

FM 2-20: the basics of recon

One encouraging trend over the last few years has been the hobby's growing motor pool. Every month it seems somebody has bought or converted or shipped from overseas some new wheeled or tracked treasure. At the current rate, we should be on track to outnumber NATO by 2030.

True, maintenance and transportation costs and risks limit use of this pool. A few show up at one or another of the scheduled events, but most shows and field exercises take place on land with limited space and sensitivity to maneuver damage by large vehicles. But there has been a search on for new venues, and eventually we will find the right maneuver areas.

But once the lowbed trailers from all over start rolling in, we face another challenge: we don't really know how to use them. This is really two factors: (1) we haven't found a way to combine prickly groups of living historians and their vehicles into effective formations, and (2) even if we did, a lot of the basic tactics and functions are a mystery.

Let's try to fix that. The armor section in this reference library is starting to fill, and we can now start adding the basic doctrinal concepts for reconnaissance. It's easy to start at once with very light recon—any large event nowadays can support at least an I&R platoon, and it's likely a platoon from a divisional cavalry troop could be assembled without breaking the bank: *if we can get owners and teams organized*. And the tactical doctrine for recon allows for a lot of task-organization to make good use of other vehicles (tanks, TD's, armored infantry, self-propelled artillery) as well.

FM 2-20 describes the organization and doctrine for the divisional cavalry troop. I've added a lot of clarification, background, and (for the infantry readers) pictures.

Garry Owen!

MHI
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FM 2-20

WAR DEPARTMENT FIELD MANUAL

CAVALRY

CAVALRY RECONNAISSANCE TROOP

MECHANIZED

WAR DEPARTMENT : 24 FEBRUARY 1944

WAR DEPARTMENT FIELD MANUAL
FM 2 - 20

This manual supersedes FM 17-20, 30 May 1942

CAVALRY
CAVALRY RECONNAISSANCE
TROOP, MECHANIZED



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(For explanation of symbols see FM 21-6.)

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This manual supersedes FM 17-20, 30 May 1942.

CHAPTER 1

GENERAL

Section I

Purpose and Scope

1. PURPOSE. The purpose of this manual is to present the organization, characteristics, and missions of the cavalry reconnaissance troop, mechanized; and to set forth doctrine for its training and tactical employment.

2. SCOPE. The scope of this manual includes discussion and illustration of organization, equipment, training, and methods of employment of the mechanized cavalry reconnaissance troop and its components, designed to simplify and speed training and to facilitate understanding of basic doctrine.

Section II

Mission

3. MISSION. The cavalry reconnaissance troop, mechanized, is organized, equipped, and trained to perform reconnaissance missions.

Other types of missions are given only in the furtherance of a reconnaissance mission of the troop or the squadron of which the troop is a part, unless no other troops are available for other types of operations for the division or other larger unit. Reconnaissance missions are performed by employment of infiltration tactics, fire, and maneuver. Combat is engaged in only to the extent necessary to accomplish the assigned mission.

3. The admonition in this paragraph is critical: commanders with a dim grasp of reconnaissance are tempted to treat the recon troop or platoon as another combat maneuver unit. This is a bad habit. These units are not configured for fire and maneuver, and the results can be devastating.

Section III

Organization and Equipment

4. ORGANIZATION . a. For detailed organization and equipment of the cavalry reconnaissance troop, mechanized, see current **T/O & E 2-27**.

4. Original tables of organization and equipment can be found at

www.militaryresearch.org.

b. The reconnaissance troop, infantry division, is the mobile reconnaissance agency available to the division commander and is employed by him to secure details of hostile organization, strength, and dispositions, the characteristics of terrain, and other information upon which to base a plan of action. It operates within the zone of action assigned to the division in coordination with the ground reconnaissance agencies of higher and lower echelons.

c. The troop organic within the mechanized cavalry squadron acts in like capacity and performs the same type of missions as the reconnaissance troop of the infantry division. The reconnaissance squadron of the armored division differs from that of the cavalry division and group in that it includes four reconnaissance troops instead of three.

d. The mechanized cavalry reconnaissance troop has a troop headquarters and three reconnaissance platoons. Each reconnaissance platoon contains an armored-car section and a scout section. Armored cars and trucks, ¼-ton, are included in the platoon in the ratio of one armored car to two trucks, ¼-ton. This permits flexibility in the organization of reconnaissance teams for specific missions. Three of the ¼-ton trucks mount caliber .30 light machine guns, and each of the remaining three transports a 60-mm mortar and crew. Three of the ¼-ton trucks are provided with short-range radio.

