laundry operations under field conditions may depend more on local SOP than on procedures in FM 10-280.

Section II
FIELD KITCHEN

This section is for the food service sergeant.

★ MISSION

Your company operates a tactical field kitchen to feed the soldiers of assigned and attached units of the battalion. The Army field feeding system calls for three quality meals each day. These meals consist of individual meals (MRE), and group meals (T, B, and A Rations), or a combination of these meals, including enhancements and supplements. A food service team with its food service equipment provides the T Ration meals from unitized modules. The basic equipment for the field kitchen is either the mobile kitchen trailer or the kitchen, company level field feeding. The trailer-mounted field kitchen (MKT-75, MKT-75A, or MKT-82) is a collection of food preparation and serving equipment mounted on a trailer chassis. See Figure 3-2 (page 3-9). If the MKT is issued to your company, see FM 10-23 for information on cooking and serving meals. The MKT is issued to divisions, to separate brigades, to ACRs, and to MASH units based on one for every 300 soldiers. The prime movers for the MKT are the 2 l/2-ton or 5-ton medium cargo trucks. Each MKT comes with a prime mover. The KCLFF enables 200 soldiers of a company to receive one hot meal a day. The only hot meal that can be prepared in the KCLFF is T Rations. The KCLFF is operated by one cook and a soldier from the supported unit. There is one KCLFF per company for the light divisions and one per two companies in heavy divisions, separate brigades, and ACRs. This provides flexibility in preparing hot meals for dispersed units and remote sites. The HMMWV, the CUCV, or a 5-ton tactical cargo truck can transport the KCLFF. There is no separate vehicle allocation for the KCLFF. The T Ration is packaged in modules with 18 or 36 meals to a module and 24 modules to a pallet. Each module contains all the components of a meal. This includes condiments and disposable eating ware.

Required Information

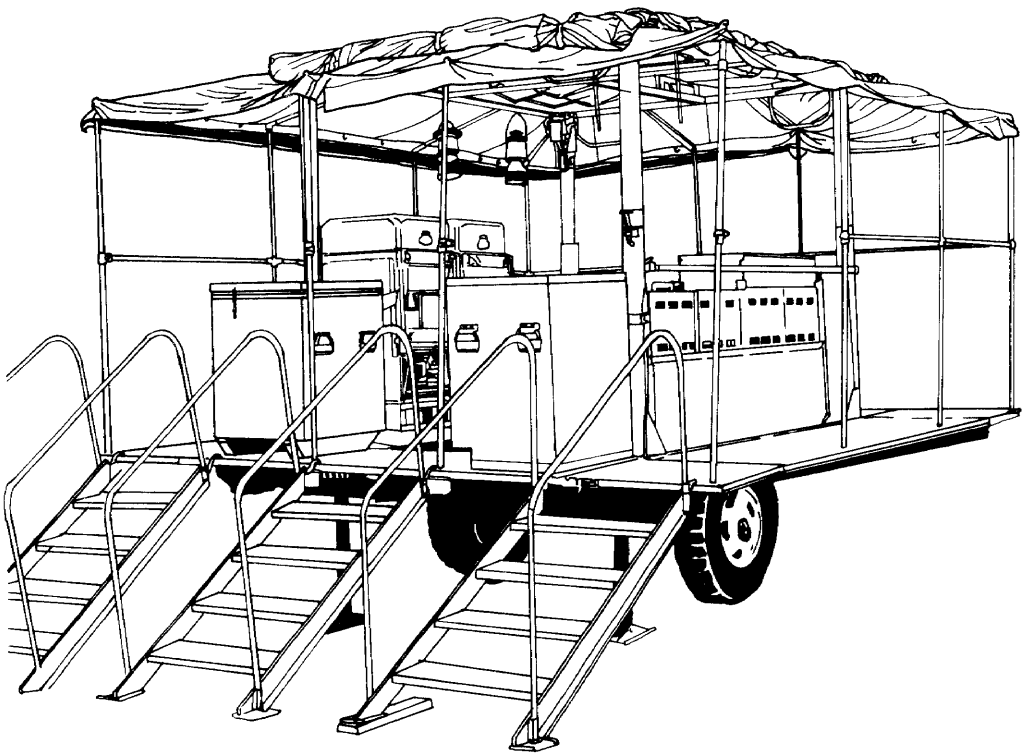
As food service sergeant, you are responsible for field kitchen operations. Use the kitchen SOP and production schedule to provide written instructions. They detail on a day-to-day and meal-by-meal basis such matters as responsibilities, work procedures, standards, and acceptable methods. To manage field kitchen operations, you must know the following:

- Where the field kitchen is to be setup.
- Location and strength of supported soldiers.
- Location of transfer points, Class I supply points, and water points.
- Location of Class III supply points for refueling kitchen vehicles and securing fuel for kitchen equipment.
- Ration issue frequency and turnaround time for obtaining rations and water.
- Time required to reach and serve soldiers operating at remote locations. Food in insulated containers will hold serving temperature for up to four hours.
- Designated ration cycle.
- Location of garbage collection points.

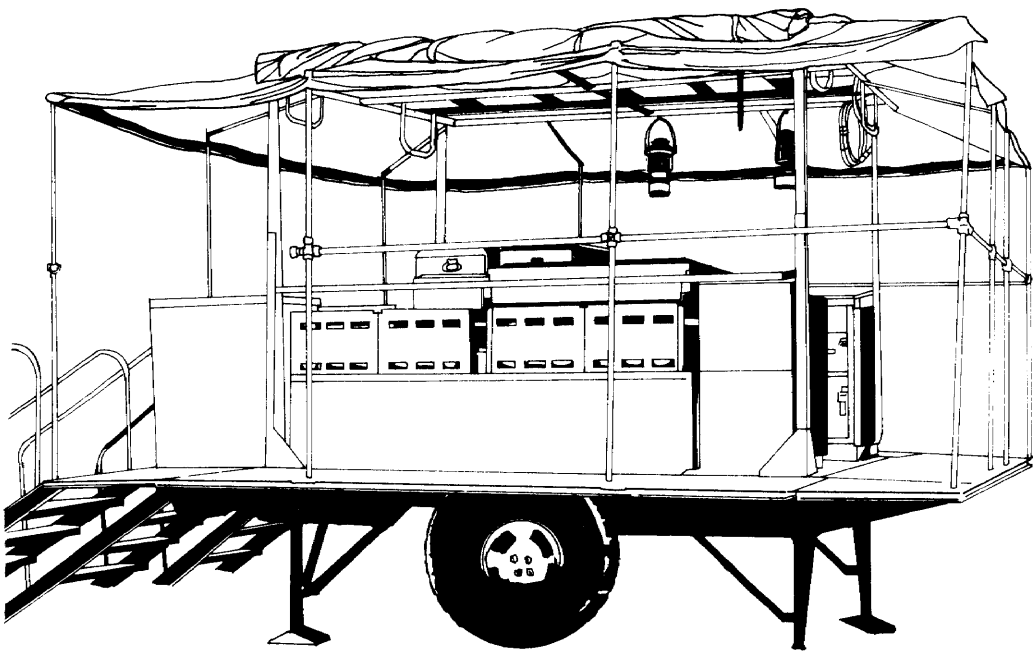
Kitchen SOP

A kitchen SOP will ensure that all food service soldiers know what is expected of them. It may be a separate SOP or part of the company SOP. The SOP should include the following:

- Responsibilities for field kitchen operations.
- Schedule for serving meals.
- Sanitation requirements.
- Safety precautions.
- Information on care and operation of equipment.
- Records and reports required.
- Procedures for delivery of meals to those who cannot come to the field kitchen.
- Procedures for pickup of rations and water.
- Information on how to store rations.
- Information on training programs.
- Measurement equivalents.
- Ration forecasting and accountability, meal card control, and cash control procedures.
- Preparation and serving of food and water in a nuclear, biological, or chemical environment.



REAR VIEW



SIDE VIEW

Figure 3-2. Trailer-mounted field kitchen

Operations

Establish a system for the routine operation of the feeding site. Check with the S1 section or have the first sergeant or unit clerk report any changes in troop strength. These changes will affect rations delivered. Inform the field kitchen of any operational changes and the location of soldiers. If possible, make this part of your SOP. Check cooks for cleanliness. Check them for signs of illness or infection, and refer those who show such signs to a medical facility for evaluation. See TB MED 530 for more guidance. As a rule, the following assumptions apply to your operation:

- Although food can be prepared in one central location, using unit soldiers, rather than food service soldiers, will pick up, deliver, and serve prepared food at the unit location. They will return insulated food containers to the kitchen site.
- T Rations will be issued in preconfigured, packaged meals, according to the approved menu.
- Each T Ration module will contain a different meal, and each meal will have a unique stock number.
- MREs will be used when T Rations cannot be prepared.
- When rations have not been unitized, units will order rations by indicating the number of meals required.
- Cooking will be curtailed during nuclear, biological, or chemical operations.

SETUP AND CLOSEDOWN

Field situations seldom allow you to operate under ideal conditions. However, you have to do the best you can with the area that is assigned to you. Develop a layout plan. Figure 3-3 shows a layout plan for feeding A and B Rations with the MKT. Other layout plans with T Rations and the KCLFF are in FM 10-23. FM 10-23 lists conditions suitable for a kitchen site.

Setup

To set up the field kitchen, you must—

- Pitch the kitchen tent.
- Off-1oad and position equipment.
- Set up the mobile kitchen trailer.
- Camouflage the area.

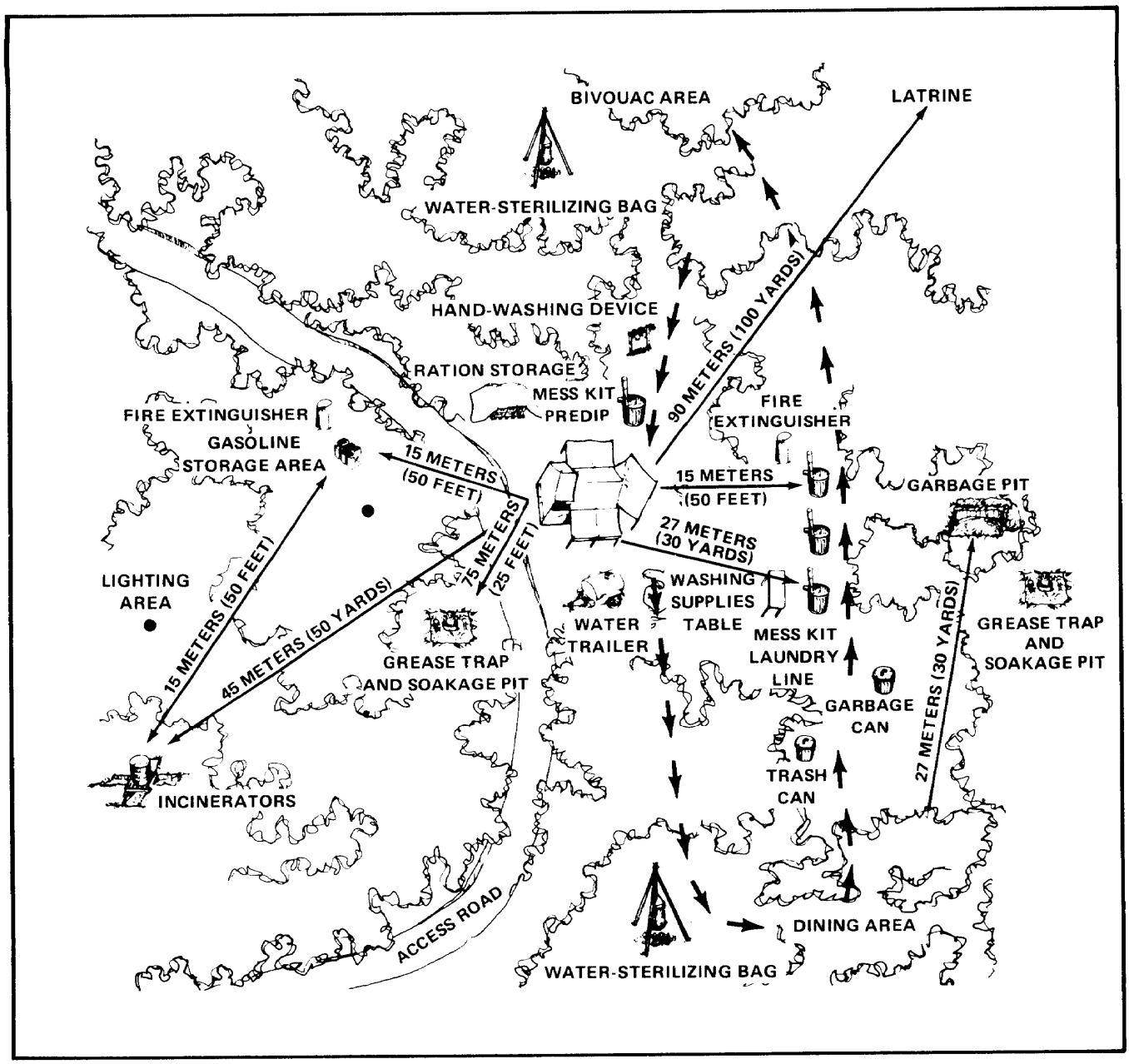


Figure 3-3. Sample site layout

Closedown

When you receive moving instructions, you must—

- Secure rations.
- Fill containers.
- Shut down ranges.
- Strike the kitchen tent.
- Load vehicles (Figure 3-4).

Vehicle number _____
Driver _____
Assistant driver _____
_____
Passengers _____
_____

EQUIPMENT LOAD

1. M59 field ranges with cooking equipment and items from accessory outfit stored inside
2. Accessory outfit tool chest with some accessory outfit items
3. Insulated food containers
4. Tent poles
5. 5-gallon water cans with taps for hand washing
6. Water-sterilizing bags (2)
7. Folding worktables (2)
8. Gasoline lanterns (2)
9. Kitchen tent in tent cover or burlap
10. 32-gallon trash cans (6)
11. Immersion heater units (3) packed in trash can with sections of pipe
12. Pioneer tools for digging soakage pits and grease traps and for pitching tent
13. Tent pins
14. Fire extinguishers (2)
15. Lids (2) for trash cans
16. 5-gallon gasoline cans (2)
17. 400-gallon water tank trailer (towed)

NOTE: Make sure load is tightly packed to prevent equipment damage and personnel injury. Use barracks bags and other similar items to fill spaces.

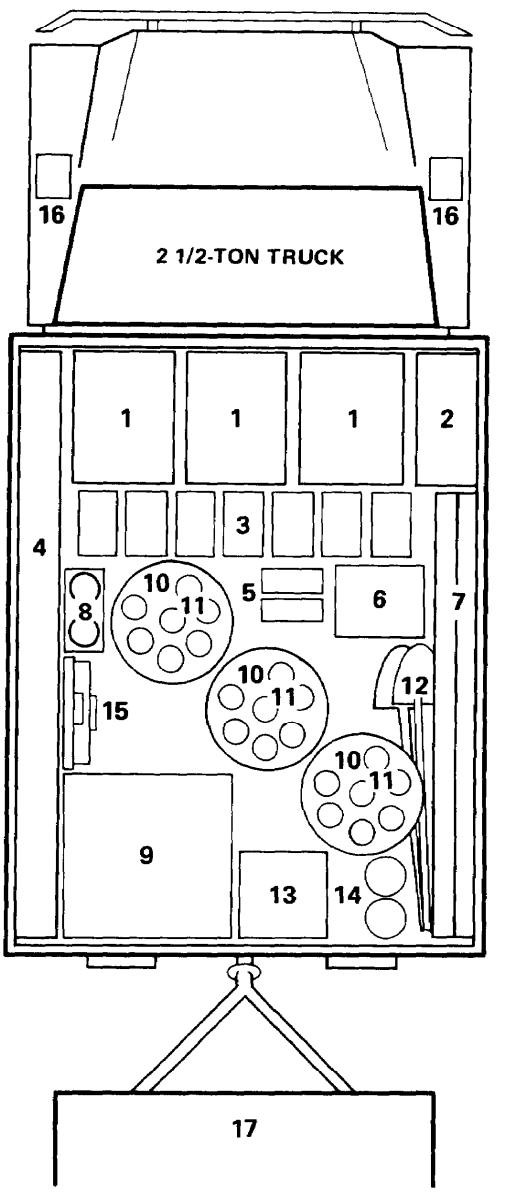


Figure 3-4. Sample loading plan for field kitchen

OPERATIONS

Field kitchen operations include receiving rations, storing and protecting them, preparing and serving meals, and keeping records. Your soldiers may also become involved in remote feeding. Rations will be packaged in standard meal packs with disposable serving and eating ware. These packages are designed to feed a predetermined number of soldiers. They are also packaged to provide protection from nuclear, biological, and chemical contamination. Each package consists of one meal with one national stock number. As a rule, your company picks up rations. The quantity of rations requested is based on troop strength. Preplanned rations eliminate the need for complicated ration requests from units. Therefore, you must be kept informed of any changes in troop strength and in location and employment of supported troops. Such changes may cause changes in the number of T Rations needed.

Ration Receipt

One soldier is usually designated to pick up and sign for rations. He completes a single line item receipt at the Class I distribution point and accountability is dropped. There should be more than one authorization on file at the ration breakdown point. Those authorized to sign for supplies are also responsible for checking them for quantity, quality, and condition. The SOP should detail exactly what should be checked. For example, supplies should be checked for damage from moisture, insects, or rodents as well as for swollen or leaking cans.

Ration Storage and Protection

Daily ration pickup reduces spoilage and theft and storage space needed. Plan the storage area so that it is linked to the road network, preferably by a one-way access road for kitchen traffic only. Make sure aisles are wide enough to allow items to be stored or removed from storage easily. Make sure food items are protected against insects and rodents and isolated from nonfood items such as cleaning solutions, pesticides, and rodenticides. Correct storage procedures will aid in the proper rotation of ration items and will ensure their use on a first-in, first-out basis. Never store rations directly on the ground. Use pallets or dunnage to protect rations from moisture and water damage. You can construct dunnage from lumber, logs, railroad ties, ammunition boxes, crates, or bamboo. See DA Pamphlet 746-1 for more on pallets. Use tarpaulins to protect rations stored outside. Authorized tarpaulins can be requisitioned through supply channels. See CTA 50-909. Tarpaulins should be tied to ration cases or to pins driven into the ground. To allow air to circulate in tropical climates, a tarpaulin should not cover the bottom third of the stacks. A tarpaulin spread over a triangular wooden frame provides a dry, ventilated, tent-like shelter for rations. The triangular frame should be constructed so that its edges extend beyond all sides of a stack. If a GP tent is used, the additional space can be used to store rations on dunnage inside the tent. If you suspect that nuclear, biological, or chemical agents are in your area of operations, containerize all open packages of food. Use multiple layers of plastic bags. Cover all food stocks with chemical-resistant plastic coverings. Seal cracks to prevent chemical vapors from contaminating food and food containers. See FM 10-23 for more details.

Meal Preparation and Serving

Follow cooking instructions printed on each tray pan. Prepare rations according to the theater T Ration menu guidance. Food may also be prepared according to SOP for items which have no recipe number and which do not vary in preparation (for example, fruit juice or bread). If the theater commander determines that use of the A Ration is feasible, meals may be prepared according to the theater master menu and recipes in TM 10-412.

Record Keeping

Higher headquarters will determine record-keeping requirements under field conditions. You may find it helpful to keep an informal equipment logbook. Keep notes on maintenance services, repairs, and replacement of parts. The notes will help you develop a planned replacement program. They will also help you spot careless use of equipment or poor operator maintenance.

Remote Feeding

Remote feeding is feeding soldiers deployed more than walking distance from the food preparation site. It may be done by a variety of methods. Battalions may send hot meals forward to remote

units using food containers. When this is not feasible, the battalion may attach a KCLFF or MKT with cooks to the remote unit for preparation of hot meals. Depending on its strength, length of mission, and other tactical and logistical considerations, the remote unit may be administratively attached for rations to the nearest unit with a ration preparation capability.

CHAPTER 4

TACTICAL OPERATIONS

This chapter is for all unit leaders.

Section I
COMMAND AND CONTROL

RESPONSIBILITIES

As leaders, all officers and NCOs have common responsibilities in the tactical operation and maintenance of units and the training and welfare of their soldiers. This section describes troop leading. It covers the techniques of how to plan and execute your unit mission. As a system or concept, command and control involves you, the leader; your subordinate leaders; all communications systems; and the planning and directing functions of troop leading.

TROOP LEADING

Troop leading is the foundation of small unit command and control. It is a combination of TLP, an estimate of the situation, and METT-T analysis (Table 4-1). Troop leading also includes techniques for terrain analysis OCOKA (Table 4-2) and the use of combat orders to issue mission guidance. Figure 4-1 shows the TLP process to be an integration of all of these. Troop leading is a critical element of all company and lower missions. The cornerstone of good troop leading is the TLP—an eight-step procedure. Its purpose is to focus on small unit decision-making—how to plan and execute an operation. The TLP steps are flexible and may be modified. The TLP process is also continuous. It involves the company chain of command. Leaders cycle through TLP as they analyze their situation, which in turn interacts

Table 4-1. METT-T analysis

- ☐ **MISSION:** What is the mission? What are the stated and implied tasks?
- ☐ **ENEMY:** What is known—location, equipment, weapons, doctrine, and tactics? What is the enemy capable of doing? How will the enemy use the terrain and weather?
- ☐ **TERRAIN:** How will terrain affect the operation? What impact does weather have on the terrain? Use OCOKA.
- ☐ **TROOPS AVAILABLE:** What are the strength, training, morale, and capabilities of my unit? What special supplies and equipment are needed? What special tasks are my subordinates required to do?
- ☐ **TIME:** How much time is available?

Table 4-2. Terrain analysis OCOKA

- ☐ **OBSERVATION AND FIELD OF FIRE:** How well can I observe my area? Can my weapons cover critical areas? From what areas can the enemy observe my unit?
- ☐ **CONCEALMENT AND COVER:** Is my unit protected from enemy observation or direct and indirect fire? What areas will cover or conceal enemy movement or activities?
- ☐ **OBSTACLES:** Does the terrain prohibit or channelize movement? Can the terrain be reinforced with mines, tactical wire, or engineer obstacles (ditches, craters, abatis) to hinder enemy movement and provide unit protection?
- ☐ **KEY TERRAIN:** What terrain (hilltops, bridges, road networks, and so forth) gives my unit or the enemy an advantage?
- ☐ **AVENUES OF APPROACH AND MOBILITY CORRIDORS:** Consider air and ground approaches. Am I located near or astride an easy approach into our rear area? For ground approaches, consider approaches by mounted high-speed troops as well as by dismounted infantry. Can my weapons cover each of these approaches? What are the likely approaches into my area? What size enemy unit does each approach support?

with subordinate TLP cycling. See Figure 4-2. This cycling may restart every time a leader perceives a change in the situation or gets guidance from his superior. This is an essential characteristic since all planning is time dependent; that is, the more time available, the more thorough is TLP. With less time, TLP must emphasize the critical actions needed to accomplish the mission. The TLP process starts to cycle when the unit leader receives a mission.

Receive the Mission

Leaders receive missions through orders from their commander or the next-higher level of command. As a rule, it is in the form of a combat order—namely, a warning order, an OPORD, or a fragmentary order. For example, the company commander may receive a warning order from battalion indicating date and time of the move, destination, and the probable routes. A leader can also start the process by analyzing his situation and determining that an action must take place. In either case, the TLP process has started. The leader must quickly analyze his mission and situation. Reverse planning and the one-third,

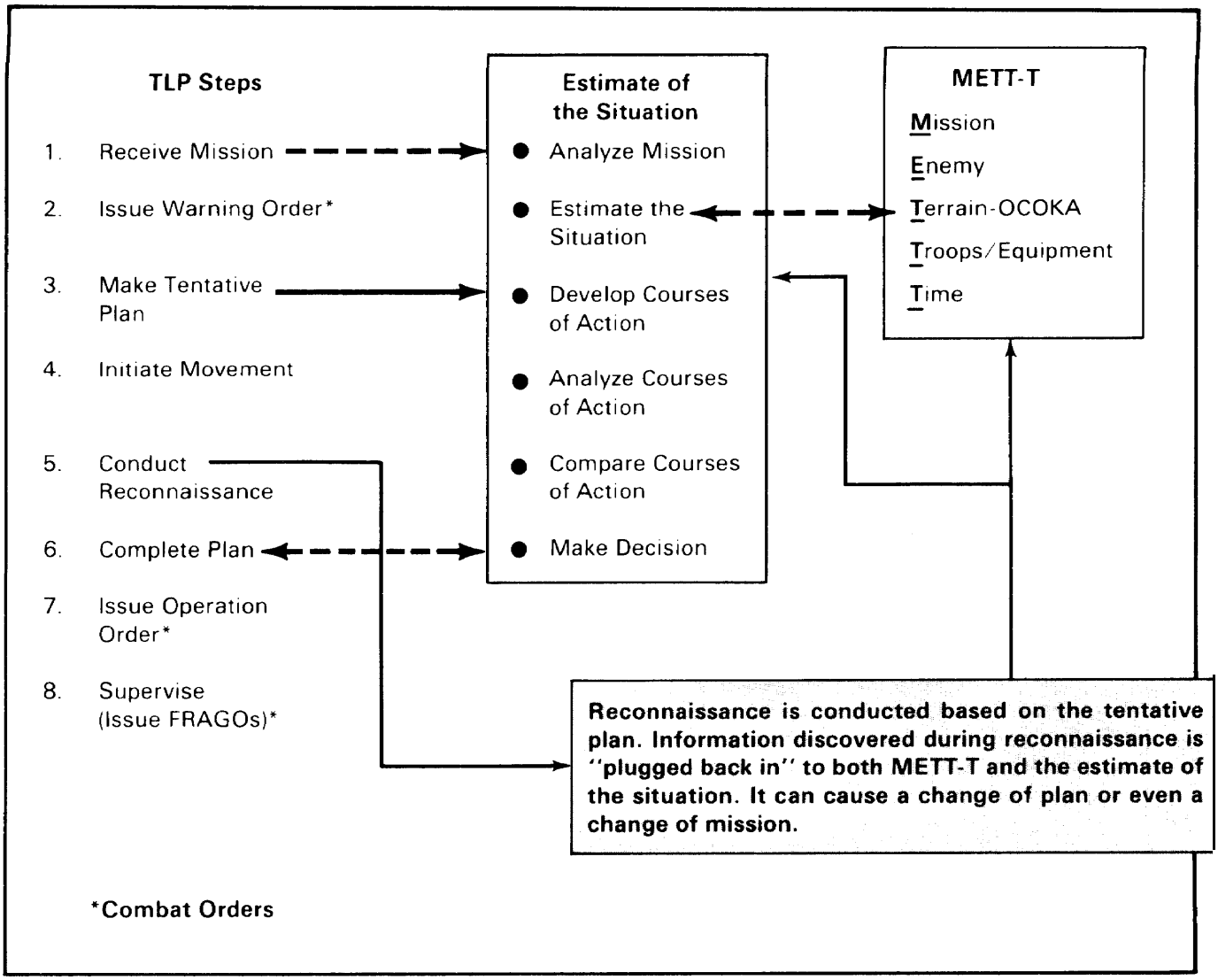


Figure 4-1. Troop leading procedures

two-thirds rule are critical at this point. The leader determines available time, starting from when the mission is to be executed and figuring back to the present. He then relates time to all critical tasks that support the mission. Once he completes this reverse planning, he ensures that his plan meets the one-third time rule. This allows subordinates two-thirds of the available time. A good, quick analysis identifying all specified and implied tasks is the key to reverse planning and time allocation. Many of these actions should be SOP actions. SOP actions can be carried out by soldiers

with minimum supervision, allowing senior NCOs time to complete their plans. The intent is to analyze as quickly as possible and give subordinates as much time and advance notice as possible. The warning order is the advance notice. Figure 4-3 shows a sample reverse planning time sequence. In the sample, the one-third, two-thirds rule is followed. Specific times are allotted for completion of various tasks.

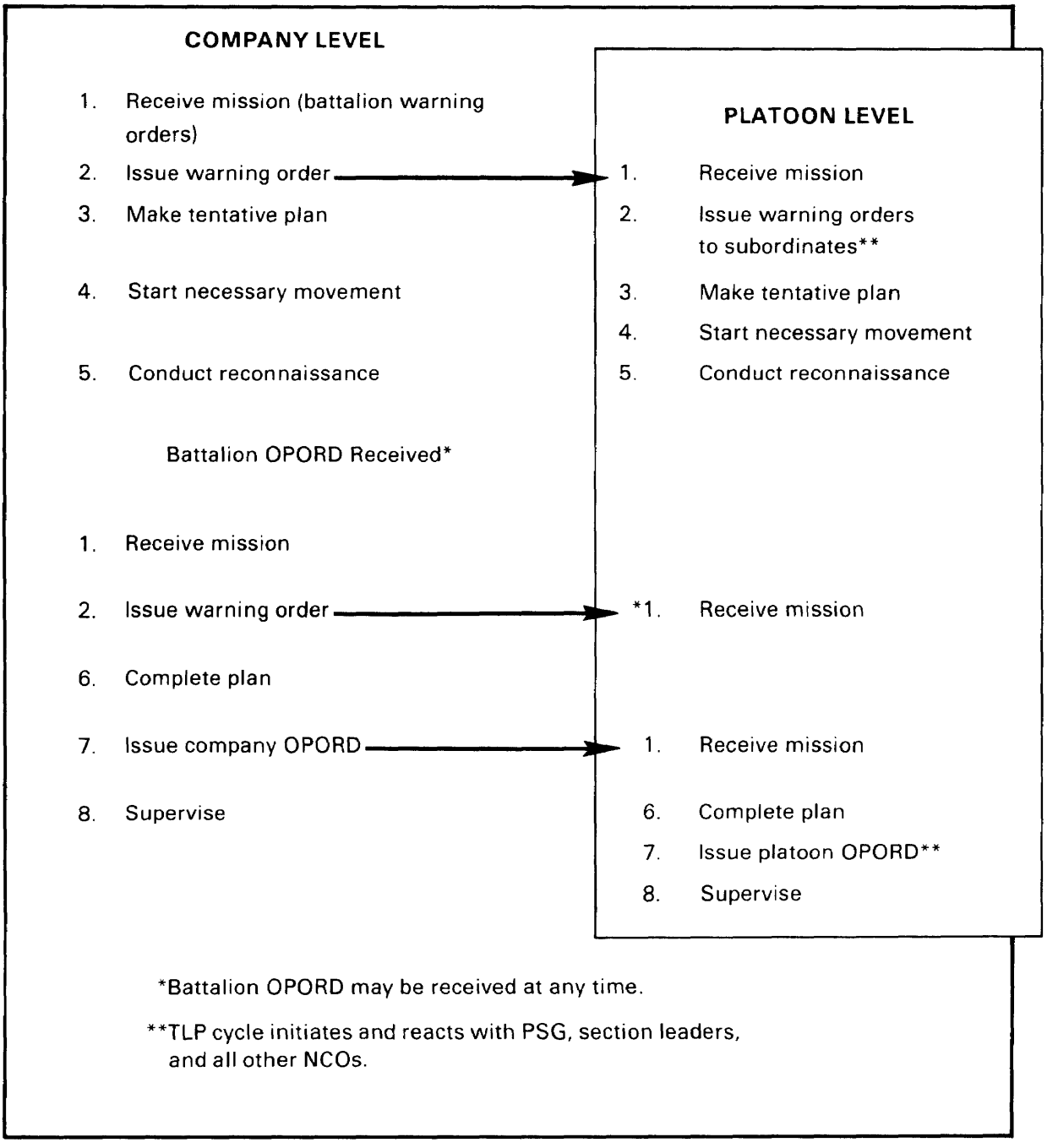


Figure 4-2. TLP cycling

TIME	ACTION
SUBORDINATE TIME	1200 - Become operational at B 1100 - Arrive at B 1000 - Depart A 0900 - Break down at A
LEADER TIME	0800 - Issue OPORD to unit 0730 - Return from recon 0615 - Depart for recon
START POINT	*0600 - Receive mission (move from location A to support at location B at 1200)

Figure 4-3. Sample of a reverse planning time sequence

Issue a Warning Order

As soon as possible after step 1 of the TLP is complete, issue a warning order to all key leaders. Although a warning order has no prescribed format, include at least the following:

- General situation: As much as is known about friendly and enemy operations.
- Mission: What your unit is to do—when, where, and why.
- General instructions: Common requirements for all subordinates.
- Special instructions: Critical times and tasks (from step 1) and special tasks to subordinates.
- The time and place of the OPORD.

Warning orders should be given to subordinates whenever more details are received about the mission. As subordinates receive more details, their planning efforts will improve.

Make a Tentative Plan

Once your subordinates have received the warning order, continue to plan. Clarify all required tasks, and prepare a concept of operation. This effort will give you a clear picture of the total mission requirement. Consider also the mission of your supported units. Your plan should point out what you need to see or verify on a ground reconnaissance, what actions or movements need to be started to make the movement easy, and what other information might be needed from your commander or staff officers.

Start the Movement

CSS units cannot move about as freely as combat units. However, considering METT-T especially time, you should consider all tasks that can be started to ensure the mission is accomplished. This could be as simple as breaking down nonessential areas and starting to pickup noncritical defense warning devices, tactical wire, and mines. You may have to combine your personal reconnaissance of the new area with your quartering party activities if time is critical. This action allows you to see the area, secure it, and start direction of your quartering party. If you do not have time to return to your unit to brief your subordinates, you must leave instructions (a FRAGO) for a subordinate to move your unit. How smooth the occupation of the new area will be under these conditions directly relates to the state of training of your soldiers, your tactical SOP, and the proficiency of your quartering party in preparing the area and in receiving the unit after the road march.

Conduct Reconnaissance

As a minimum, conduct a thorough map reconnaissance. However, actual knowledge of the terrain of your area of operations is critical. As early as possible, and if time permits, conduct a physical reconnaissance of routes and operating sites. Consider the METT-T and OCOKA. Focus on the friendly situation and mission as well as on potential enemy actions. Look at the terrain from the enemy's point of view. How will he move to your site? How will he use the terrain to support an attack on you? What enemy action can impact on your movement to the new site? The reconnaissance should help in finalizing your plan of occupation, setup, and defense. Reconnaissance and quartering party activities can be combined if time is critically short. Make this type of occupation drill part of your unit training. Another option is to have a subordinate conduct the reconnaissance. He must be familiar with your tentative plan, your concept of operation, and the unit tactical SOP. He must know how to properly use the terrain to site a QM unit and defend it.

Complete the Plan

Once you have completed your reconnaissance and verified your initial concept or modified it, you can begin to finalize your plan. Continue to focus on reverse cycle planning. Emphasize the support mission, your defense of the site, and how you will occupy, move, and break down your current site. Although many of these actions will be SOP, they must be tied in with how you and the soldiers will actually use them in the new area for a new mission. The completed plan should be in combat order format. Figure 4-4 shows a five-paragraph operation order. It should also include an overlay sketch for movement, support sites, defense, and an indirect fire plan.

Issue the OPORD

Issue the OPORD to subordinates as soon as possible. Subordinates should have been told the time and place earlier in the warning order. Use a terrain sketch or sand table to help your subordinate leaders visualize the order as you brief them. A company order should be given in less than 30 minutes. As a minimum, the leader should discuss breakdown, movement, occupation, setup, and defense of the new site. If the supported unit has not changed requirements, there is no need to discuss normal operations. If support requirements have changed, they should be included in the briefing. Since security and defense are critical, consider giving a second brief of the defense plan when you arrive at the new site. The initial OPORD brief, using a terrain sketch or model, should give leaders a clear idea of your defense plan. However, you should point out critical defense tasks on the ground with each leader. If time constraints force a subordinate to move the unit while you conduct a reconnaissance, you will have to complete your plan and issue the OPORD at the new site. As the unit arrives at the release point, have your quartering party guide subunits to their sites. Issue the OPORD at a vantage point or at your CP where you have set up a terrain model.

Supervise Your Soldiers

Supervising involves three separate actions: inspecting, rehearsing, and issuing follow-on guidance. Inspection ensures that the plan and the SOP are being carried out. Rehearsals for drills, ambush actions, and patrols are needed to ensure soldiers do what is needed for survival. Follow-on guidance is issuing FRAGOs to subordinate leaders to modify or change your existing plan. You must brief your subordinates, but you must make sure they in turn brief their soldiers.

Section II
DISPLACEMENT

RECONNAISSANCE

Once you know you must move, organize a reconnaissance party. Include members from each section to help you survey the suggested route and the proposed area. Coordinate with the battalion S2/S3 for the latest information on threat activity. Your NBC team should accompany the reconnaissance party, conduct an NBC reconnaissance en route and at the new site, and

OPERATION ORDER

A. WARNING ORDER: Issue the order as early as possible. Include--
1. General Situation.
2. Mission and Critical Times.
3. General Instructions--Tasks common to all.
4. Special Instructions--Tasks to specific leaders or units.
5. Time and place you will issue the OPORD.

B. OPERATION ORDER.
1. Situation.
a. Enemy Forces: As much information on enemy locations, strength, equipment, tactics, and intentions as known. The impact of terrain and weather on the operation.
b. Friendly Forces: The mission and intentions of the following:
(1) Your next-higher command.
(2) The supported unit.
(3) Any adjacent unit.
(4) Any units in front of or behind you.
c. Attachments or detachments (effective time of same).
(1) Units attached to your unit.
(2) Units detached from your unit.
2. Mission. The who, what, when, why, and where. Sequence all critical mission tasks.
3. Execution. (Explain how you intend to accomplish the mission.)
a. Concept of Operation: Explain your intent. Sequence or phase the operation to accomplish all tasks. Ensure primary mission of each subunit is covered.
(1) Scheme of maneuver: (Use if needed).
(2) Fire support: (Use if artillery or Army aviation fire support is available.).
b. Subunit Instructions: List all subunits. List all critical tasks for each subunit.
c. Coordinating Instructions: List all instructions common to two or more subunits. Include instructions for movement, defense, and security here.
4. Service Support. List all unit-level support functions.
a. Supply. Feeding instructions, all classes of supply necessary to mission.
b. Services: (Any services applicable).
c. Administrative: Any administrative instructions.
5. Command and Signal.
a. Command. List higher CP location, your CP location, and accession of command for your unit.
b. Signal. List all pertinent signal or SOI information. Include special signals, challenges, and passwords. End with a time check (synchronize leader watches).

C. FRAGMENTARY ORDER. Supplements OPORD.
1. Situation. Changes to situation (friendly and enemy).
2. Mission. Brief explanation as needed.
3. Execution. Changes to specific units or leader tasks. Who is doing what? Fire support and CSS requirements.
4. Time to execute.

Figure 4-4. Operation order format

mark contaminated areas. See FMs 3-3 and 3-100 for procedures. Route reconnaissance will provide you with current and accurate information on obstacles, road conditions, and critical terrain features along the march route. For more on route reconnaissance, see FM 5-36. Site reconnaissance will provide the information to help you find the best location. When you survey the site, give first priority to the space and special terrain features that are needed for operations and characteristics that determine how well the area can be defended. The three methods of reconnaissance are map, ground, and air. Table 4-3 outlines conditions you should check when you use these methods.

Table 4-3. Reconnaissance checklist

CONDITIONS	ROUTE			SITE		
	Map	Ground	Air	Map	Ground	Air
Road surfaces	x	x	x	x	x	x
Railways			x	x	x	x
Obstacles	x	x	x	x	x	x
Waterways	x	x	x	x	x	x
Amount of available water	x	x		x	x	x
Buildings					x	x
Type of terrain	x	x	x	x	x	x
Location of bypasses and detours	x	x	x			
Inclines and valleys	x	x	x	x	x	x
Concealment and cover	x	x			x	x
Bridge repair and construction requirements		x	x			
Enemy movements		x	x		x	x
Width of roads and trails		x	x		x	x
Critical points	x	x	x		x	x
Distance between points	x	x	x			
Clearance and capacity for loads		x				
Facilities for refueling en route	x					
Location of bivouac sites and rest halts	x	x	x			
Best spots for road guides (checkpoints)		x				
Fording sites	x	x	x	x	x	x
Nuclear, biological, and chemical contamination	x	x	x	x	x	x

Map

Use maps for all reconnaissance operations. Obtain maps of the new area from the unclassified map supply. In choosing your new location, consider the terrain features, roads, wooded areas, and waterways that are shown on the map. However, keep in mind that map reconnaissance is not always reliable, since terrain features may have changed since the map was printed. For more about map reading, see FM 21-26.

Ground

When time and security permit, follow map reconnaissance with ground reconnaissance. Organize your reconnaissance as a patrol. It will help you to locate critical points along the route, such as structures or features that limit road width and overhead clearances. It will help you to determine the load that vehicles can carry. It will show features that interfere with the meeting or crossing of two or more lines of traffic. Record odometer readings at the beginning and the end of the reconnaissance to measure the distance between old and new areas. When conducting ground reconnaissance, take the following items:

- Maps and photographs of the area.
- Binoculars.
- Compass.
- Copies of engineer route reconnaissance overlay, if available.
- Map overlay paper.
- Notebook and pencil.
- Tactical radio.
- Radiological and chemical detection equipment.

Air

If aircraft are available, have them flown over the routes and the area assigned to your unit. Observe the terrain from the air and photograph it. If no aircraft are available, use existing aerial photographs to supplement ground reconnaissance.

SITE SELECTION

Your battalion or higher headquarters will determine a general location for your unit. As commander, you choose the specific area. Then select an operating site for each element. If possible, move to a vantage point overlooking the site to see if it has satisfactory terrain features. Table 4-4 lists specific features to look for. Once you have observed the area, inspect the site by actually moving through it. Security should be your primary consideration. Keep in mind that field situations seldom allow your unit to operate under ideal conditions. You may have to make trade-offs. If you must make trade-offs, consider your mission and the type and location of the threat. In CSS operations, site selection is determined mostly by

Table 4-4. Site characteristics

LOCATION	Near a main supply route.
	Near railways and waterways.
	Good roads to and within the site to support the movement of heavy and bulky equipment, to ease strain on vehicles, and to make resupply and evacuation less difficult.
TERRAIN	Hardstand—good solid soil and drainage. Where heavy rains and floods will not interfer with movement on roads.
	Away from landmarks which may be used by the enemy as reference points.
	Suitable for parking vehicles.
	Ease of defense, including the positioning of weapons, building of obstacles, and maximum use of natural concealment.

Table 4-4. Site characteristics (continued)

FACILITIES	Communications which may be used. Buildings that can be used after they are inspected and found safe. Buildings should have enough entrances and exits for supply distribution. Floors should be sturdy enough to support the weight of stacked supplies and equipment.
SPACE	Adequate for all sections.

tactical considerations. Be sure to select an alternate area in case your unit must move because of enemy action; nuclear, biological, or chemical contamination; or the effect of weather on the terrain. When you select an operating site for each element, consider the volume of traffic, needed space, safety requirements, and defense. Prepare an overlay of your preliminary layout for your unit, the quartering party, and the battalion.

MOVEMENT PLANS AND PREPARATIONS

While waiting for the operation order, review your movement plans and begin preparations. You should always have a contingency or buy-out plan to support a rapid or emergency departure from your current operating site. Enemy action may require you to move before planned departure times. The manner in which you organize to move depends on the purpose of the move and how you intend to occupy the proposed site. The two principal types of movement are administrative and tactical. An administrative movement is one during which no enemy interference or contact is expected. Emphasis is on economy, including maximum use of your own transport capability. A tactical movement is one in which enemy interference or contact may occur. Emphasis is on mission accomplishment.

Operation Order

Final preparations for movement begin when you receive an operation order (or fragmentary order) from higher headquarters. It will give the specific destination and time of your move. Some operation orders will outline every step of the move. Others may only inform you of the move. In some cases, the order may be given orally. A detailed operation order is in a five-paragraph format with annexes. It may include a strip map. Figure 4-4 and Table 4-5 give the types of information in a detailed operation order. See FM 101-5, Chapter 7, for more on operation orders. See FM 101-5-1 to identify symbols used on strip maps. When you receive the operation order, you and your supervisory personnel should review loading and unloading procedures, compute or review external transportation requirements, and assign

Table 4-5. Other information in a detailed operation order

SECTION	COVERAGE
ANNEXES	Convoy organization. Movement conduct. Checkpoints.
STRIP MAP	Start and release points. Route numbers. Place names. Critical points. Checkpoints. Directional arrows. Distances between points. Bivouac, rest, halt, and refueling areas. Targets for indirect fire.

Movement Order

After you receive the operation order, give your soldiers a warning order. This warns them of the impending move so that they may begin preparations. Draft a movement order or annex to your unit OPORD. Use FM 101-5. Include the time of the move, destination, and policies and procedures to be followed by your soldiers. You may also include the same data and use the same format as a detailed operation order (Figure 4-4 and Table 4-5). Brief your key personnel on the movement order. They will then brief their soldiers on specific roles in carrying out the order. Make sure each driver has a copy of the strip map.

Liaison

You should stay in contact with the battalion, supported units, and units which support your unit as you prepare to move. Meet with the battalion S2/S3 to plan the move. Bring area maps up to date, and discuss convoy support, security force requirements, and the current friendly and enemy situation. Submit requests for transportation, fuel, rations, and engineer, air, combat arms, maintenance, and recovery support. Obtain final highway clearances so as not to conflict with other traffic using the same route. Notify battalion and supported units of the date and time of closedown at the old site and when you plan to begin operations at the new site. You do not have to give notice of date and time of closedown if a like unit will be moving into your old site. Coordinate with the base cluster operations center. Ask about the availability of military police for security en route.

Detached Parties

Organize the parties that will not move with the main body of your unit. These are quartering or advance and rear parties.

Quartering or advance. A quartering or advance party is a group of soldiers from each platoon or section sent to the new site before the main body to secure, reconnoiter, and organize the area. As a rule, the quartering party is about 10 percent of the unit. Soldiers in the party go ahead of the main convoy. They post guides along the selected route to help the convoy find the new site. They will check the area for mines, booby traps, trip flares, and nuclear, biological, or chemical hazards. They may be required to clear the area of enemy soldiers who have been bypassed. They will mark locations of unit elements to help drivers move their vehicles to the proper site. They may help to setup the command post and lay communications wire. Quartering party soldiers should take with them field gear, rations, weapons, engineer tape, area maps, compasses, guide signs, and materials for making and erecting signs. They should also take tools, NBC machinery and detection equipment, and a tactical radio.

Rear. Designate the last section of the main party to stay behind and close out operations after the unit has begun to move to the new site. The rear party performs functions such as covering sumps and filling emplacements. Soldiers in the party maintain communication with higher headquarters until the command post in the new area becomes operational. They may also collect stragglers or maintenance failures not recovered by the main body.

SITE OCCUPATION

Members of the quartering party should meet your unit at the convoy release point designated on the strip map. They should lead the elements to their new operating sites. Have cross-country routes marked at the release point to help vehicle drivers reach their areas quickly. When elements arrive at their operating sites, they should establish security immediately, prepare hasty defense positions, and begin to unload and set up operations.

Unit Layout

Secure the site and establish your headquarters. Make sure you locate the headquarters to provide maximum control of the unit. The layout of your unit must not make operations difficult.

Security and Defense

Two important steps in site setup are security and establishment of a hasty defense. You must coordinate your defense with the base commander or base cluster commander before installing it. Your unit must not act independently on defense since it may have fields of fire which extend into another unit's area. Your quartering party may encounter enemy forces in the new area. They must be prepared to fight and, if possible, eliminate small pockets of isolated enemy soldiers. See Section IV for more details on defense.

Command Linkup

Inform higher headquarters at once when sites have been set up for all elements and your unit is ready to start operations. Include in your report the encoded map coordinates of all operating sites, the administrative and operational condition of the unit, and the time the unit will start operations. Contact the base cluster commander so that he can include you in his support of the rear operations.

SITE DEFENSE

You are responsible for the security and defense of your soldiers and equipment. The location of your unit within the theater of operations means that combat and combat support units are between you and the enemy. However, this does not mean that there is no chance of enemy attack. Your unit may face attacks by long-range field artillery, missiles, ground attack helicopters, and ground combat forces. If threat forces attack your unit, your soldiers must be able to defend themselves initially with the assets in your unit. You must develop a defense plan, assign specific duties, and ensure that your soldiers are trained to perform defense tasks. The defense plan, to include a reaction force, must be rehearsed to ensure that all site NCOs understand the concept. Rehearsals must be both planned and unplanned. You will need to develop your defense plan in conjunction with higher headquarters and adjacent units.

Section III
MOVEMENT

CONVOYS

Your unit usually moves by motor transportation. Even if your unit moves by air or rail, it moves by motor transportation to a railhead or airhead. If your move is part of a move by a larger organization, you will be in charge of your serial. If your unit moves by itself, you will be in charge of the convoy. You must be familiar with road movement methods and procedures.

Loading Procedures

You are responsible for supervising loading operations. Assign someone to inspect the loading operations. Each driver is responsible for loading his assigned truck according to the load plan. For specific procedures on loading equipment, supplies, and troops, see FM 55-30, Chapter 10.

Manifests

The leader of each unit element prepares a manifest for that element and gives it to you before the convoy leaves. You will need a complete set of convoy manifests listing all personnel and equipment. These manifests give vehicle bumper numbers, types of cargo, and names of drivers, assistant drivers, and passengers. Make sure that the manifests are checked when vehicles are in the assembly area so that any last-minute changes can be made. Make copies of the manifests, and send them to the battalion. You can attach the manifests as an annex to your movement order. They will help you plan unloading operations at the new site. If there is an ambush or accident, the manifests will provide an accurate roster for taking a headcount and reorganizing the march units. A sample manifest format is shown in FM 55-30.

Final Briefing

Before the convoy leaves the assembly point, brief all drivers, assistant drivers, and passengers. This briefing allows you to review main points of the planned movement along the selected route. It lets you inform your soldiers of any last-minute changes. Table 4-6 lists topics you may want to include. FM 55-30, Appendix M, has a recommended format for drafting the final briefing. You may also find the convoy commander's checklist and report formats in FM 55-30, Appendixes O and P, helpful. After you have given the final briefing, have the convoy move to the start point shown on the strip map which was given to each driver.

Table 4-6. Sample topics for final briefing

CONVOY OPERATIONS	Route, rate of march, and catch-up speed
	Vehicle interval, day and night
	Call signs and radio frequencies
	Actions in event of accident or vehicle breakdown
	Safety requirements
LOCATIONS	Start and release points
	Checkpoints
	Free-fire and no-fire zones
	Security elements
	Refueling points
	Contaminated areas
	Destination
	Unloading sites at destination
DEFENSE	Actions during ambush, enemy contact, or air attack
	NBC defense
	Contaminated personnel and equipment

Control

You can control motor convoys by effectively organizing and identifying convoy vehicles; coordinating communications; and setting march rate, movement method, checkpoints, halts, and procedures for maintenance operations. Cover all of these in your movement order. Make sure you use the correct color flags and convoy clearance numbers for each vehicle in a convoy of six or more. See FM 55-30, Chapter 5.

Night Movement

There are several factors to consider when your unit moves at night. They include the rate of march, vehicle density, and light discipline. Instruct your officers and NCOs on safety precautions to use in a night move. See FM 55-30, Chapter 5, for details on night convoys, including advantages and disadvantages. There are three basic types of lighting used during a convoy move. Normal lighting is that prescribed by the law of the country where you are. Reduced lighting is cutting down the brightness of all interior and exterior lights. You can do this either by cutting the power to the lights or by screening them. Blackout includes blackout drive and blackout marker. Choose the one best suited to your move.

Vehicle Security Preparations

Make sure your soldiers are prepared for possible attack. Have them prepare the windshields and harden the vehicles. Use tarpaulins and car tops to improve security. See FM 55-30, Chapter 5, for details.

Defense

A convoy is a good target for the enemy. A well-planned defense is essential. Use the defense principles described in Section IV, and FM 55-30, Chapter 6. FM 55-30 covers active and passive convoy defense measures. Decide how much and what kind of security support you need. Depending on the expected threat, you may get support from your own unit or other units. When you need outside support, you must coordinate closely with the security force. To get security support from another unit, request it from higher headquarters. FM 55-30, Chapter 6, has details on the following topics:

- Military police support.
- Area support.
- Unit internal support.
- Guard groups.
- Covering force.
- Mines and booby traps.
- Vehicle destruction.

Contaminated Areas

Your unit may have to cross a contaminated area. If the area is marked, it will be marked as shown in Figure 4-5. If you must cross a contaminated area, limit the danger to your soldiers by having them wear MOPP gear. Avoid low places where chemical or biological agents may collect. Avoid contact with debris, buildings, woods, shrubbery, tall grass, and puddles. These tend to retain contamination. Shield your vehicles from radiation. Place sandbags on the floors to protect against radiation. Go as fast as you can safely go. The less time you stay in the area, the less effect the contamination will have on you. After crossing the area, perform hasty decontamination to prevent the spread of contamination.

AIR, RAIL, OR WATER MOVEMENT

Air, rail, and water are other modes of movement. During training and when preparing for movement, your soldiers must become familiar with procedures for packing, boxing, blocking, bracing, and crating organic equipment. They must learn how to load equipment and personnel. Prepare a loading plan, and keep it current.

Air

As a rule, the headquarters with command of both the transported and transporting units orders the tactical airlift of military units. The commander of the Air Force unit or the aviation unit specifies the cargo load allowed for the type of aircraft used. For more on planning unit air movement, see FMs 55-9 and 55-12. FM 55-40 covers Army air transport operations. See FM 100-27 for requesting USAF tactical airlift support.

Rail

The area transportation office or the transportation movement office will provide packing, boxing, and loading procedures. Host nation constraints on type of equipment and size of railcars must be identified and plans modified accordingly. Details on rail movements are in FM 55-20.

Water

For water movement, equipment must be waterproofed, packed, crated, and marked. Soldiers must be trained in embarkation, shipboard, and debarkation procedures. Destination, anticipated use, available shipping space, and type of vessel are factors which must be considered. The transportation movements officer or local transportation officer gives instructions based on movement requirements. Details on water movements are in FM 55-50.

OVERSEA MOVEMENT

Your unit may be alerted for displacement from CONUS to an oversea command, from one oversea command to another, or from an oversea command to CONUS. The alert will begin with a warning order that a movement directive will be issued. When alerted, the unit must become POM-qualified. It must be prepared to deploy and

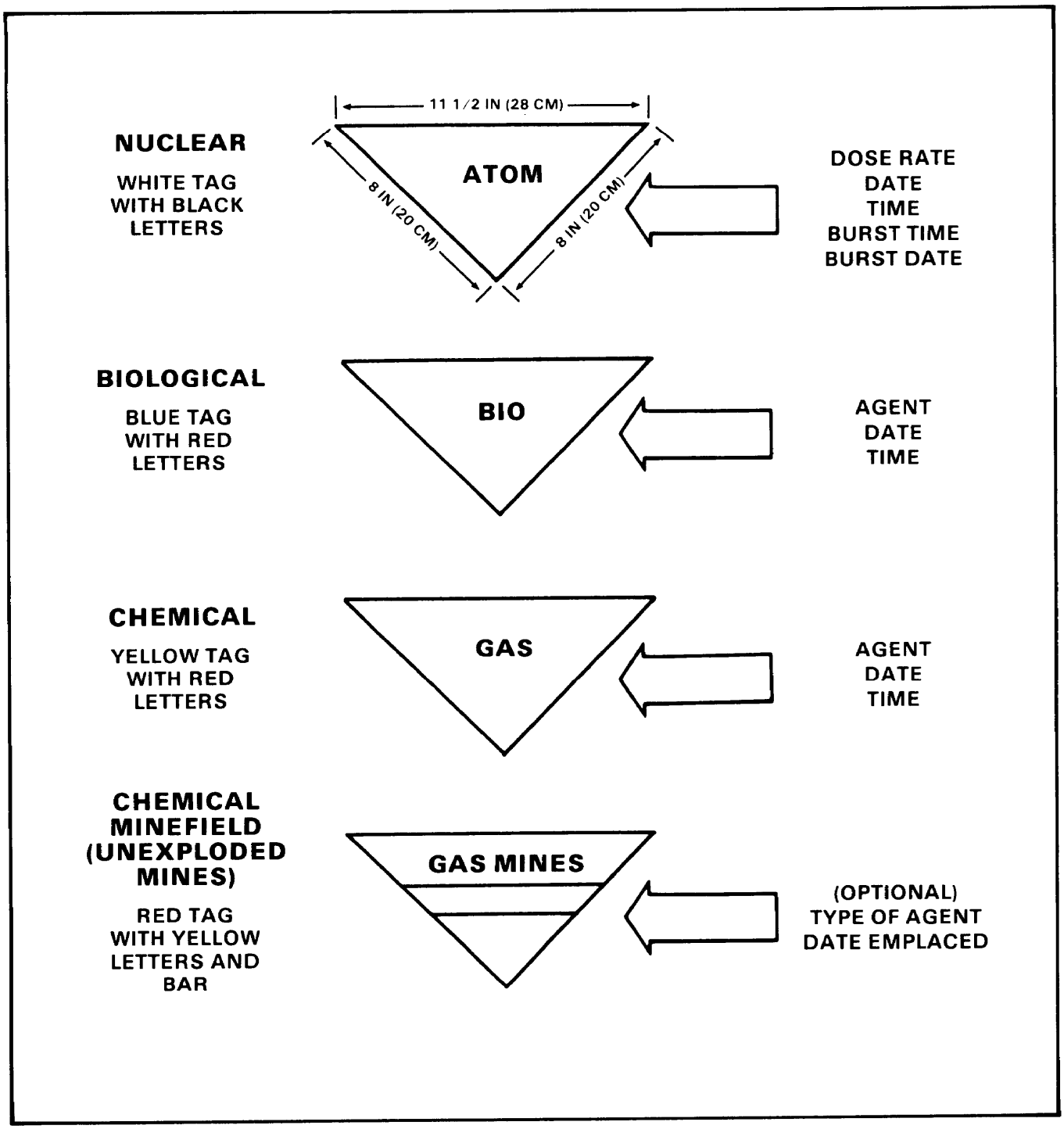


Figure 4-5. Marking of contaminated land area

perform assigned missions. Use the procedures in AR 220-10 to prepare your unit. Table 4-7 has more guidance. You may modify procedures to permit rapid deployment if your unit is moving in support of operation plans, urgent operational requirements, exercises, or manevuers.

Table 4-7. Movement guidance

TRANSPORTATION MODE	CHECK
SURFACE	**FM 55-65 for:**
	Movement plan.
	Personnel processing.
	Final disposition.
	Security safeguards and clearances.
	Packing and marking.
	Movement documentation.
AIR	**FMs 55-9 and 55-12 for:**
	Duties of the unit movement officer.
	Air movement planning and documentation.
	Aircraft load planning.
	Pallet profiles.
	Preparation of supplies and equipment.
	Departure and arrival airfield operations.

Warning Order

When you receive the warning order, you must—

- Conduct a showdown inspection to determine the status of unit equipment taken from the home station.
- Ensure that adjustment entries to property book and equipment status reports are made to show corrected data resulting from the showdown inspection.
- Conduct inspections to determine quantities of personnel and organizational clothing on hand and POM-qualified.
- Initiate requests for replacement items if there are shortages of clothing, equipment, or publications.
- Review the basic load authorization document for accuracy and compatibility with equipment authorized by the MTOE.

Movement Directive

A movement directive gives you the authority to take further action to prepare your unit for oversea movement and to execute the move. Also, it prescribes authorized displacement strength. Upon receiving a movement directive, you will–

- Take action to bring the unit to displacement strength. (See AR 220-10 for personnel screening and administrative procedures.)
- Conduct a final showdown inspection to determine that all personal and organizational equipment is on hand in serviceable condition.
- Continue inspection of organizational equipment.
- Ensure repair or replacement of unserviceable items.
- Issue requests to fill shortages established by the showdown inspection or as changed by inspections cited in the movement directive.
- Ensure processing and reporting of COMSEC materiel held by the unit. (For more details, see AR 380-40.)
- Report all excesses promptly for disposition.
- Maintain a detailed movement requirement listing and summary for both air and surface transportation.

Movement Order

The movement order will confirm instructions and guidance contained in the movement directive, adding details necessary to prepare for the move. See FM 55-312 if your unit is in CONUS and has been directed to proceed to port by motor convoy.

EMERGENCY MOVEMENT

You may have to move your unit when you least expect it. Your SOP should have instructions for emergency movements. You should always have a plan to leave any operating site quickly. You may be in danger of being overrun by the enemy. If so, destroy equipment and supplies that might be used by the enemy. Do this only on orders from higher headquarters and only as a last resort. However, never destroy medical supplies. Include in your defense plan directions for quick and thorough destruction of supplies, equipment, and vehicles. Include priorities for methods of destruction. Have your soldiers saturate clothing, textiles, and other flammable supplies with gasoline or fuel oil and burn them. Smash or crush equipment with hammers or vehicles. This includes radios, telephones, field ranges, lanterns, and typewriters. Explosives may be used on vehicles. If you intend to use explosives, include in your emergency destruction plan the type, amount, and placement of each charge. See FM 5-25 for more on using explosives for demolition. If no explosives are available, drain the oil supply and run the engine until the pistons seize. Then slash tires and smash batteries, coils, distributors, alternators, generators, spark plugs, water pumps, radiators, carburetors, gages, controls, and headlights.

Section IV
DEFENSE

THREAT

Because disruption of the rear area is a major element of Threat doctrine, your unit may face a threat as varied as that confronting combat units. This threat includes, but is not limited to, cells and networks of enemy agents; special operations teams; sabotage and reconnaissance units; and rocket, missile, and air strikes. It also includes tank or mechanized infantry forward detachments; airborne, air assault, and heliborne units; radio-electronic combat operations; and nuclear, biological, and chemical warfare. Threat forces can support rear combat operations with air-droppable assault guns, artillery, rocket launchers, and airborne assault vehicles. Within coastal areas, attacks by naval infantry forces are possible. Threat forces place great importance on the use of obscurants in offensive and defensive operations. Smoke and chemical munitions are

used for hiding or screening targets from direct observation. Soviet armed forces use smoke extensively. The three types of smoke are blinding, camouflaging, and false or decoy. Each type is classified as frontal, oblique, or flank, depending on the placement of the screen relative to the front line. Each type serves a different tactical purpose. All three kinds of smoke could be used at the same time.

Blinding Smoke Screens

The enemy uses blinding smoke screens to blind your gunners and restrict their ability to engage threat forces effectively. Blinding smoke screens are dispensed on or to the front of your position.

Camouflage Smoke Screens

The enemy uses a camouflage smoke screen to screen the maneuver of his units from your observers and fire support means. Camouflage smoke screens are dispensed on or to the front of the threat.

False or Decoy Screens

The enemy uses a false or decoy screen to deceive you as to the actual location of his forces and the probable direction of the main attack. The location of false screens depends upon the type of operation, the time available, the terrain, and the weather operations. Threat forces are well-equipped for smoke operations. Smoke munitions include smoke hand grenades, smoke barrels, drums, smoke pots, mortar and artillery munitions, air-delivered smoke bombs, and smoke generators on armored recovery vehicles, tanks, and armored personnel carriers. More information on the threat tactics and equipment can be found in FMs 71-100, 100-15, and 100-16.

LEVELS OF THREAT ACTIVITY

Table 4-8 outlines the three levels of enemy threat activity. Details are in FM 19-1. Threat activity will not occur in a specific order. Your unit may face one or more actions at a time. In some cases, Level I or Level II activities will be conducted in support of a Level III incursion or a major attack occurring in the main battle area. Some threat activity may take place well ahead of hostilities. This may include reconnaissance, targeting, and sabotage and terrorist attacks against key personnel and activities.

BASE DEFENSE OPERATIONS

Each unit in the rear area is responsible for its own security and protection. In order to better defend an area, CS and CSS units usually form a base or a base cluster. Details on base cluster defense operations are in FMs 71-100 and 100-15.

Base

A base is a small area with a defined perimeter and established access control. It provides enhanced security to units while they continue to support combat forces. A base is made up of one or more units. Each unit in the rear area will establish a base or will be assigned to one. The senior officer in the base area will become the base commander. You may be designated as a base

Table 4-8. Levels of threat activity

LEVEL	DESCRIPTION
I	Those threat forces which can be defeated by base or base cluster self-defense measures.
II	Those threat forces beyond base cluster self-defense capability, which can be defeated by response forces, normally military police with supporting fires.
III	Those threat forces beyond response force capability which necessitate the command decision to commit the echelon TCF.

commander. Each base establishes a base defense operations center to plan, coordinate, and supervise base defense operations. The base must be able to protect itself against a Level I enemy incursion. In a Level II attack, the base must be able to engage and delay enemy forces until friendly response forces arrive.

Base Cluster

A base cluster comprises several bases. It usually covers a larger area than a base and has no defined perimeter. The base cluster commander establishes a base cluster operations center which provides command, control, and supervision of the base cluster.

Base or Base Cluster Commander

A base or base cluster commander plans, prepares for, and supervises the internal defense of the base or base cluster. At the division level, he reports directly to the division rear command post. At corps level, he reports to the RAOC. The base cluster commander assigns a defensive position and a sector to each base.

PREPARATION

There are steps you can take to reduce the chances of being attacked. They include planning for defense; using camouflage, deception, and concealment; and dispersing operations. You should also observe light and noise discipline. Listening posts and observation posts, active patrolling, and good use of alarm systems will enhance security and help you detect the enemy in time to respond.

Plans

Plan the defense of a proposed area before your unit moves. During the reconnaissance of the proposed area, obtain data on terrain or natural obstacles which may be used to camouflage or conceal operations. Look at the terrain from the enemy's point of view. How will he attack? From where? How can you stop or delay him? How can you use your weapons? Where do you employ your soldiers to best defend the area? Sketch the area on a map, and lay out a tentative defense plan. Request ammunition and any supplies you will need for obstacles, camouflage, and smoke support. Instruct your soldiers on the effective execution of the defense plan. Establish liaison with adjoining units. Request assistance and information from the battalion headquarters or the BDLT. It will help you get the information you need in order to move. For example, it may provide an intelligence summary. It will help you set up security. The BDLT will also integrate your unit into an existing base cluster or will help you establish a new base. Ideally, your defense plan should be to increase perimeter defense while the unit continues its mission. Your base or base cluster should be trained to respond as appropriate. When attack is imminent, all designated base defense soldiers stop their normal duties and take their fighting positions. Your first responsibility is to secure your unit. If the base defense forces cannot defend against enemy activity, military police or a tactical combat force might support you. Coordinate such support with your base cluster operations center. The base cluster commander must ensure that all individual cluster defense plans are mutually supporting, The base commander must coordinate the entire defense plan and integrate flexibility into the plan.

Layout

The quartering party, time and resources permitting, will have already started work on defense measures, such as listening posts, observation posts, warning devices, barriers, and camouflage. As other units move into the area, you must continue to develop the defense. For information on construction of fighting positions and emplacement of weapons, see STP 21-1-SMCT. After you have set up your defense, make a detailed sketch and an artillery fire plan. Send these by secure means to the base cluster commander within two hours after he reaches the area. Your sketch should give correct map coordinates (encoded for security) so that the location can be posted to a tactical map at the base cluster operations center. Use military symbols and graphics according to FM 101-5-1. Draw the sketch as close to scale as possible.

Camouflage and Concealment

Direct your soldiers to camouflage and conceal their equipment as they set up operations. Make sure they take full advantage of natural terrain. In some contingency operations, they may not be able to conceal their equipment because of a lack of vegetation or because of flat terrain. Smoke can

screen displacement operations and increase survival from air attack. Stress that survival of the unit depends on each soldier making sure that he is not seen by the enemy. Soldiers should also construct hardened overhead cover to protect them from the effects of overhead blasts. More on camouflage, cover, and concealment is in FM 5-20 and TC 5-200.

Deception

You should have an established deception plan. If time and resources allow, use this plan to increase your unit's chances of avoiding attack.

Dispersion

Dispersion can reduce a unit's vulnerability to being targeted, or it can reduce the effects of nuclear, biological, or chemical weapons. Spread your operations so that they are not all in one small area. As you disperse, security problems increase. Estimate how much your forces can disperse without sacrificing security. Your base cluster operations center should have a dispersion information plan to help you. Spread out as much as you can. However, dispersion is secondary to your mission.

Light Discipline

Train your soldiers to work with little or no light. You may find that the only safe time for operations is at night. Night operations, especially during a blackout, are slower and more difficult. MHE is difficult to use. Make sure that everyone who needs a flashlight has one. Use appropriately colored and filtered lights on flashlights. Try to use tents or buildings for your operations. Use night vision devices.

Noise Discipline

Noise discipline is a defense against enemy attack. The more quietly your soldiers work, the less they reveal about the unit's position. This is especially important when an enemy is more familiar with the terrain than you are. Your soldiers should also be able to use flashlight signals to direct traffic. The slightest noise travels a great distance at night. For more details on signals, see FM 21-60.

MILITARY OPERATIONS ON URBANIZED TERRAIN

As nations become more developed, it becomes almost impossible to avoid combat on urbanized terrain. MOUT may have a significant effect on CSS functions. See FM 90-10 and TC 90-1 for more on MOUT.

Supplies and Services

In any combat situation, CSS units are vulnerable to attack. These units should be dispersed in built-up areas for better cover and concealment. In urbanized areas, roads are usually very good. However, rubble and other battle damage may make transportation difficult. Obstacles on roads, dispersal of operations, and the proximity of combat will complicate delivery of supplies and services. Therefore, supplies and equipment will be moved as far forward as possible, and more emphasis will be placed on unit distribution. Services must also move forward, since evacuation of casualties, disabled equipment, and other personnel and equipment can be major problems.

Civilians

Large numbers of civilians located in relatively small urbanized areas may disrupt military operations. Mass casualties can result from hostile actions or from misdirected friendly fires. These factors may have a great impact on unit operations.

REAR OPERATIONS

Units in the rear area must be prepared to secure and defeat the threat while continuing their primary missions. Rear area units are primary targets for enemy attack because they provide vital support to the combat forces.

Principles

The three principles of rear defense operations are unity of effort, economy of forces, and responsiveness. Unity of effort ensures that rear operations are part of the total battle plan. Economy of forces involves CS and CSS units defending themselves until support forces arrive. Responsiveness means quick action to destroy the enemy and minimize damage.

Objectives

The primary objectives of rear operations are—

- Prevent or minimize enemy action in rear areas.
- Prevent or minimize disruption of CS and CSS forward.
- Provide area damage control after attack.
- Allow movement of friendly units through the rear area.

Operations Center

An RAOC controls rear defense operations at each echelon. The rear operations commander controls all operations of the RAOC. The center has operational control of the base and base cluster commanders.

Tasks

Rear operations demand that units perform certain defense tasks. Your soldiers must be able to secure the base and detect, delay, and destroy the enemy.

Secure. Soldiers at the base or base cluster must be able to defend its units while continuing CS and CSS missions. The commander must establish the necessary defensive measures.

Detect. Soldiers at bases and base clusters must be able to detect the enemy. This will involve the use of observation and listening posts, patrols, communications intelligence, radar, remote sensors, and chemical and radiological detection and monitoring devices. They will also use warning systems to notify personnel of enemy activity.

Delay. After soldiers detect an enemy attack and give the warning, they must delay the enemy long enough to permit base defense forces to respond. Delay measures include mines, booby traps, obstacles, and barriers.

Destroy. After the enemy force is detected and delayed, it must be destroyed. If the threat exceeds available base assets, delay measures must be employed until help arrives.

PATROLS

Patrols are an integral part of a unit's security and defense operations. They provide an extension of the commander and his listening and observation posts. As a rule, CSS units conduct only security and reconnaissance patrols. However, in rear operations with AirLand battle, CSS units may be called upon to conduct limited combat patrols. The patrol process starts with troop leading procedures as outlined in Section I. To be effective, a patrol must be well-planned and well-executed.

Reconnaissance and Security Patrols

If the mission indicates that a reconnaissance or security patrol is needed, you and your subordinates should follow TLP. During this process, as the mission of the patrol is finalized, terrain analyzed, and subtasks identified, organize the patrol to do the job. Reconnaissance and security patrols are organized for command and control, reconnaissance, and security. Typical organizations are shown in Figure 4-6. The size of the patrol may vary. The patrol must have at least an NCO leader and a radio. As a rule, no machine guns or antitank weapons are assigned to this type of patrol unless enemy contact is expected.

Combat Patrols

CSS units may have to destroy, capture, or disperse small enemy forces. During AirLand battle operations, enemy forces may be bypassed. They may send small teams into rear areas to conduct reconnaissance and to sabotage friendly facilities. If MPs or TCF forces are unable to react to a threat, your soldiers may have to conduct a raid or an ambush to eliminate the threat. You may want to organize these patrols as shown in Figure 4-7.

TACTICAL REACTION FORCE

Designate at least seven soldiers for a squad to serve as a reaction force. This force should have a senior NCO. It should have communications and at least one machine gun, one grenade launcher, and one antitank weapon. Use the reaction force to support the unit defense, block threatened areas, seal penetrations, and reestablish the unit perimeter. The force should be able to meet unit

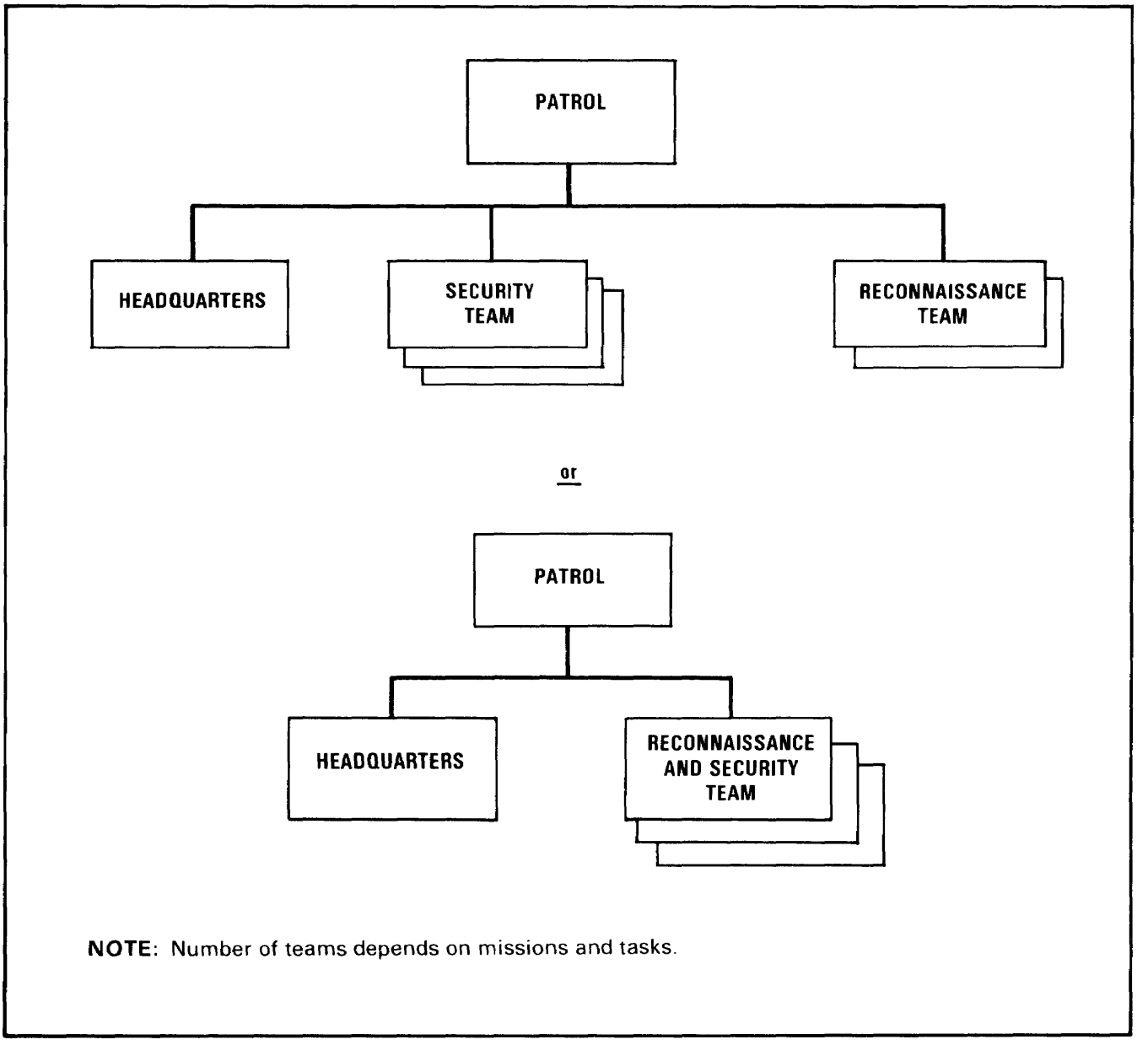


Figure 4-6. Organization of a reconnaissance and security patrol

contingencies. Locate the force within your unit area where you can assemble it and move it to any area on or within the perimeter.

Planning and Organizing

Specify in your SOP the section, such as your maintenance section, that is responsible for reaction force duties. The section should be standardized to ensure continuity of leadership,

training, and organization. During your defense planning and your initial occupation of the area, you should have detected critical approaches and terrain required for your defense. You must also identify critical defensive tasks. For example, if your area is penetrated along a given approach, how can you stop the enemy? Can you counterattack to reestablish the perimeter? Having identified the task, decide the minimum size force and the weapons with which you can do the tasks. A seven-man squad may be the best size. Tell the reaction force your intentions, the number of contingencies to be planned and rehearsed, and how, when, and under whose authority the force will implement each plan. All of your soldiers must know how the reaction force will be used. In this way, there will be no mistake in identifying it during combat.

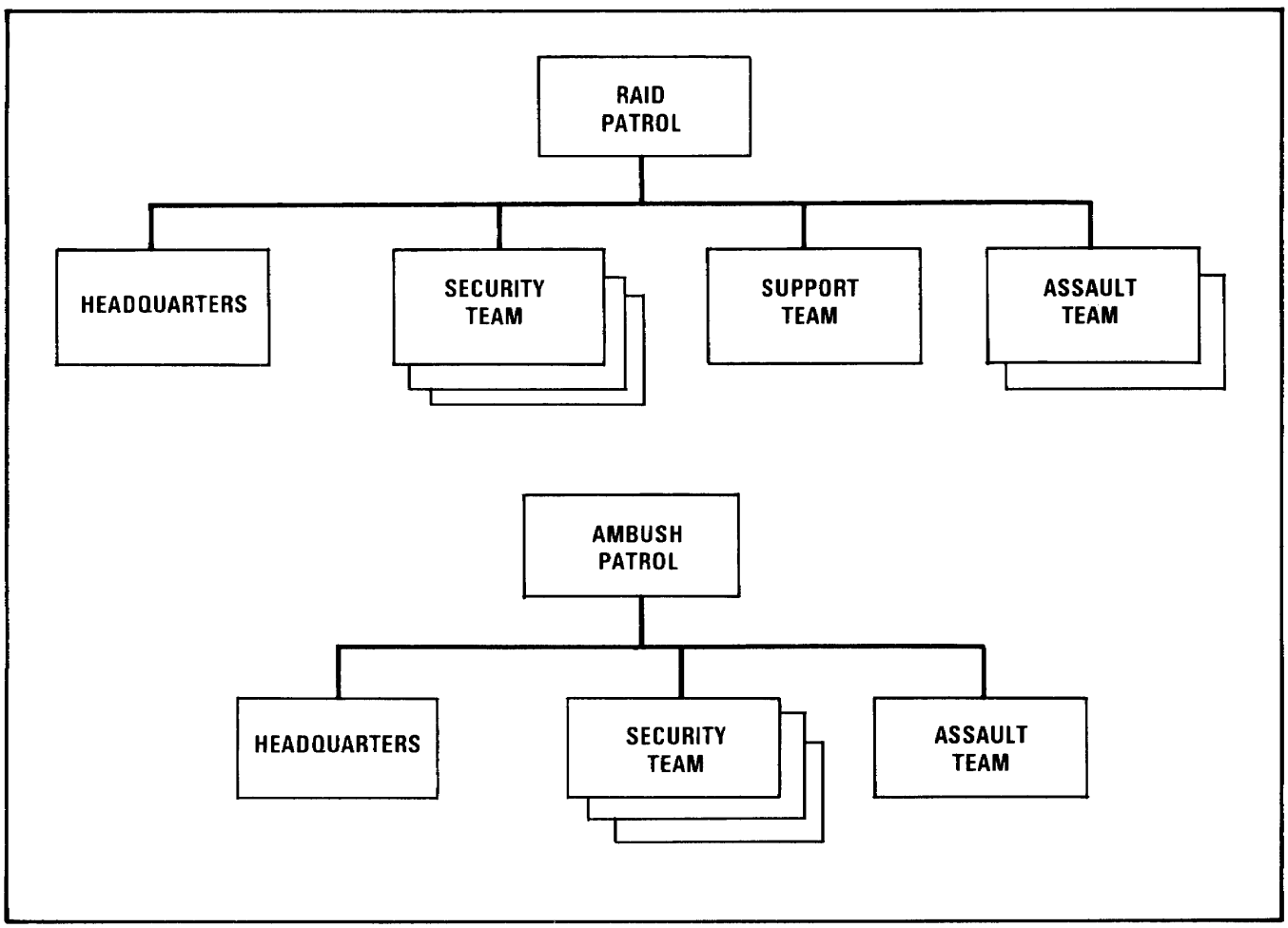


Figure 4-7. Organization of a raid patrol

Operating With MPs and the TCF

MPs will probably be available to help your unit against the threat. The TCF may be available during a Level III threat only. Plan accordingly. Ideally, the base defense operations center or base cluster operations center will plan for MP and the TCF contingencies. Determine ahead of time how MPs and the TCFs can help your unit. You may use these forces in two ways during Level II and Level III actions. The preferred method is to have the MP or TCF move around your perimeter and attack the flank or rear of the threat. The other method is to have the MP or TCF enter your area and attack to expel the threat frontally. Whatever method you use, plan and coordinate the action with the assisting force. Your soldiers must know how to support the operation. Fire control is critical. Set up fire control and restrictive fire measures. Pass them to each soldier.

NUCLEAR DEFENSE

In the event of a nuclear attack, your soldiers will have to operate in a contaminated environment. To reduce hazards, make sure your soldiers know what to do before, during, and after a nuclear attack. See FM 3-4.

Before Attack

The best defense is to dig in. Have your soldiers build shelters for protection. Deep fighting positions with overhead cover give good protection against initial and residual radiation. Dirt is a good shielding material. Caves, tunnels, and storm drains provide good shelter when there are no cave-ins that would allow radiation to enter. See FM 3-4 for more on the use of natural terrain features for nuclear protection. Usually, buildings do not provide adequate protection. You may use the basement of a concrete or steel-frame building. Stay away from windows and other openings. Keep doors, windows, and vents closed at all times. Keep clothing, equipment, and other items where your soldiers are sheltered. Tie down items to keep them from becoming lethal missiles during the blast wave. Disperse ammunition and other explosives. Turn off all equipment. Disconnect power, communications, and antenna cables. Leave grounding cables connected to equipment. Use smoke to reduce the light and thermal effects of nuclear detonation.

During Attack

Train your soldiers to act without hesitation. As a rule, a nuclear attack will be a surprise. The first sign is a flash. If there is a flash, soldiers should drop to the ground with their heads toward the flash. Your soldiers should close their eyes, place their hands and arms near or under their bodies, and keep their helmets on. Soldiers should count the flash-to-bang time for NBC-1 reporting procedures. They should stay down until the blast wave has passed and returned and debris has stopped falling.

After Attack

Report the attack to the rear operations center. See FM 3-100, Chapter 2, for the standard format for reporting nuclear, biological, or chemical threats or attacks. Your base cluster operations center SOP should have instructions for your use. See Table 4-9 for the reports for which you are responsible. You will also have to check on personnel and equipment, prepare for fallout, and avoid contamination.

Check on personnel and equipment. The injuries will usually be burns, fractures, and cuts. Have first aid given to the wounded. If time and conditions permit, recover the remains of soldiers killed in the attack and move them to the GRREG collection point. Locate and organize your equipment so that you can continue the mission. If feasible, have your soldiers reinforce their positions to improve protection from fallout. Communications equipment may be damaged, and contact with the base cluster operations center may be lost. Be sure to have SOPs for all operations in the absence of orders.

Prepare for fallout. To protect your soldiers and equipment from radiation, give timely warnings. The S2/S3 should receive an NBC-3 report from the base defense operations center warning that fallout is expected. Tell your soldiers to start monitoring the area. You should have at least two soldiers trained to operate each radiac instrument. You may also need to repair and improve shelters, cover equipment, and place water, rations, and individual equipment in covered fighting positions or other protected areas. Soldiers may need to put on protective clothing. MOPP gear gives some protection because of complete body coverage. It reduces the chance of beta particles coming in contact with

Table 4-9. NBC reports

REPORT	USE
NBC-1	To report initial and subsequent data on an attack. Send this report to the S2/S3.
NBC-2	To pass evaluated data of a nuclear, biological, or chemical attack to a lower commander. The S2/S3 receives this report from the DISCOM or the NBC control center.
NBC-3	To give immediate warning of expected contamination. The S2/S3 receives this report from DISCOM or the NBC element and gives the data to you and other commanders.
NBC-4	To report radiation dose rate measurements. If you are in charge of the monitoring teams in your area, you will send this report to the S2/S3.
NBC-5	To locate areas of radiological, biological, and chemical contamination or hazards. The S2/S3 receives this report from DISCOM or the NBC element.
NBC-6	To summarize information concerning a chemical or biological attack.

skin and causing burns. It reduces the possibility of wearers ingesting alpha particles and simplifies decontamination. However, MOPP gear will not protect against the initial nuclear radiation. Also, it will not protect against residual contamination from induced gamma radiation and fallout. See FM 3-4 for more information.

Avoid contamination. When a monitoring team detects fallout, one of the members sounds an alarm. The NBC defense annex to the base or base cluster SOP will tell what kind of alarm to use. See that an NBC-4 report is given to the S2/S3 whenever the dose level changes. Soldiers should take cover and stay there until the all-clear signal is given or until they are told to move. See FM 3-3 for more on contamination avoidance. After the all-clear signal, see that soldiers, food, water, and equipment are monitored with a radiac set for contamination. Have soldiers and equipment decontaminated. See FM 3-5 for more on decontamination.

BIOLOGICAL DEFENSE

Biological agents may cause death or long-term disability. Biological attacks are hard to detect. However, there are some measures your soldiers can take to protect themselves before, during, and after the attack. For toxins, follow the guidance in the next paragraph. For more details, see FM 3-100.

Before Attack

See that all of your soldiers stay healthy, get enough rest, and keep high standards of personal hygiene. If you can, have your soldiers immunized against the diseases that may be caused by biological agents. Have your soldiers wear protective clothing. They should eat and drink only approved food and beverages. They should also treat cuts and wounds, no matter how small. Stress the need for good field sanitation, including pest control.

During Attack

As soon as the alarm for an attack is sounded, everyone should put on his protective mask and gloves. You may suspect a biological attack if you see low-flying aircraft that appear to be producing a mist or a spray or if you see any other device spraying in the area. Bomblets that seem to have no immediate effect or swarms of insects that are not native to the area or that appear soon after

aircraft have been in the area are other indications. If many people are sick for no known reason, this may be due to biological agents.

After Attack

Report the attack to higher headquarters according to local procedures. Soldiers do not unmask unless given the order. Soldiers may decontaminate themselves and their clothing with soap and water. Try to get germicidal soap for them to use. Sunlight usually decontaminates unshaded areas. If large areas of buildings need to be decontaminated, request support from the base defense operations center. Ensure that no food or water is used until it is determined to be safe. Report all illnesses to medical personnel. They may be able to identify the agents used in the attack and keep disease from spreading through the unit.

CHEMICAL DEFENSE

Protective clothing and equipment must be worn in defense against chemical attack. There are five standardized MOPP levels. The protective posture may vary from no protection (MOPP Level O) to full protective clothing and equipment (MOPP Level 4). It is based on nine MOPP analysis factors a commander must consider before he decides on the MOPP level. The S2/S3 with the chemical officer or NCO analyzes these factors and recommends the posture level for the approval of the commander. Instructions on the protective posture are usually provided in an annex to the SOP. They tell what variations may be made and when the posture must be followed with no variations. Table 4-10 shows which protective items are usually worn at the five MOPP levels. FM 3-100, Chapter 3, and FM 3-4, Chapter 2, have more details on the use of the MOPP. See FM 3-4, Appendix A, Table 12, for estimates of lowered performance that CSS units may expect in a chemical warfare environment. Remember, no matter what the conditions, your mission comes first.

Before Attack

Know the MOPP and the variations allowed. When the chemical threat is constant, soldiers may have to wear protective clothing for longer periods. It usually takes longer to put on the clothing than it does to receive a fatal dose of a chemical agent. See that your soldiers understand signals and alarms and react to them quickly. Have them cover themselves and their equipment before going to sleep. Set up decontamination priorities (soldiers first, then mission-essential equipment). Organize standby decontamination stations. Prepare protective shelters. Direct drivers to park their vehicles under foliage or trees. Designate detection teams to survey contaminated areas. Establish an evacuation plan for casualties. Train soldiers to recognize and report attacks and hazards. Train them in protective mask and individual protection procedures. Hold frequent drills to various levels and MOPP during

Table 4-10. Protective items used at MOPP Levels 0 through 4

PROTECTIVE ITEM	LEVELS				
	0	1	2	3	4
Mask or Hood	Carried	Carried	Carried	Worn*	Worn
Overgarment	Readily Available	Worn*	Worn*	Worn*	Worn
Overboots	Readily Available	Carried	Worn	Worn	Worn
Gloves	Readily Available	Carried	Carried	Carried	Worn

*Coat or hood can be left open for ventilation in hot weather.

all operations. Provide training in self-aid and buddy aid to everyone. Inventory chemical agent detection kits to make sure they are complete. Issue them as needed. Stock ample supplies of decontaminating agents. CTA 50-970 authorizes them.

During Attack

The first one who recognizes a chemical attack stops breathing, puts on his mask, checks and clears the mask, resumes breathing, and gives the alarm. Those alerted mask immediately and cover themselves with ponchos or shelter halves to protect against chemical droplets or sprays. They then continue the mission. As each soldier works, he watches for symptoms of chemical agent poisoning, such as that caused by a nerve agent, and uses self-aid and buddy aid measures. Regardless of what MOPP level is in effect, soldiers should put on protective items in the order specified in FM 3-4. This order provides the most protection as soon as possible.

After Attack

Report the attack to higher headquarters according to local SOP. Soldiers do not unmask unless given the order. They may take no food or water until you approve. However, they may continue to do their jobs. Give first aid to the wounded. See TM 8-285 for more details. Decontaminate exposed skin immediately. Check clothing and equipment for contamination. First check the items that must be handled, such as weapon handguards, telephone headsets, and radio microphones. Then check other equipment. Most items can be decontaminated with soap and water, the M258A1 kit, or the M280 individual equipment decontaminating kit. Some items should be replaced through the exchange procedure.

DIRECTED ENERGY DEFENSE

Directed energy weapons include lasers, microwaves, and particle beam devices. They produce casualties and damage or destroy targets with high-energy electromagnetic radiation or pulses of charged particles. Such weapons have not yet been fielded by the major military powers. However, some military powers have used laser support systems as weapons. They are also developing microwave and particle beam weapons. The threat from microwave and particle beam weapons is not expected soon. The most likely directed energy threat on the modern battlefield would be from laser equipment. Soldiers could suffer eye injury, skin burns, and electro-optical burnout from lasers. The best defense against laser weapons is to protect the eyes and light-sensitive devices.

Before Attack

Laser energy can be blocked by any material that shields light. One of the most readily available forms of protection from directed energy is large area smoke screens. The best defense is to keep apertures of sensitive electro-optical equipment closed unless in use. Soldiers who are in sight of enemy positions should wear laser goggles.

During Attack

Laser attacks are noiseless. They can occur with no warning. Soldiers should wear laser goggles and immediately look away from intensely bright flashes of light. Observe the environment through remote electro-optical devices such as television, if possible. Never use binoculars to check suspected laser sources. A laser to the eye through binoculars will multiply the effects of the laser by the power of the binoculars. Lasers can be countered by conventional weapons fired at the source. The laser energy itself can be lessened by natural or artificial obscurants such as dust and smoke.

After Attack

Take note of enemy laser positions, and prepare counterfires. Note technical details, such as color and intensity of the light and effects on eyes and electro-optical equipment. Pass this information up through intelligence channels. Reassure soldiers blinded by laser light that vision will return within hours or a day or two, unless damage is especially traumatic. Victims should be observed for symptoms of shock.

CHAPTER 5

BATTALION COMMAND OPERATIONS

Section I
COMMAND AND CONTROL

This section is for the battalion commander and staff.

THE PROCESS

The battalion command and control process involves planning, coordinating, and executing support and tactical operations. Battalions directly control and synchronize the actions of companies to provide supplies and services to sustain their supported units. Key command and control considerations for the battalion commander include—

- Making maximum use of time.
- Conducting physical reconnaissance of support sites, defensive areas, and supply routes.
- Planning and maintaining flexibility.
- Instilling initiative in and requiring initiative from all leaders.
- Decentralizing execution.
- Providing clear, concise missions.
- Pooling all assets.
- Focusing on sustaining the main effort.

PLANS

Plans are the initial basis for action. Commanders must expect considerable variance from plans because the situation can change quickly. After an initial order, battalions are usually directed by a series of FRAGOs with the commander continually making decisions to support the battle. In planning an operation, the battalion commander focuses on developing a concept of the operation that best accomplishes the mission and the intent of the supported maneuver commander. The battalion commander assigns missions and tasks to subordinate elements. He allocates forces and establishes priorities to make the concept work.

Characteristics

Planning is continuous. Initial plans are updated and refined. Avoid complete change, especially if it negates subordinate planning and preparation. Plans must be concise, but they must be simple to understand. SOPS that are detailed, understood, and practiced allow for short, concise plans. Orders should not repeat SOP items.

Operations

The battalion commander will have limited time to plan and prepare to conduct an operation. During operations, the TLP process is the basis for

planning and preparation. The commander does a quick estimate with the other members of his CP. Subordinates provide a quick radio or telephone update, and the commander and staff pass on other information as needed. The commander gathers his leaders to quickly explain the concept, shows the concept on a map, hands out a few control graphics, and allows face-to-face coordination. A FRAGO sent over the radio is far less desirable, but sometimes it is necessary.

METT-T

Consider the factors of METT-T during the development of all estimates, including IPB. Evaluate each factor with the other factors to gain a true picture of the battlefield. A significant change in one or more of the factors of METT-T will usually cause change in the OPLAN or OPORD. See Table 4-1.

DECISION-MAKING PROCESS

The decision-making process (Figure 5-1) is as detailed or as simple as time allows. The commander plays the central role in this process. Members of the staff provide advice and information about their specialties. The commander bases his decisions on—

- His METT-T analysis.
- Staff input.
- Information from reconnaissance.
- Analysis and comparisons of courses of action.
- War-gaming.
- His personal judgment.

The decision-making process must be able to accommodate rapid changes on the battlefield. Details on the decision-making process are in FM 101-5.

TROOP LEADING PROCEDURES

Troop leading procedures and the decision-making process are complementary actions. They continue, uninterrupted, from operation to operation. The troop leading procedures can occur in almost any sequence. Several actions can take place at the same time. Some actions, such as reconnoiter, may begin early and be repeated as often as required. Figure 4-1 shows the relationship of the factors of METT-T, the estimate of the situation, and the troop leading procedures. Troop leading procedures begin with a mission and end when the mission is completed.

Receive the Mission

On receipt of the mission, the battalion commander and his staff conduct an initial METT-T analysis. This analysis determines—

- The mission (task and purpose).
- The enemy (unit, size, type).
- The area of operations (is movement required; when must it start).
- The attachments and detachments (who, when).
- The time available (time for further planning, when to issue the warning order, FRAGO, or OPORD).

The commander and staff make an informal schedule to ensure that they use no more than one-third of the available time to prepare and issue the FRAGO or OPORD. The commander makes rapid deductions and issues instructions to his staff. The staff issues a warning order. The commander should provide his subordinates with as much preliminary detail as possible so that they may begin their troop leading procedures. He also determines what critical information he needs from his staff, higher headquarters, and reconnaissance to continue the planning process. If available, MPs may assist in route and area reconnaissance. Leader reconnaissance begins as soon as feasible and is as detailed as time permits.

Issue a Warning Order

Issue a warning order when you receive an order or warning order from higher headquarters. The warning order informs the staff and subordinate commanders what the operation is, when it is scheduled to begin, what preliminary actions are required, and where and when the order will be issued.

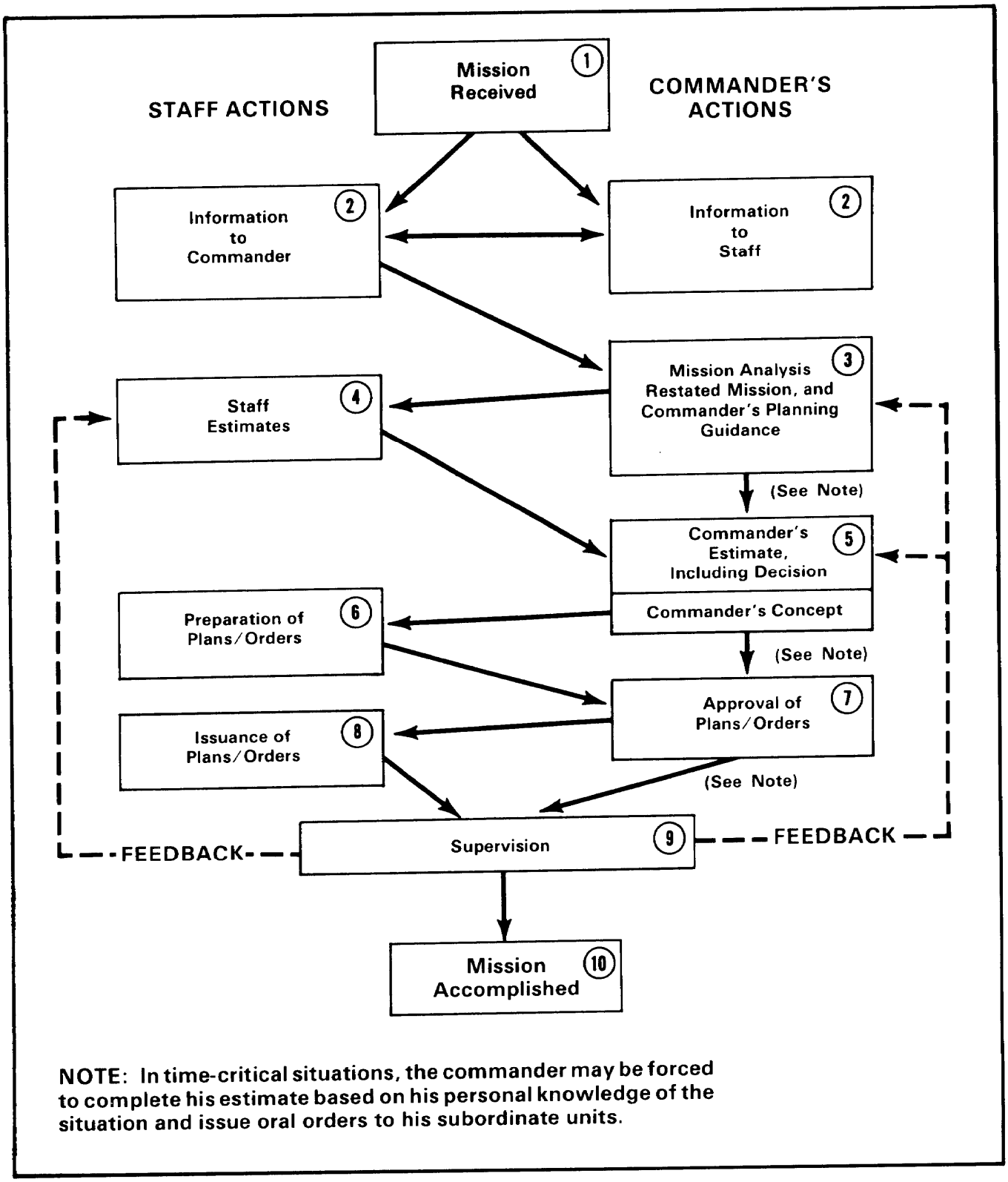


Figure 5-1. Military decision-making process

Make a Tentative Plan

The commander, assisted by the staff, begins his estimate process. The estimate of the situation is an integral part of decision making. It incorporates analysis of the factors of METT-T and of courses of action into a process that allows the commander to select the best course of action as the basis for the plan. At the battalion level, the estimates usually a mental process. (See FM 101-5, Chapter 5, for a full discussion of command and staff estimates of the situation.) Table 5-1 gives the steps in estimating the situation.

Table 5-1. Steps in estimating the situation

STEP	EXPLANATION
1. **Make detailed mission analysis.**	Review the DISCOM order to determine all specified and implied taskings. Incorporate the mission-essential tasks into the battalion commander's restated mission. The commander gives the staff the restated mission and guidance, including the constraints and implied tasks identified during the mission analysis.
2. **Develop situation and courses of action.**	Based on the restated mission and commander's guidance, the staff begins planning the new operation. The battalion staff provides updated staff estimates, requested facts, and recommendations. This includes the S2/S3 initial situation template, the weapons status of the battalion, the availability of support, and recommendations concerning preparations. As early as possible, the battalion commander provides his intent. This is how to support the maneuver commander and how the battalion defense will delay, stop, or destroy the enemy during rear operations. This also includes a view of the next mission or the support mission once the maneuver commander's objectives have been achieved. The commander's intent is a clear statement of the desired effects of the operation. It must expand on the why of the mission statement to explain the big picture. It is a statement of purpose or intended outcome, rather than guidance about how to conduct the operation. The commander and the S2/S3 then develop tentative courses of action, such as support requirements, the type of support used, and designation of the main attack, supporting attack, and reserve forces.

Table 5-1. Steps in estimating the situation (continued)

STEP	EXPLANATION
3. Analyze course of action—war game.	One way to evaluate courses of action is to war-game them against likely enemy courses of action. Begin with the most probable. IPB plays an important part in war-gaming courses of action. Through IPB, the commander and S2/S3 develop a clear picture of the battlefield, the courses of action available to the enemy commander, enemy actions that disclose which course of action the enemy will adopt (indicators), and establish decision points or lines that are used to specify points during friendly or enemy movement that require task force action. When a decision point is reached, the battalion (or supporting assets or individual teams) takes a specified action, such as counterattack, fire on a group of targets, or displace to another position. The specified actions are taken either automatically or on order as directed by the OPORD. War gaming often involves the entire staff in planning the use of CS assets. This includes establishing priorities, command, and support relationships; assigning targets; and fixing responsibilities.
4. Compare courses of action.	The commander and staff compare the advantages and disadvantages of each course of action. If time and situation permit, each staff officer briefs his area of responsibility concerning each course of action. If this is not possible, the commander must rapidly consider all available information. Based on the staff recommendations and his own knowledge and experience, the commander decides on a course of action and expands it into a concept of operation.
5. Decide the best course of action.	After comparing courses of action, the commander chooses or modifies one and gives his decision to the staff in the form of a concept of operation. The S2/S3 or XO supervises compilation of the complete plan or order. The commander and the S2/S3 then start the movement. They conduct a reconnaissance to obtain information to finalize the plan.

Start the Movement

Start the movement of the elements based on the tentative plan. Reconnaissance may have started immediately on receipt of the warning order. Issue more warning orders, FRAGOs, or movement instructions as the plan is developed.

Reconnoiter

As a rule, each company commander has his tentative areas of responsibility; however, each may also have to reconnoiter other areas, such as the flanks, rear, or routes. Leaders and the staff reassemble at a prearranged time and location to report on their efforts. Use the information from the leaders and other sources (for example, scouts and patrols) to complete the plan.

Complete the Plan

Using the latest reconnaissance and intelligence information, the commander finalizes his concept of operation, adds details, and prepares the order. The staff develops contingency plans. It refines and incorporates into an OPORD the final task organization, plans for fire control, CSS, security, surveillance, communication, command and control measures, and lateral or flank coordination. The staff determines requirements for additional support and requests it from higher headquarters. It also coordinates with adjacent, supporting, and higher headquarters. In fast-moving situations, you may use an order with an overlay with graphics and an execution matrix. Use the one-third, two-thirds rule. Higher headquarters uses only one-third of the planning time available, including the time it takes to issue the order.

Issue the Order

The commander should use any aids, such as a sketch or a sand table, to help his soldiers visualize the terrain. He can require subordinates to backbrief him on their units role to ensure they understand their instructions and his intent. This can be done after the orders briefing.

Supervise and Refine the Plan

The commander and his staff supervise the preparations for the operation. Such preparations include coordination, reorganization, fire support, engineer activities, maintenance, resupply, and movement. As subordinate commanders develop their plans, minor changes may be needed to implement the commander's intent. Any change to the plan must be coordinated with the battalion commander.

Rehearsals. Conduct rehearsals to reinforce both the scheme of maneuver and the fire plan. When possible, conduct rehearsals under limited visibility or NBC conditions and over similar terrain. Key staff and subordinate commanders should take part. They can identify problem areas and contingency actions, determine movement and reaction times, help coordination, and refine the plan. Rehearsals and backbriefs should identify key events and critical tasks which subordinates must address to the commander's satisfaction.

Changes in METT-T. Whenever a significant change in the factors of METT-T occurs, the main CP must ensure that the battalion commander, staff, and subordinate unit commanders know it. Before the start time of the operation, the S2/S3 should update any changes to the known enemy situation.

Refinement of the plan. Refinement of the plan is a continual process. Throughout the fight, the commander monitors the progress of the battle. He does not hesitate to adjust or modify his original plan when the development of the battle or a significant change in the factors of METT-T requires it.

INTELLIGENCE PREPARATION OF THE BATTLEFIELD

IPB is the continuous process of analyzing the weather, enemy, and terrain of a specific battlefield area for all tactical operations. It is an integral part of the battalion command and control process. It allows the battalion to plan and execute support operations better and react quickly to threat actions. Specific responsibilities and functions of the IPB process are described below.

Responsibilities

The S2/S3 is responsible for collecting, analyzing, and reporting the information. The analyzed information is then disseminated as

intelligence. IPB provides a basis for all intelligence operations, tactical decisions, and tactical operations. The staff uses IPB information in developing the operation, the collection and the reconnaissance and surveillance plans. IPB integrates threat doctrine with the terrain and weather to determine and evaluate enemy capabilities, vulnerabilities, and probable courses of action. The S2/S3 relies on higher headquarters to provide terrain and weather information. The formal IPB process is performed at corps and division. The informal IPB process is performed at brigade and battalion levels. IPB makes it easier to select supply routes and support sites and to defend against different threat levels. It allows planning to be proactive instead of reactive.

Functions

The functions of the IPB process are battlefield area evaluation, terrain analysis, weather analysis, threat evaluation, and threat integration.

Battlefield area evaluation. The scope is narrowed to the present battalion area of operation and future areas of operations and interest. The commander and S2/S3 view each of these areas by width, depth, height, and time. After the specific areas have been defined, the S2/S3 assembles the information and materials required to continue the IPB process. The S2/S3 should acquire normal climatic, weather, and area studies.

Terrain analysis. Terrain analysis identifies the effects of terrain on support and tactical operations. This occurs with weather analysis. The S2/S3 relies on higher headquarters to provide terrain factor overlays and other detailed terrain products. Without these overlays, he should conduct the analysis with help from a division or corps engineer. Available terrain factor overlays might include:

- Vegetation.
- Surface materials (soils).
- Surface drainage.
- Slope.
- Obstacles.
- Transportation (roads and bridges).
- Cross-country movement (wet and dry).
- Concealment (summer and winter).
- Groundwater (planning database only).

Terrain analysis that helps you determine the enemy's point of view is described in Table 5-2.

Weather analysis. Weather is critical to battalion support operations. Mobility for CSS may be

Table 5-2. Terrain analysis to help determine enemy's point of view

☐ **Maneuver space.** Considering choke points and natural obstacles, how many armored vehicles and, therefore, what size unit does each avenue of approach support?
☐ **Trafficability.** How do soil trafficability, ruggedness of terrain, weather, and limited visibility affect movement rates?
☐ **Concealment and cover.** What terrain allows movement as close to the defender as possible using column formations before deploying into assault formations?
☐ **Observation and fields of fire.** What terrain is suitable for supporting direct fire by tanks, attack helicopters, or self-propelled artillery?
☐ **Key terrain.** What terrain gives the enemy a decided advantage over the defender?
☐ **Limited visibility effects.** Smoke, dust, fog, and darkness all affect movement. During such periods, roads, ridgelines, and other features that facilitate navigation increase the value of an avenue of approach.
☐ **Enemy air avenues of approach.**

affected. The S2/S3 relies on the staff weather officer and weather team at division or corps to provide specific weather information. This includes:

- Ground fog.
- Severe weather.
- Cloud-free line-of-sight.
- Terrain-influenced wind direction.
- Snow depth.
- Ice thickness.

The S2/S3 then integrates weather data with terrain data. He combines his own hasty analysis with short- and long-range forecasts, light data tables, and climatic summaries when analyzing terrain.

Threat Evaluation. The S2/S3 evaluates available enemy order of battle factors. These include:

- Unit identification.
- Composition.
- Disposition.
- Strength.
- Training.
- Tactics.
- Logistics.
- Combat effectiveness.

When such detailed order of battle data are not available, the primary threat evaluation tool is a generic doctrinal template. It depicts the enemy doctrinal deployment for various types of operations without the constraints of weather and terrain. It displays composition, formation, frontages, and depths. During threat evaluation, the S2/S3 identifies high-value targets.

Threat Integration. The battalion S2/S3 relates his threat evaluation of the terrain and weather to predict how the enemy will plan his maneuver in the area of operations. He develops situation, event, and decision support templates. For more details on IPB, see FM 34-130.

Section II
COMMAND SECTION

This section is for the battalion commander.

★ MISSION

The mission of the battalion command section is to command, control, administer, and supervise the operations of units of the battalion. The command section consists of you, the battalion commander and your immediate staff. You and your staff plan and supervise the establishment and operation of division and brigade supply, distribution, and ammunition transfer points. The sections that are subordinate to the command section include the S1 section, the S2/S3 section, the S4 section, and the support operations section (in the MSBs and FSBs). They include the logistics operations section and the unit ministry team in the S&S battalion and the battalion maintenance section (in the FSBs and the airborne division MSB). As battalion commander, you are responsible for the morale and welfare of the soldiers assigned to the battalion. You may delegate some duties to the staff. If a problem arises, the staff should discuss it with you. The staff should propose a solution, recommend a course of action, and make sure your decision is earned out. You command all units organic or attached to the battalion. You plan, supervise, and direct battalion activities. You prescribe policies, procedures, and standards according to orders from higher headquarters You also decide courses of action and issue orders. Prepare your soldiers to operate in a highly visible environment under intense media scrutiny. The soldiers described below assist you.

Executive Officer

The executive officer is your principal assistant. He--

- Assumes command when you are absent.
- Is responsible for making sure your policies are earned out.
- Serves as chief of the battalion staff.
- Supervises, directs, and coordinates functions of the battalion staff.
- Decides on matters within policies you set forth.
- Coordinates briefings to make sure you and your staff are informed of all areas of the battalion mission.
- Serves as the battalion materiel readiness officer.

★ S1

The S1 is responsible for the personnel requirements of the battalion. He--

- Advises you on administrative and personnel matters and coordinates all personnel issues.
- Develops and issues instructions for submission of records and reports.
- Coordinates administration of attached units.
- Authenticates orders and instructions and supervises their distribution.
- Serves as the battalion information officer.
- Advises you on safety.

S2/S3

The S2/S3 supervises the tactical mission of the battalion. He--

- Advises and assists you in planning, coordinating, and supervising the operations, training, defense, and intelligence fictions of the battalion.
- Controls communications.
- Plans and coordinates battalion movements.
- Supervises operations and training for NBC defense and employment of smoke and flame.

S4

The S4 supervises internal supply, food service, field service support, evacuation, and unit maintenance of headquarters and subordinate units. He--

- Coordinates and plans for area damage control measures, such as evacuation of casualties and disposal of contaminated material.
- Guides and supervises the internal logistics functions of the units assigned or attached to the battalion.
- Serves as the purchasing and contracting officer and the mortuary affairs officer for the battalion.

★ Support Operations Officer

The support operations officer is your advisor on logistics and medical matters. He--

- Provides guidance and advises on matters relating to supply and services, maintenance, transportation, and health service support.
- Ensures logistics and medical support to supported units is consistent with the tactical operation.
- Coordinates additional support with the DISCOM support operations branch.
- Prepares and distributes the external service support SOP.

Chaplain (S&S Battalion Only)

The chaplain advises you and your staff on all religious support and unit morale matters. He-

- Plans for and provides religious services.
- Provides the battalion and attached units with pastoral care and counseling.

★ Maintenance Officer (FSB, Air Assault and Airborne Divisions Only)

The maintenance officer advises you on motor transport maintenance. He--

- Directs the employment, operation and unit maintenance of motor transport within the battalion.
- Informs you of operational status of equipment.
- Coordinates unit maintenance operations with maintenance operations of higher headquarters.
- Develops unit maintenance program.
- Prepares the maintenance annex to the battalion SOP.
- Directs the unit maintenance element.
- Supervises the preparation of daily and monthly materiel condition status reports for you.

Command Sergeant Major

The command sergeant major is your main enlisted assistant. He--

- Maintains liaison between you and top NCOs of subordinate units.
- Advises and assists senior NCOs.
- Helps you inspect subordinate units.
- Helps develop the collective mission-essential tasks and individual training tasks for the unit and the soldiers.

★ PREPARATION FOR MOVEMENT

You must be ready to move the battalion at any time and by any means. When it moves in the theater of operations, the battalion most likely will use motor

transport, but it may use air, rail, or water transport. One of the first things you should do after taking command is to see if your unit has a current movment plan. The plan should cover the following:

- Plans for all types of movements.
- Plans for loading organic vehicles and other modes of transport which might be used.
- Instructions and maps for conducting movement.
- Plans for displacing all or part of the battalion.
- Procedures for closing out operations at the old area and setting up operations at the new area.
- Plans for the march, such as feeding the troops, refueling vehicles, performing unit maintenance en route, and getting road clearances.
- Plans for defending the battalion.
- Safety procedures.

RECONNAISSANCE AND SITE SELECTION

After the higher headquarters commander assigns the general area you or your representatives must check it out. The S2/S3 usually takes charge of getting a group together and making arrangements for the reconnaissance. The group should include you, staff officers, company commanders, key personnel selected by the company commanders, and any others you may choose.

Reconnaissance

There are several ways to checkout the route and the new area. Sometimes map reconnaissance is the only way because of the lack of time or security. If there is no immediate danger from hostile forces and if there is enough time, travel the route and visit the area. Use ground and map reconnaissance for this method of checking. If air transport is available, check out the route and the area from the air. Aerial photographs may be used to aid in map and ground reconnaissance.

Site Selection

You and your staff should select an operating site and an alternate site for the battalion CP. The S2/S3 and company commanders select the general operating areas for the units. As a rule, the headquarters and supply company commander is responsible for setting up the battalion CP. See FM 55-30 for help with motor movements. See FM 55-12 and FM 55-40 for help with air movements.

Section III
S1 SECTION

This section is for the battalion S1.

★ MISSION

S1 section personnel, under your supervision, assist the commander and staff in administrative and personnel matters. Key personnel in your section include the personnel records supervisor, the personnel staff NCO, and personnel, administrative, and legal specialists. The personnel records supervisor is your primary assistant. He oversees all activities of the PAC and coordinates with subordinate units. He is assisted by the personnel staff NCO who coordinates and supervises activities of the PAC. TC 12-17 has information to help you develop your plans and some tips to make you more successful in your job. It has examples and checklists covering all areas of your responsibilities. Section responsibilities include--

- Preparing the personnel estimate.
- Preparing strength accounts.
- Reporting casualties.
- Conducting replacement operations.
- Developing casualty projections with special emphasis on critical low-density MOSS and nuclear and chemical weapons effects.
- Processing personnel actions and reports.
- Developing procedures for emergency evacuation.
- Monitoring duty rosters.
- Operating the battalion mail service.

- Monitoring legal support functions.
- Advising on safety.

ADMINISTRATIVE AND PERSONNEL MATTERS

You operate the battalion PAC which handles administrative tasks for battalion units. Your soldiers send data to the personnel services division of the personnel services company, which operates the automated SIDPERS. You or your soldiers take the actions below.

★ Prepare Directives or Correspondence

Company personnel should use handwritten notes or memos within the battalion. However, when company commanders have correspondence which goes outside the battalion, PAC personnel type it in the correct format. Company commanders send the PAC a handwritten draft of the information and instructions on what they need--a memorandum, an endorsement, or a comment. Preprinted memoranda or forms may be used for repetitive actions. Policies may be set up to allow the S1 or the personnel staff NCO to sign actions when the signature of the company commander is not required. AR 25-50 contains guidelines for preparing correspondence.

Operate the Battalion Mail Service

You serve as the battalion postal officer to provide mail service to all battalion units. Company commanders appoint at least two unit mail orderlies to take mail from their company to the battalion mail pickup point and receive mail to take back to their company. Each mail orderly must have a DD Form 285 (Appointment of Military Postal Clerk, Unit Mail Clerk, or Mail Orderly). The PAC prepares this form. It gives one copy to the mail clerk, sends two copies to the AG postal division, and files one copy.

★ Maintain Unit Strength Accounting

The first sergeants, supervised by the company commanders, send a personnel daily summary to the S1 section. The report includes authorized and actual strength figures, casualty reports, and administrative gains and losses of key personnel. Once you receive the company reports, forward the information by radio or telephone to the higher headquarters. AR 600-8-1 covers casualty reports. TC 12-16 covers wartime strength accounting.

Administer Personnel and Manpower Management Activities

The personnel staff NCO within the PAC maintains liaison with company commanders and their first sergeants. Company commanders may send oral or written requests for personnel actions through the personnel staff NCO. Requests may include reclassifications, promotions, reductions, separations, reassignments, reenlistments, and evaluations. They may also include routine administrative tasks such as mail cards, medical forms, family or financial counseling, identification cards and tags, clearance forms, and requests for leave.

★ Promote Morale and Welfare of Battalion Troops

Low morale affects the way soldiers do their jobs. If soldiers need help, the company commander or first sergeant coordinates with the PAC to arrange for Army community service or other agencies to assist their soldiers. If soldiers have problems with their pay account or need to make any changes to it, the PAC helps them or makes an appointment for them at the supporting finance activity. Recreational activities are in the company area or rest areas (rest and recreation areas are in the rear area). DISCOM unit ministry teams provides religious support for the MSBs and FSBs. S&S battalions have a separate unit ministry team assigned for religious support.

Assist With Discipline, Law, and Order

Discipline, law, and order in the battalion are your responsibility. You coordinate with the military police and the staff judge advocate. AR 27-10 covers military justice. AR 600-8-2 covers suspension

actions of military personnel. The PAC supports your soldiers by--

- Preparing paperwork for the company commanders' signatures.
- Preparing statements and forms for soldiers and arranging legal counsel for them.
- Forwarding documents through appropriate channels for action.
- Notifying company commanders of actions taken by higher headquarters.

REPORTS

The PAC prepares or coordinates many reports. Some of these are accident, readiness, casualty, strength, and evaluation reports and unit rosters.

Accident Reports

The first sergeant makes a handwritten report of all accidents on DA Form 285 (US Amy Accident Investigation Report). The report is sent to the PAC. The PAC types the form, gets the necessary signatures, and forwards the form to higher headquarters.

Readiness Reports

The company commander prepares a handwritten DA Form 2715-R(Unit Status Report). The PAC types the report and sends it to the S2/S3 section.

Casualty Reports

When a battalion soldier is wounded, injured, missing, seriously ill, or killed, the person who has direct knowledge of the incident reports it to the commander. The commander or first sergeant makes sure a DA Form 1155 (Witness Statement on Individual) is completed and sent to the PAC. PAC personnel prepare a DA Form 1156 (Casualty Feeder Report) and send it to the PSC. If the incident results in a change in duty status for the soldier, PAC personnel complete the necessary forms to update the SIDPERS database and send them to the PSC. These procedures are in DA Pamphlets 600-8 and 600-8-1. When a soldier is killed, critically wounded, or seriously ill, the PAC prepares the appropriate sympathy or condolence letter for the unit commander's signature. The PAC holds the letter, undated until higher headquarters verifies that the soldier's next of kin has been notified. Then, the PAC dates and mails the letter.

Strength Reports

Each unit in the battalion reports to you its unit strength by secure means. Consolidate the reports to show numerical strength, loss, and replacement data for battalion use and input by secure means into the command and control system. The data are usually forwarded by radio or telephone. The report must include authorized and actual strength figures, battle and nonbattle casualties, administrative gains and losses, and losses of key personnel. FM 101-5 has more details.

Evaluation Reports

ARs 600-200 and 623-105 have the requirements for evaluations. The PSC issues evaluation reports. The raters and reviewers complete their parts of the form in pencil and return the form to the PAC for final typing. The PAC then sends the report back to the unit for signatures and returns it to the PSC for processing. The report should always be sent in a sealed envelope from one place to the next because it is personal. The PAC or unit keeps no file copies of the reports.

Unit Rosters

Unit commanders may request rosters for their units. The company commanders furnish the information in handwritten form for the PAC to type. The PAC may also prepare rosters using SIDPERS output or other source documents.

ORDERS

The administrative service division of the personnel services company issues written orders. The PSC requests the issue of orders for personnel actions. Unit commanders may request the issue of other orders. The S1 tells the PAC what action is required. The PAC prepares a DA Form 2446 (Request for Orders) and sends it to the PSC. The PAC keeps a copy of the request until the orders are received. AR 310-10 has more on preparing military orders.

Section IV
S2/S3 SECTION

This section is for the battalion S2/S3.

★ MISSION

The mission of the S2/S3 section is to make sure the battalion completes its tactical mission. Since the S&S battalion is located either in the TAACOM or the COSCOM, it has more personnel to supervise a larger distribution of supplies. Because of this, the S2/S3 section of the S&S battalion had two branches--a logistics operations branch and a communications branch. The logistics operations branch has been changed to a section with the logistics officer reporting directly to the battalion commander. At the same time, the communications branch is being reduced in size while in the process of being phased out altogether. Table 5-3 (page 5-14) shows the personnel prescribed for each battalion. Section personnel supervise intelligence gathering and formulate plans. The section is responsible for the training management of the battalion units. It is also responsible for the battalion operation order, the movement and location of battalion units, and rear operations. The section establishes and operates the battalion wire net, the radio net, and the battalion message center. Soldiers in your section staff all actions having to do with the supplies and services provided to supported units. They--

- Coordinate all supply and service operations provided to supported units.
- Monitor tactical motor transport operations and request additional support for battalion units where needed. Personnel resources are subject to change. Check the latest TOE for current staffing.
- Acquire and disseminate weather information that would impact on motor transport operations.
- Direct and supervise tactical movement of battalion units.
- Supervise and coordinate the gathering and processing of intelligence information.
- Help prepare plans and schedules for the operating elements of the battalion.
- Prepare and coordinate security plans and operations.
- Coordinate the installation and operation of the battalion communications system.
- Coordinate mortuary affairs activities.
- Plan and coordinate NBC defense operations.
- Coordinate rear operations plans and activities.
- Advise, monitor, and assist unit commanders.
- Plan, coordinate, and supervise the training of battalion units.

★ COMMAND POST AND TACTICAL OPERATIONS CENTER

You manage tactical mission operations from the TOC. The TOC is the chief component of the battalion CP. A key consideration in determining the location of a CP is the ability of the site to provide for good communications with higher, lower, and adjacent organizations. Locate the CP near routes which allow friendly forces access to the area. Avoid prominent terrain features and major road junctions. This prevents the enemy from readily determining the CP location. Locate the CP in a built-up area when possible. Barns, garages, and warehouses eliminate the need for extensive camouflage. Basements provide added protection from enemy fires. Covering windows and using basements enhance noise and light discipline. Use of a built-up area also reduces inflared and electromagnetic signatures. In a built-up area, the CP may be in the same building with all of the battalion staff. Designate a separate area of the building for the TOC. The CP may also be intents. In this case, you should have a medium GP tent for the TOC with other staff members located next to it in smaller GP tents. Figure 5-2 (page 5-15) shows a layout and staffing for the TOC. The layout for your TOC will depend on the facilities you use.

Staff

Most of the time, the TOC has the battalion commander, the S2/S3, staff members, and communications soldiers. The TOC must be staffed and operated 24 hours a day. To do this, you may setup two 12-hour shifts. Usually, each shift has at least one officer, two

NCOs, one clerk, and any liaison personnel needed. When the situation does not warrant a full staff, at least one person must be on duty at all times. Then, you may have one fully staffed, 12-hour shift and an officer or NCO on duty for the other 12 hours. Have the operations sergeant keep a duty roster to rotate the duty officer and NCO detail.

Functions

TOC personnel receive reports from battalion units, requests for assistance from supported units, directives from higher headquarter, and other information pertinent to the mission. They keep the S2/S3 section informed in all areas. They keep operations maps and charts posted with the latest information. The operations sergeant keeps the operations map up to date. The intelligence sergeant makes sure the latest information is on the situation map and the weather chart. Using the charts and maps provided, you or the battalion commander briefs staff officers and unit commanders, usually daily. The commander decides how often. The communications chief is in charge of the net control station in the TOC. Other communications soldiers may be located in a trailer, tent, or other structure next to the TOC to operate the wire net and receive, transmit, and distribute messages.

Security

The TOC is a restricted area. Take precautions to keep it secure. The CP usually has wire or some other protective barrier around it. If the TOC is in a place where it needs more protection, request that wire or barriers be put around the TOC as well. Post a guard at the entrance to the TOC. The company commander who is responsible for CP security assigns the guards. Publish a roster of those who are to have access to the TOC. See that the roster is given to the guard. When someone needs to enter the TOC, the guard checks the person's identification card against the roster. After the initial check, the guard may admit a person who is recognized. If someone is not on the access roster, the guard asks one of the staff to see if he should be permitted to enter. One of the staff must escort this person while he is in the TOC.

★*Table 5-3. S2/S3 section personnel*

DUTY TITLE	TOE						
	42446L	63146L	63156L	63216L	63226L	63256L	63266L
Operations Sergeant	X	X	X	X	X	X	X
Transportation Sergeant		X		X			
Intelligence Sergeant	X	X	X	X	X	X	X
NBC NCO	X	X	X	X	X	X	X
Battalion Communications Chief		X	X	X	X		
Mortuary Affairs NCO			X				
Clerk-Typists	X		X				X
Combat Signaller	X	X	X	X			
Section Chief					X	X	
UL Communications Maintainer		X	X				X
Vehicle Driver		X				X	
Wire Installer	X			X			
Radio Operators				X			
Graphics Documents Specialist	X						

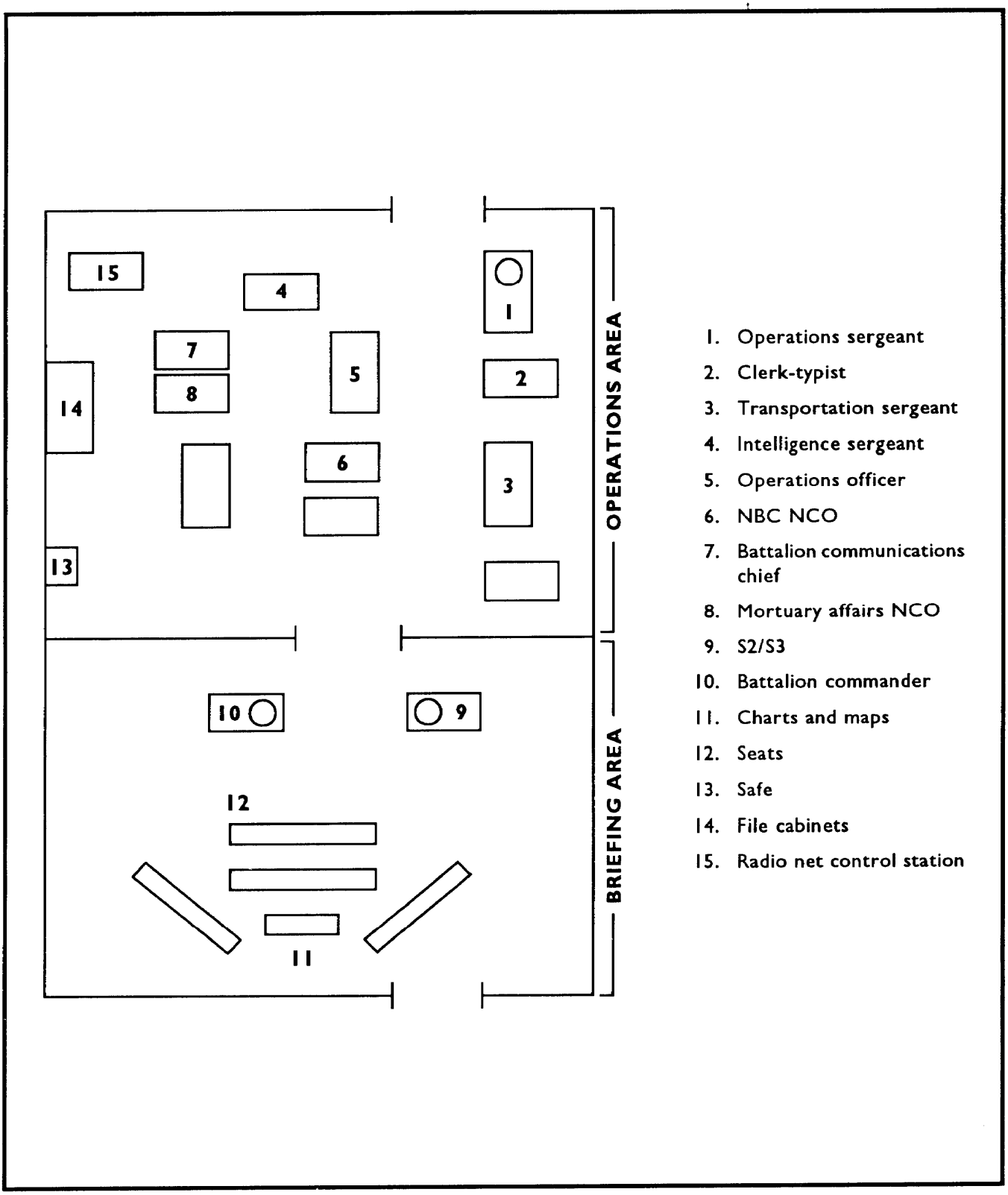


Figure 5-2. Layout and staffing for a TOC

COMMUNICATIONS

You have staff supervision of communications when in a field or combat situation. The tactical communications chief operates the communications system and supervises other communications personnel. The communications system includes single-channel radio nets and a mobile radio-telephone system. The communications chief and personnel do the tasks listed below.

Maintain Communications Equipment

Battalion signal equipment includes FM radios, field telephones, switchboards, terminal devices, COMSEC devices, and auxiliary equipment such as batteries, wire, and cables. The communications branch keeps track of these items and performs unit maintenance on them.

Operate the FM Net Control Station

Communications personnel monitor and control FM voice communication between battalion units using procedures in FM 24-18 and the SOI. The net controller opens and closes the net and imposes and lifts radio silence. He ensures proper radio-telephone procedures are used and keeps unauthorized stations from transmitting.

Provide Telephone Switching Service

The communications branch switchboard operators manually connect battalion field phones and teletypewriters for intrabattalion communication. This allows voice communication to all theater elements.

Establish Communication with Subordinate Units

Communication soldiers lay wires to all units. They also set up an FM voice net.

★ Manage CRYPTO Nets

Coordinate with higher headquarter for SOIs and CRYPTO net variables. Manage the CRYPTO net key changeover and key distribution.

MOVEMENT

Once you receive operation orders, tell the battalion units where they must locate and when they must begin operations. Issue a warning order to battalion elements to let them know a move is planned. Form a reconnaissance party to check the route and the new area. Have the operations NCO coordinate with the MCO to make sure transportation is available. Send an advance party to the new area to clear the route of obstacles, to post route markers, and to make hasty defense positions. The advance party also sets up the command post, lays communication wires from the command post to defense positions and supply areas, and prepares the kitchen area.

★ TRAINING

You are the training coordinator for the battalion. Company and detachment commanders and their key NCOs are the trainers. Work with staff members and unit commanders to organize training plans. Hold meetings to determine unit missions and training needs. Discuss with commanders the time needed for individual training and for their own unit's collective training. Prepare a training schedule and training and evaluation outlines. Include in the schedule the mission, when the training is to be given, and where the training is to take place. Also, include notes about training and evaluation outlines, other sources and references, and specific guidance. See FM 25-100 for more on training management.

★ INTELLIGENCE

The intelligence functions and the operations functions of a headquarters may be separated or consolidated. In the FSBs, the MSBs, and S&S battalions, the functions are consolidated. You are responsible for major tasks in the area of intelligence. Members of your section give advice and information on intelligence, tactical operations, and security. The intelligence sergeant maintains the operations map. He continuously updates this map to show the positions of all battalion units and all known friendly, allied, and enemy forces in the battalion area. Your soldiers prepare the intelligence annex to the battalion SOP, reports, and OPORD when needed. They distribute

maps, photos, and other data to battalion units and submit requests for information to higher headquarters.

Estimates

The intelligence estimate is a continuing requirement. Your section receives information of intelligence value from battalion elements and sends it to the DISCOM, COSCOM, or TAACOM S2/S3, as appropriate, for action. Even though intelligence information may not be immediately important to the battalion, it may be important to others. Unit commanders should make sure that their soldiers report without delay any observations of the enemy or any attempts at subversion or espionage. FM 101-5 shows the type of information included in an intelligence estimate.

Reports

You report enemy activities, items of captured enemy materiel, areas that have become impassable, and the effects of weather and terrain. This information will be used to update the situation map at higher headquarters. Once higher headquarters processes the information, your section receives an intelligence report. Forward the applicable part to battalion units.

REAR OPERATIONS

You coordinate with the battalion commander, other battalion staff members, and company and detachment commanders to develop rear operations security plans and training for the battalion. The authority to carry out rear operations is delegated to a rear operations commander. Chapter 4 has more on rear operations. Details are in FMs 71-100 and 100-15.

REPORTS

Your section prepares or processes mission operation reports and forwards them to higher headquarters. Be prepared to submit the following:

- Intelligence spot report.
- Intelligence summary.
- Situation overlay.
- Ground surveillance plan.
- Air reconnaissance surveillance request.

★ S&S BATTALION LOGISTICS OPERATIONS SECTION

This section provides the commander with information and advice on battalion mission operations. The section is staffed by experts in supply and mission services. They inspect supply and service activities of battalion elements. They also advise the commander on their mission capabilities and accomplishments. The section staff stays in close contact with the commanders of supported units. The staff helps identify and solve problems and resolves complaints concerning supply and services provided by the battalion. Section personnel serve as the battalion commander's representatives. They coordinate actions between subordinate units and the MMC and MCC. The aerial delivery officers and supply and services officers prepare operational plans, estimates, directives, and assignment of missions for subordinate units. They also act as liaison between battalion headquarters and subordinate units. The supply system technician, operations sergeant, petroleum supply sergeant, materiel control supervisor, materiel storage supervisor, and subsistence supply supervisor advise others on tasks involving supply, supply procedures, and maintenance of supply. They make sure stock balances are reported to the MMC so that inventories may be adjusted. The chief movements supervisor maintains liaison with transportation movement offices and transportation units for movement of supplies. The senior mortuary affairs NCO and laundry NCO help the supply and services officer in duties related to mortuary affairs and laundry and renovation services. The materiel control and accounting NCO and specialists prepare requests for supplies and keep records of all supply transactions for the section. You also have clerk-typists and clerks to perform administrative duties. The section personnel monitor subordinate supply and service activities and keep in touch with supported units. If units request assistance or training, the logistics officer sends an assistance team from the logistics operations staff or calls on higher headquarter to send assistance. The section also sends inspection teams to all subordinate activities to observe and report on their operations. Members of the logistics operations staff visit or call user units. The members encourage them to

report on how well supply and service units are supporting them. The logistics officer then briefs the commander. The logistics officer handles the small problems using battalion policy and SOP as a guide. He brings big problems to the attention of the commander and recommends solutions. The logistics officer relays the commander's orders to commanders of subordinate units and helps them interpret the orders. He then monitors operations to make sure the orders are followed and the problems are resolved.

★ Inspections

Soldiers in the logistics operations section inspect almost all battalion activities. The battalion headquarters has no experts for water purification and distribution, airdrop and rigging, maintenance of air delivery equipment, labor supervision, and baking. The supply and services officer knows these areas but can use experts outside the office to provide details on these operations. Frequency of inspection depends on the subordinate activity. Operations that are running smoothly require fewer inspections than those which have lots of problems. Inspections should usually be announced in advance. Although unannounced inspections provide a more realistic view of operations, they also disrupt mission activities and may cause unnecessary delays. Each inspection should be well-planned. The supervisor should tell the inspectors what to look for, but at the same time he should encourage them to use their initiative. When the inspector arrives at the site, he should contact the unit commander. The commander will usually detail a soldier to serve as a guide. Inspection procedures vary a great deal. Before leaving, the inspector should tell the unit commander what he found and answer any questions. The inspector then reports to a supervisor at logistics operations or to the logistics officer.

Reports

Managers in the section can monitor some aspects of the supply operation without leaving the office. If they review the data in reports and listings from automated systems and in reports produced manually at subordinate units, they can pinpoint problem areas. Supply managers at logistics operations are mainly concerned with storage and inventory management and location accuracy.

Storage Management

Inaccurate location information, poor inventory control, or failure to issue stocks as MROs are received may interrupt the flow of supplies to supported units. Reports from the MMC and the supply operations office of the QM supply company allow the logistics operations staff to keep track of all open MROs, confirmations, and denials. A typical storage management problem in a subordinate unit is slow processing of MROs. The action officer must determine the cause and notify the appropriate staff officer. A graph might be used to compare the number of MROs cut with the number of late MRCs. This could show if late MRCs were due to increased work load. Another reason for slow processing might be equipment problems. A graph could be used to compare the number of late MRCs with the number of hours the equipment was not operating.

Inventory Management

Records of GS stock at the supply point are kept at the MMC. Those for DS stocks are kept at the S&S company supply and service operations office. Stocks are issued automatically based on availability. Controlled stocks are issued from the supply point only when the MMC or the operations office cuts an MRO. When the MMC or operations office receives an MRC from the supply point, the recorded balance is decreased. The balance increases only when the MMC or the operations office gets a receipt or turn-in document from the supply point. Therefore, when the quantity of stock on hand differs from the recorded balance, one of the following has probably happened:

- A transaction has not yet been posted.
- Stocks have been miscounted upon receipt.
- Stocks have been miscounted during issue.
- Stocks have been misplaced.
- Stocks have been stolen.

Under SARSS and SPBS, stocks are inventoried frequently. Location surveys precede each inventory. The commander of the supply and service battalion may require more inventories and location surveys at

supply points where major discrepancies occur. He may also direct the logistics operations staff to monitor inventory and survey procedures. AR 740-26 tells how to conduct inventories and location surveys. More on location surveys may be found in TM 743-200-1.

★ S&S BATTALION COMMUNICATIONS BRANCH

This branch provides communication and message service within the battalion headquarters. The branch accounts for and maintains all communication equipment in the headquarters, except COMSEC equipment. This includes radios, field telephones, teletypewriters, terminals, batteries, wire, and cables. The branch monitors and controls voice communication between battalion units, using procedures in FM 24-18 and the SOI. The net controller opens and closes the net, imposes and lifts radio silence, and makes sure correct procedures are used. He keeps unauthorized stations from transmitting. The branch operates a telecommunications center. The center can transmit and receive messages by teletypewriter. The branch provides telephone and teletypewriter switching service for all battalion elements. It establishes communications with subordinate units. Branch personnel lay wire to all units and establish a radio net. The branch trains battalion personnel and coordinates the training with the S2/S3 section. The battalion communications chief supervises the installation and operation of the battalion communications systems. He is assisted by the combat signaller team chief, the switchboard operator, and the telecommunications center operators. The chief--

- Plans and coordinates battalion CE requirements and activities.
- Plans, directs, and monitors the operation and management of battalion field communications systems.
- Determines capabilities and limitations of assigned CE equipment.
- Advises the commander and his staff on CE and COMSEC requirements, capabilities, and operations.
- Helps resolve maintenance problems with battalion CE equipment.

Section V
S4 SECTION

This section is for the battalion S4.

★ MISSION

The S4 section is responsible for the internal supply and maintenance functions of the battalion's organic and attached units. As the S4, you advise the battalion commander on the status of supply and maintenance in the battalion and account for battalion property. In addition to the supply NCO and the supply specialist, the S&S battalion has a wheeled vehicle maintenance technician, a property accounting technician, a senior maintenance supervisor, a clerk-typist, and a reports clerk. The wheeled vehicle maintenance technican and the senior maintenance supervisor coordinate battalion-level maintenance and inspect unit maintenance of wheeled vehicles, MHE, generators, and accessories. The supply NCO, with the help of the supply specialist, supervises battalion internal supply functions. The property accounting technician supervises the supply NCO in the receipt, storage, and issue of supplies. He checks requisitions against authorization documents and compiles data for reports. Other actions your personnel take include the following:

- Receive requests for expendable supplies from battalion units, enter them on the document register, and forward them to higher headquarters.
- Monitor requests from battalion units for nonexpendable supplies.
- Monitor due-in expendable.
- Supervise the turn-in of supplies and equipment.
- Monitor materiel readiness status of battalion units.

- Prepare logistics reports.
- Plan, execute, and monitor administrative movements.
- Inspect the logistics data files for all battalion units.

★ INTERNAL LOGISTICS FUNCTIONS

Supplies and equipment must be available for battalion units when they need them. Keep higher headquarters informed on the status of internal logistics. Major shortages of equipment or supplies which affect mission capability should be reported through command channels at once. Give the higher headquarters staff advance notice of battalion requirements of supplies and equipment. Base requirements on the number of soldiers in the battalion, past demand experience and current requests, unit supply status reports, and the unit commanders' estimates of future needs. Battalion logistics include internal supply, field services, and maintenance.

Internal Supply

Internal supply is the provision of supplies in support of battalion personnel, equipment, and operations. It excludes supplies which are passed on to supported units (mission stocks).

★ Field Services

Field services are those services provided to support battalion personnel and equipment. They include shower, laundry, decontamination, and mortuary affairs. Field service personnel also inspect and repair individual clothing turned in through laundry and shower operations.

Maintenance

Maintenance includes inspection, repair, calibration, and modification of battalion equipment at unit and direct support levels.

★ SUBORDINATE UNIT SUPPLY FUNCTIONS

You monitor the status of supplies in the battalion. You take care of the paperwork for combat service support, much of which is consolidated at battalion level. This involves preparing and processing logistic reports and records, which include readiness-related reports; bulk petroleum reports; receipt, issue, and turn-in forms; and property transactions and lists received under the computerized systems. Members of your section are trained and experienced in unit supply. They inspect supply rooms, dining facilities, arms rooms, motor pools, and other unit supply activities. They resolve any problems according to battalion, higher headquarters, and DA policy. You should know how supplies are classified and how they are accounted for. Table 5-4 (page 5-21) shows the classes of supply. Supply accounting terms are explained in DA Pamphlet 710-2-1.

Expendable Items

The unit supply sergeants send requests to the battalion S4 section. The S4 section keeps a document register for requests for expendable items. Supply specialists list each request on the document register and enter a document number on the request. Then the requests are sent to the MMC.

Nonexpendable Items

The supply sergeant may prepare requests for nonexpendable items. He forwards the requests to the property book team at the MMC which keeps document registers for these requests. Battalion policy may require the supply sergeant to send the requests through you for your information.

Durable Items

The unit supply sergeant sends requests to your section. Your section keeps a document register for requests for durable items. Each request is listed on the document register, and a document number is entered on the request. Then the requests are sent to the MMC.

★ MAINTENANCE

You are the battalion materiel readiness officer. Organize maintenance operations as the battalion commander directs. Coordinate with the maintenance

control section of the maintenance battalion to ensure sufficient DS is provided. You also--

- Help select the areas for setting up vehicle maintenance.
- See that areas are designated for other equipment maintenance.
- Inspect facilities and operations frequently to see that regulations and battalion policies are followed.
- Identify problem areas and help find solutions. See FM 43-5 for sample inspection checklists.
- Ensure that repair parts are requested according to regulation and that they are received promptly.
- Check to see if records are kept correctly.
- Ensure that liaison is kept with supporting maintenance activities and that no problems are encountered. Copies of the supporting unit's SOP are given to the maintenance personnel so they will use the correct procedures for requesting support.
- Give maintenance training needs to the battalion S2/S3 so that they can be included in the battalion training schedule.
- Keep the commander and the other staff members advised of the maintenance and materiel readiness situation.

★ MOVEMENT

You may be the movement officer. As such you are responsible for moving the battalion in the field. Coordinate logistics support for the move. Give the S2/S3 the movement information that will be included in the administrative or logistics annexes to the operation order. You also--

- Prepare loading plans for battalion headquarters.
- Advise battalion units on preparing loading plans.
- Ensure movement plans are up to date with MTOE changes.
- Consult with the S2/S3 to determine priorities for the move.
- Determine transportation requirements and request additional transportation support.
- Coordinate transportation to and from CEB points.
- Coordinate transportation assets in evacuation of PWs.
- Coordinate transportation assets to assist in evacuation and hospitalization of casualties resulting from NBC warfare.
- Control evacuation of captured materiel.
- Obtain road clearances for the move.

★ *Table 5-4. Classes of supply*

CLASSES	SUPPLIES
I	Subsistence and gratuitous health and comfort items.
II	Clothing, individual equipment, tentage, organizational tool sets and kits, hand tools, and administrative and housekeeping supplies and equipment.
III	Petroleum fuels, lubricants, hydraulic and insulating oils, preservatives, liquid and compressed gases, bulk chemical products, coolants, deicing and antifreeze compounds, components and additives of petroleum and chemical products, and coal.
IV	Construction materials, including installed equipment and all fortification and barrier materials.
V	Ammunition of all types (including chemical, nuclear, and special weapons), bombs, explosives, mines, fuzes, detonators, pyrotechnics, missiles, rockets, propellants, and other associated items.
VI	Personal demand items (nonmilitary sales items).
VII	Major end items such as launchers, tanks, mobile machine shops, and vehicles.
VIII	Medical materiel, including repair parts for medical equipment.
IX	Repair parts and components, including kits, assemblies and subassemblies--reparable or nonreparable--which are required for maintenance support of all equipment.
X	Material to support nonmilitary programs such as agriculture and economic development (not included in Classes I through IX).
Miscellaneous	Water, maps, salvage, and captured material.

★ **Section VI**

UNIT MINISTRY TEAM

This section is for the chaplain.

MISSION

The UMT, a special staff element of the S&S battalion, provides the battalion religious support. Personnel include the chaplain and the chaplain assistant. The team provides religious support to the battalion throughout its area of operation. This support includes religious services, sacraments, ordinances, instructions, and pastoral care. For more details on religious support, see FM 16-1.

OPERATIONS

The commander is responsible for the religious program in his unit. The UMT implements the program. Also, the UMT provides input to the personnel estimate and provides a religious support annex to the OPORD. The UMT provides the following services:

- Worship services.
- Memorial and funeral services.
- Counseling.
- Pastoral care to battle fatigue casualties.
- Staff input to battalion plans and orders.
- Input to the personnel estimate that establishes religious support priorities.
- Morale, morals, and religious update to the commander.
- Advice to the commander on the role of indigenous religions in the area of operations.
- Ethical issues update to the commander.

Section VII

MAINTENANCE SECTION

This section is for the unit maintenance technician.

★ MISSION

The mission of the maintenance section is to provide the personnel and equipment to perform unit maintenance on equipment belonging to the battalion. Units that have battalion maintenance sections include the headquarters and supply companies of the airborne and air assault divisions of the FSB. Equipment maintained includes wheeled vehicles, generators, MHE, scoop loaders, water purification equipment, pumps, and compressors. The MI battalion provides DS maintenance on electronic warfare, electronic countermeasure, and COMSEC equipment. Your main duty is to ensure mission capability of equipment. You are assisted by the motor sergeant and the senior mechanic. Other mechanics in your section include light and heavy wheeled vehicle mechanics and QM and chemical equipment, power generation equipment, and utilities equipment repairers. Make sure that PMCS are performed regularly and safely. Make sure the safety precautions listed in Table 5-5 (page 5-23) are observed. Your maintenance capabilities depend on time available, tool authorizations, and availability of repair parts. Maintenance your section cannot perform is sent to a support activity at higher headquarter. Helpful maintenance publications include DA Pamphlets 738-750 and 750-35 and FMs 43-5 and 43-12.

SETUP AND CLOSEDOWN

Once the operating areas are selected, you and the S4 plan the layout of the battalion maintenance section. Set up the section in a sheltered place to store and secure tools and equipment. It should provide sufficient work space. The area selected for maintenance must be centrally located, be on or near a good road, provide concealment, be easily defended, and be relatively hard-surfaced and well-drained.

Table 5-5. Safety precautions for maintenance areas

HAZARD	PREVENTIVE MEASURES
Vehicle	Use ground guides to move vehicles in the area. Use two guides to help drivers back up vehicles. Place chock blocks against each vehicle. Do not refuel vehicles in maintenance tent. While refueling: • Turn off engine. • Connect ground wire to vehicle. • Have a fire extinguisher handy. Disconnect the ground cables of the battery whenever working around a vehicle. This may prevent someone from starting the vehicle when other soldiers are still working on it.
Personal	Remove rings or watches before performing maintenance tasks to avoid electrical shocks. Pocket identification tags so that they will not get caught in operating equipment during maintenance. Wear protective clothing while welding. Wear MOPP gear when working in contaminated areas. Wear additional protection (wet weather suit or the mechanic's overalls) over MOPP gear to avoid degradation of such gear by petroleum products.
Work Area	Clean up spilled liquids at once. Wrap stored chisels and other sharp tools to prevent injury.

Setup

See FM 55-30, Chapter 7, for information on setting up a tactical motor pool. To set up a maintenance element in the field, you need to develop a layout plan (Figure 5-3, page 5-24), pitch tents, position equipment in the tents (Figure 5-4, page 5-2),and organize for maintenance operations and repair parts issue.

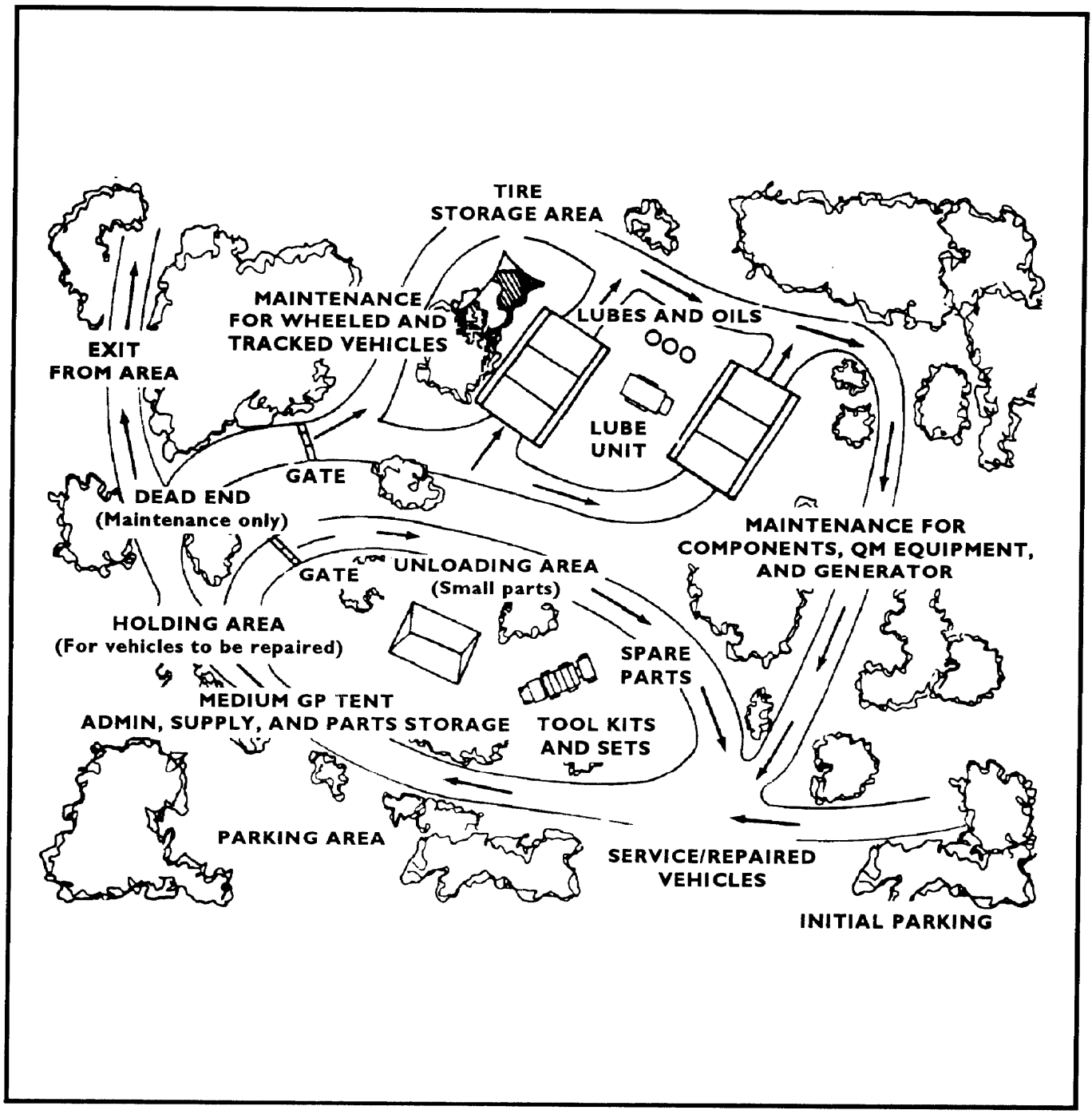


Figure 5-3. Sample maintenance section layout

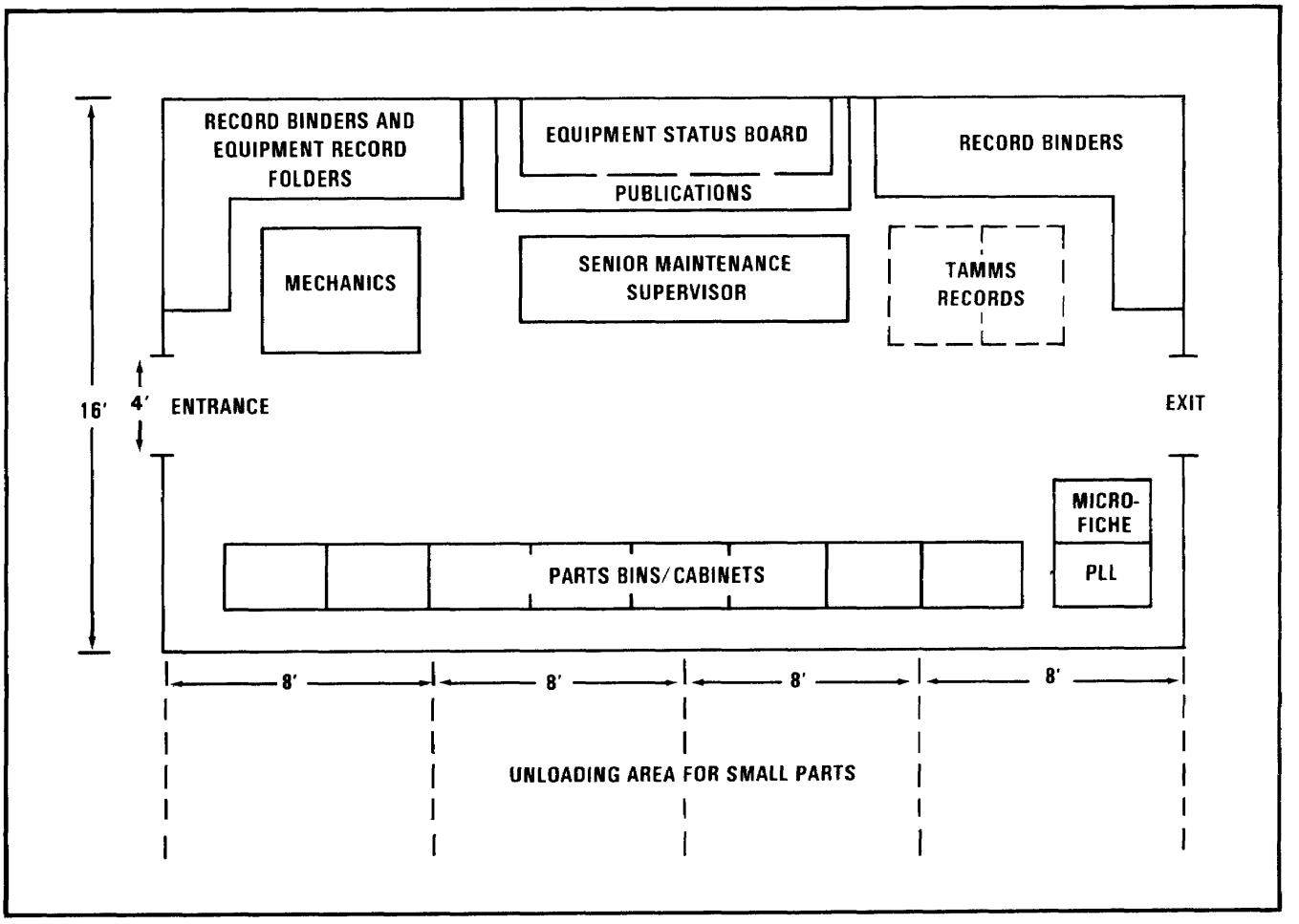


Figure 5-4. Sample layout for positioning equipment in a medium GP tent

Closedown

When the unit has to move, the commander will issue a warning order telling you when to close down and prepare to move. There are some questions you can ask as you plan for the move.

- By what date must the unit be ready to move?
- What types of operations are expected?
- How many soldiers will move to the new area?
- Will some soldiers continue to operate at the old area?
- When will equipment be deployed?
- Is special maintenance required for equipment before or on arrival in the new area?
- Will advance elements require any special maintenance support?
- What are climate and terrain like in the new area?

OPERATIONS

You are responsible to the battalion commander for setting up and running the section. Your soldiers perform unit maintenance, repair parts operations, tool maintenance and accountability, and record keeping. They also dispatch and recover vehicles and evacuate disabled equipment.

Unit Maintenance

Make sure that your soldiers do not perform maintenance beyond their capabilities. Deficiencies discovered before, during, and after operation which are beyond the operator's capability become the responsibility of unit mechanics. Your mechanics perform maintenance services on equipment and repair items sent to them. When they cannot repair the items, they send them to DS maintenance. Make sure the mechanics use

technical manuals for the equipment in performing quarterly maintenance services and troubleshooting. The mechanics also use DA Form 2404 (Equipment Inspection and Maintenance Worksheet), just as the operator does, to note any defects they find. If the mechanics cannot correct the defects and must send the item to DS maintenance, they note that on the form. Once the DS maintenance activity completes the work, DA Form 2407 (Maintenance Request) or DA Form 5504 (Maintenance Request) showing the hours of labor, parts and other materials used, and cost of repairs is sent back to the unit.

Repair Parts Operations

Your section is authorized a PLL to support daily maintenance operations. Usually, this is for a specific number of days of supply based on the average customer wait time. The unit commander approves the PLL. You supervise the PLL clerk and make sure the list is set up and maintained according to DA Pamphlet 710-2-1 (TMs in the 38-L32 series if your unit is automated).

Mandatory parts list. Consolidated MPLs list the repair parts you must have for use on combat-essential equipment. The unit commander should check to be sure there is an MPL for each on-hand end item identified in the Mission Profile Development List for his unit. Request additional MPLs according to DA Pamphlet 710-2-1, Chapter 8. The commander should also check the mandatory stockage quantity and update the PLL records according to DA Pamphlet 710-2-1, Chapter 8.

Repair parts requests. The PLL clerk makes requests for parts. To ensure requests are submitted in a timely manner, find out the average maximum lead time for items requested. Make daily requests SOP to prevent an accumulation of requests and to help ensure continuous supply. Specify procedures for establishing PLL levels, for using priority designators, for requesting follow-ups, and for reporting delays.

Tool Maintenance and Accountability

Establish an effective tool control system and inventory tools regularly. Account for and replace lost, damaged, or destroyed tools according to AR 735-5. See TM 9-243 for details on tool use and care. DA Pamphlet 710-2-1, Chapter 6, has toolroom procedures. You are authorized a set of common tools and equipment. The set is usually mounted on a secured vehicle. One side of the vehicle can be used for storing tools and test equipment, and the other side can be used to store key repair parts. This setup will help your soldiers find the tools they need quickly and will speed on-site repair. Assign a tool keeper to maintain a tool sign-out register. Make sure the equipment is returned at the close of each working day. Issue an automotive tool kit on a hand receipt to each mechanic. Each mechanic is responsible for ensuring that assigned tools are properly maintained and stored when not in use. Setup a secure tool storage area.

The Army Maintenance Management System

TAMMS is the key to good maintenance management. TAMMS records give your commander the data needed to manage equipment resources. These records enable him to evaluate modification work orders, repair parts requirements, materiel readiness, and support requirements. They help him evaluate equipment operation, including availability, deficiencies, and failure frequency. DA Pamphlet 738-750 contains specific instructions on the preparation and use of maintenance system forms. See Table 5-6 for key TAMMS records that you will use. The three types of records are operational, maintenance, and historical. Operational records are used to control operators and equipment, plan for maintenance operations, and make best use of equipment. Maintenance records control maintenance scheduling, inspection procedures, and repair work loads. They also provide a uniform method for recording corrective actions. They are used to determine equipment readiness and reliability and to determine use and logistic requirements. Historical records document permanently the receipt, operation, maintenance, and disposal of equipment.

Unit Level Logistics System

ULLS provides supervisory control and flexibility to maintenance operations. ULLS expedites repair parts supply and maintenance functions at the lowest level. ULLS also communicates with other systems by magnetic media (diskette). ULLS performs many jobs for your unit with little

Table 5-6. Key TAMMS records

TYPE RECORD	FORM	PURPOSE
OPERATIONAL	DA Form 2401 (Organization Control Record for Equipment)	Used to consolidate listing of all equipment dispatched. Provides ready identification of user and location of equipment while in use.
	DD Form 1970 (Motor Equipment Utilization Record)	Used to control equipment use. Sometimes referred to as trip ticket. Filled out for each vehicle dispatched. Records miles or hours and fuel and oil consumption.
MAINTENANCE	DA Form 2404 (Equipment Inspection and Maintenance Worksheet)	Used to record equipment faults found during operator's daily inspection, periodic services, and inspections by maintenance activities. Parts requirements go to PLL clerk.
	DA Form 2405 (Maintenance Request Register)	Used to consolidate record of job orders (DA Form 2407) initiated, received, and processed by maintenance activities. Used at unit level to record number of maintenance requests submitted to supporting maintenance units.
	DA Form 2406 (Material Condition Status Report)	Used to report the condition of equipment so that defects can be corrected.
	DA Form 2407 (Maintenance Request)	Used to request maintenance from a supporting unit and record details of maintenance performed.
	DA Form 2408-14 (Uncorrected Fault Record)	Used to record equipment faults that have not been corrected by maintenance.
	DD Form 314 (Preventive Maintenance Schedule and Record)	Used as record of scheduled and performed maintenance services. Maintained for each item requiring periodic services by unit maintenance personnel.

Table 5-6. Key TAMMS records (continued)

TYPE RECORD	FORM	PURPOSE
HISTORICAL	DA Form 2408-9 (Equipment Control Record)	Used to obtain initial basic equipment acceptance and identification information. Also used to update information on ownership, location, usage, transfer, gain, loss, overhaul, and disposition.
	DA Form 2409 (Equipment Maintenance Log (Consolidated)	Used to record complete maintenance history of equipment item.

input from the operator. When your clerk orders repair parts, ULLS edits the request, updates the document control register, and provides information to update deadline. ULLS edits transactions using an internal catalog and information provided in the equipment data file. When your clerk issues a part from the PLL, ULLS makes, computes, and generates a replenishment requisition. ULLS is divided into three major areas: Class IX supply, maintenance, and utilities or files maintenance. ULLS supply data is sent to the supply support activity at the DSU level. The data are then forwarded to the DS4 level. ULLS speeds up supply and maintenance operations at the unit level while eliminating errors that could occur under a manual operation. It allows supervisory control of the system with passwords, user identification codes, and the commander's exception report. In case of an emergency, when ULLS is not available or operative, your unit may use manual procedures.

Dispatch

Dispatch procedures apply to vehicles, generators, forklifts, and engineer equipment. They also apply to other items the commander designates.

Before mission. The operator contacts the dispatcher with a vehicle requirement. The dispatcher designates a vehicle. The operator performs a before-operation check using the appropriate technical manual and DA Form 2404. If he finds any deficiencies, they are either corrected or another vehicle is designated. The operator documents the discrepancies on DA Form 2401 (Organization Control Record for Equipment). The dispatcher uses DA Form 2404 to dispatch the vehicle to the operator.

During mission. The operator performs during-operation checks. Make sure the operator knows that any maintenance problems found during these checks should be reported at once, if possible, and recorded on performance records for the equipment.

After mission. The operator tops off the fuel, performs after-operation checks, and makes appropriate entries on the DA Form 2404. The operator then returns the DA Form 2404 and the DD Form 1970 (Motor Equipment Utilization Record) to the dispatcher. The dispatcher reviews the entries and posts the mileage or hours. He then enters the time of return to close out the DA Form 2401 entry for that item.

Recovery and Evacuation

It may become necessary to recover equipment which becomes disabled in a location away from the motor pool. If your soldiers are unable to repair disabled equipment, arrange to evacuate it and have it serviced elsewhere.

Recovery. To prepare for recovery, consult technical manuals for the weight of the item and for other necessary data. Reconnoiter the area to determine the best method of anchoring the wrecker. FM 20-22 discusses various types of ground anchors, equipment needed, safety precautions, and records for computing equipment capacities. FM 21-305, Chapter 22, provides each

vehicle driver with vehicle recovery and field expedient information. Each of your drivers should have a copy of FM 21-305. Use the maintenance SOP to standardize signals between wrecker and winch operators. If an item is so contaminated that it cannot be recovered, contact the higher headquarters for advice and assistance.

Evacuation. If a unit cannot recover an equipment item, notify the supporting maintenance activity and request evacuation. Tell the maintenance activity the type of equipment and its location. If the situation allows, a crew member should remain with the equipment until it is picked up by the supporting activity.

★ **Section VIII**

Support Operations Section

This section is for the support operations officer.

MISSION

The mission of the support operations section is to exercise staff supervision over the supply, maintenance, transportation, health service, and field service support operations of the battalion and to advise the battalion commander in these areas. Section personnel plan, coordinate, and supervise the battalion's transportation requirements. They provide mortuary affairs training, supervision, and advice to all units in the area of operation. As support operations officer, you supervise the section. Duties of your soldiers are as follows:

- The health services staff officer provides staff supervision over medical operations.
- The operations sergeant provides technical expertise and staff supervision over the supply functions performed by the battalion.
- The maintenance control sergeant exercises staff supervision over DS equipment maintenance.
- The mortuary affairs NCO exercises staff supervision over mortuary affairs. He also provides training and advice to area units.
- The movements supervisor controls transportation.

OPERATIONS

You direct the activities of the support operations section. You monitor daily battle loss reports to anticipate requirements. You advise the commander on requirements versus available assets. You determine requirements by coordinating with the S4, the S2/S3, and personnel from supported units. Make sure support is consistent with the type of tactical operation being conducted. Keep track of available assets in the MSB and FSB companies, the S4, and supported units. Keep the DISCOM support operations branch informed of the logistics and medical situation. Request backup support through this branch when requirements exceed capabilities. You provide input to the S4 for the logistics estimate and the service support annex. You recommend support priorities and ensure logistics SOPs are up-to-date and followed. Coordinate with the S2/S3 on the location of support units within your area of operation. Make sure supported units know the places and schedules for support operations. You prepare and distribute the external service support SOP. This SOP has guidance for supported units on procedures for receiving support. You may also have to coordinate host-nation support with the DISCOM.

Supply

Your section has many specific supply functions. It coordinates supply distribution with the DISCOM, the brigade, and supported units. It also determines the type of supply operations needed. Your section monitors the basic load of maneuver battalions and makes needed adjustments. It also coordinates with the DAO representative to pre-position ammunition for specific tactical operations.

Maintenance

Your section coordinates with the maintenance company the allocation of resources between supported

units. This includes MST operations. It makes plans and policies for QSS, exchange, and Class IX operations. It monitors shop production, job status reports, and the ASL. It coordinates the status of critical parts with the DMMC. It generates disposition instructions for unserviceable items using the DISCOM commander's guidance. Instructions include evacuation, cannibalization, and controlled exchange policies. It reviews backlogs on critical weapon systems with the S4. It requests additional support from the DISCOM support operations branch to maintain prescribed operational levels.

Transportation

Your section coordinates and monitors the movement of replenishment stocks for the battalion. It anticipates and recommends MSRs to the MCO. When transportation requirements exceed the battalion's capability, it coordinates support with the MCO. It also coordinates the backhaul of equipment and supplies with the MCO and the DMMC and delivery priorities with the S4.

Health Service Support

Your section, with the help of the brigade or division surgeon and the medical company commander, provides input to the service support annex on medical evacuation and hospitalization. This input includes Class VIII supply, helicopter landing sites, medical priorities, and evacuation procedures. Your section plans treatment and evacuation based on projected WIA losses. It coordinates plans with supported units and the medical operations center in the DISCOM. It monitors medical evacuation and treatment operations to ensure brigade needs are being met. It also monitors the level of medical assets available. If more resources are needed, it requests them through the DISCOM medical operations center.

Other Support

Your section performs functions other than those discussed above. It coordinates support during moves. It informs the battalion S4 and supported units of the new supply, maintenance, and medical points and their new operating times. It also coordinates with the S2/S3 on shuttle operations. Your section sets up the area after each move. It coordinates with the S2/S3 on the NBC threat to assess the impact on support operations. This helps in developing an NBC contingency plan which includes stocking of NBC equipment and supplies.

APPENDIX

SUGGESTED SOP FORMAT

A-1. HEADING

The heading should contain—

a. Designation.
b. Location or mailing address.
c. Date of issue.
d. Number.
e. Title (Standing Operating Procedure).

A-2. BODY

The body should contain brief but comprehensive instructions relating to each of the following, when applicable.

a. General.
   (1) Subject.
   (2) References.
   (3) Purpose and scope.
   (4) Definitions, when necessary.
   (5) Mission.
   (6) Assignment.
   (7) Capabilities.
   (8) Organization.

b. Command.
   (1) Command post.
   (2) Liaison officers.
   (3) Procedure guides.
   (4) Orders.
   (5) Intelligence.

c. Security and Defense.
   (1) Plan.
   (2) Conduct.
   (3) Responsibilities.
   (4) Measures.
   (5) Weapons.
   (6) Mines and booby traps.
   (7) Air and ground attack.
   (8) Rear operations.
   (9) Reconnaissance.
   (10) Fighting positions.
   (11) Patrols.

d. Movements.
   (1) Order of march.
   (2) Distances between vehicles.
   (3) Maximum speeds day and night depending upon road conditions.
   (4) Reconnaissance.
   (5) Feeding.
   (6) Refueling.
   (7) Halts.
   (8) Air and ground protection.
   (9) NBC protection.
   (10) Limited visibility and smoke operations.
   (11) Night movement.
   (12) Guides.
   (13) Vehicle identification.
   (14) Control officer.
   (15) Trail officer.
   (16) Loading.
   (17) Communications during march.

e. Personnel.
   (1) Military justice.
   (2) Strength reports.
   (3) Decorations and citations.
   (4) Prisoners of war.
   (5) Casualties.

f. Unit Administration.
   (1) Office management.
   (2) Field kitchen operations.
   (3) Unit supply.
   (4) Unit maintenance.
   (5) Safety management.

g. Training.
   (1) General.
   (2) Responsibilities.
   (3) Objectives.

(4) Directives.
(5) Phases.
(6) Equipment.
(7) Schools.
(8) On-the-job training.
(9) Records and reports.

A-3. ENDING

The ending of a typical SOP should contain—

a. Unit commander's signature.
b. List of enclosures or annexes.
c. Distribution.
d. Authentication, if applicable.

★ GLOSSARY

ACR armored cavalry regiment
admin administrative
ADPE automatic data processing equipment
AFM Air Force manual
AG Adjutant General
AMDF Army Master Data File
AMTP ARTEP Mission Training Plan
AR Army regulation
ARTEP Army Training and Evaluation Program
ASL authorized stockage list
ASP ammunition supply point
atom atomic
ATP ammunition transfer point
attn attention
BDLT Base Defense Liaison Team
bio biological
BSA brigade support area
C change
CE Communications-Electronics
CEB clothing exchange and bath
cm centimeter
CMMC corps materiel management center
COMMZ communications zone
COMSEC communications security
CONUS Continental United States
COSCOM corps support command
CP command post
CRYPTO cryptographic
CS communications system
CSS combat service support
CTA common table of allowances
CUCV commercial utility cargo vehicle
DA Department of the Army
DAO Division Ammunition Officer
DC District of Columbia
DD, DOD Department of Defense
DISCOM division support command
DMMC division materiel management center
DS direct support
DSA division support area
DSU direct support unit
DS4 direct support unit standard supply system
ECM electronic countermeasures
EMP electromagnetic pulse
F Fahrenheit
FARE forward area refueling equipment
FAWPSS forward area water point supply system
FLAGS suspension of favorable personnel actions
FM field manual, frequency modulated
FMFM Fleet Marine Forces Manual
FRAGO fragmentary order
FSB forward support battalion
G1 Assistant Chief of Staff, G1 (Personnel)
GP general purpose
GRREG graves registration
GS general support
HQ headquarters
H&S headquarters and supply
HTF how to fight
HMMWV high mobility multipurpose wheeled vehicle
in inch
IPB intelligence preparation of the battlefield
ITEP Individual Training Evaluation Program
KCLFF kitchen, company level field feeding
LID light infantry division
lube lubricant
MASH mobile Army surgical hospital
MCC movement control center

MCO movement control officer
MED medical
METT-T mission, enemy, terrain, troops and time available
MHE materials-handling equipment
MI military intelligence
MILES multiple integrated laser engagement simulation
MKT mobile kitchen trailer
MMC Materiel Management Center
MOGAS motor gasoline
MOPP mission-oriented protective posture
MOS military occupational specialty
MOUT military operations on urbanized terrain
MP military police
MPL mandatory parts list
MRC materiel release confirmation
MRE meal, ready-to-eat
MRO materiel release order
MSB main support battalion
MSR main supply route
MST maintenance support team
MTOE modification table of organization and equipment
NAVSUP naval supply
NBC nuclear, biological, chemical
NCO noncommissioned officer
NCS net control station
no number
NSN national stock number
OCOKA observation and fields of fire, concealment and cover, obstacles, key terrain, and avenues of approach and mobility corridors
OPLAN operation plan
OPORD operation order
P packaged
PA Pennsylvania
PAC Personnel and Administration Center
pam pamphlet
PBO property book officer
PCS permanent change of station
PLL prescribed load list
POL petroleum, oil, and lubricants
POM preparation for oversea movement
PS power supply
PSC Personnel Service Company
PSG platoon sergeant
PUB publication
PW prisoner of war
QM quartermaster
QSS Quick Supply Store
RAOC rear area operations center
RC Reserve Component
ROWPU reverse osmosis water purification unit
S1 Adjutant (US Army)
S2 Intelligence Officer (US Army)
S3 Operations and Training Officer (US Army)
S4 Supply Officer (US Army)
S&S supply and service
SARSS Standard Army Retail Supply System
SB supply bulletin
SC supply catalog
SDT self-development test
SIDPERS Standard Installation/Division Personnel System
SMCT soldier's manual of common tasks
SOI security operations instruction
SOP standing operating procedure
SPBS standard property book system
STANAG Standardization Agreement
STP soldier training publication
TAACOM Theater Army Area Command
TAADS The Army Authorization Documents System
TAMMS The Army Maintenance Management System
TASC training and audiovisual support center

TB technical bulletin
TC training circular
TCF tactical combat forces
TDA tables of distribution and allowances
TLP troop leading procedures
TM technical manual
TMT transportation motor transport
TOC tactical operations center
TOE table of organization and equipment
TRADOC United States Army Training and Doctrine Command
TTP tactics, techniques, and procedures
UCMJ Uniform Code of Military Justice
UL unit level
ULLS Unit Level Logistics System
UMT Unit Ministry Team
US United States of America
USAF United States Air Force
USAMC United States Army Materiel Command
USAR United States Army Reserve
USARF United States Army Reserve Forces
VA Virginia
WIA wounded in action
XO executive officer

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CARL E. VUONO
General, United States Army
Chief of Staff

Official:

THOMAS F. SIKORA
Brigadier General, United States Army
The Adjutant General

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