e. Troop headquarters contains command, maintenance, administrative, and supply personnel, and transportation. Armored cars, each mounting an antitank gun and a light machinegun, are included for command, maintenance, and liaison functions. There are ¼-ton trucks for messenger and traffic-control duties, half-track personnel carriers to transport essential supplies and provide maintenance facilities, and a 2½-ton cargo truck to provide kitchen facilities. A liaison detachment consisting of an officer and five enlisted men, with an armored

car and a ¼-ton truck, intended primarily for liaison with division headquarters, is provided in the cavalry reconnaissance troop assigned to the infantry division. The reconnaissance troop of the infantry division has three mechanics, automobile, for second echelon maintenance, a motor supply corporal, and an additional half-track vehicle, which are not found in the reconnaissance troops of mechanized cavalry squadrons.

f. Each reconnaissance platoon is tactically self-contained. By attachment of transportation from troop headquarters, two of the three platoons can operate on detached missions beyond supporting range of the remainder of the troop.

5. TACTICAL VEHICLES. Elements of the mechanized reconnaissance troop are mounted in various types of wheeled and half-track vehicles, the characteristics of which must be appreciated in order to employ the unit effectively. Each tactical vehicle carries a ground mount for each type of machinegun mounted in or on the vehicle.

a. **Light armored car, M8.** Armored cars are the basic command and communication vehicles. The light armored car, M8, is a 6 by 6 vehicle, weighs 16,400 pounds with equipment and crew, and is capable of cruising from 100 to 250 miles cross country or 200 to 400 miles on highways without refueling. On a level, improved road, it can sustain a speed of 55 miles per hour. Each armored car is equipped with a long-range radio set to assist in the exercise of command or for the purpose of relaying information received from subordinate elements to higher headquarters, and a short-range radio set for communication within a platoon, reconnaissance team, or headquarters. The armor of the vehicles provides a fair degree of protection against small-arms fire, while the 37-mm antitank gun permits mobile defense against lightly armored vehicles at ranges not exceeding 400 yards when armor-piercing ammunition is used. The gun also fires canister and high explosive shell. Each armored car is equipped with one caliber .30 machine gun, light, for use against personnel. An anti-aircraft machine gun may be added, located so that it can be fired from the turret. The vehicle is not designed for offensive combat. The car has only fair mobility across country. Mobility is limited in heavily wooded areas and on broken terrain. The large turning radius and limited mobility across country make the car susceptible to ambush on roads and in defiles.

b. **Truck, ¼-ton.** The ¼-ton truck is the basic reconnaissance vehicle. The dominant characteristics of the ¼-ton truck are low silhouette, speed, and exceptional cross-country mobility. These characteristics facilitate concealment and effective use of the minimum amount of cover. It is the cross-country scouting vehicle of the troop; it is not designed for offensive combat. Equipped with short-range

a. The mechanized cav troop's organization and equipment evolved through the war as improved designs and combat experience informed Army Groups Force's decisions. At the start of the war, the armored car available was the M3 series. This design combined poor protection with worse mobility, and experience in North Africa hastened its replacement.



By late 1942, the White scout cars were largely replaced by the M8 Greyhound 6x6 vehicle. This was a moderate improvement: protection was more comprehensive, but mobility was complicated by its size.



radio, ¼-ton truck patrols extend materially the range and effectiveness of the armored car. During maneuvers, they provide the means of transporting fire power rapidly and effectively to outflank resistance.

c. To disable vehicles. For details of methods to be employed in the destruction of vehicles which, owing to limitations of time or transportation, it will be impossible to evacuate, see FM 25-10.

6. WEAPONS. a. The types and number of weapons issued to the personnel of the mechanized reconnaissance troop are indicated in **T/O & E 2-27**; details of vehicular armament are included in current Technical Manuals. Each armored car is equipped with a 37-mm anti-tank gun and one caliber .30 light machine gun. Other vehicles are equipped with 60-mm mortars, caliber .50 (HB) and caliber .30 (light) machineguns, and antitank rocket launchers. Personnel of the troop is armed with caliber .30 carbines, caliber .30 rifles, caliber .45 submachine guns, and hand grenades.

b. For characteristics and employment of weapons, see Field Manual for the weapon concerned.

Section IV

Training

7. OBJECTIVE. a. Purpose. Basic, technical, and tactical training is conducted to develop—

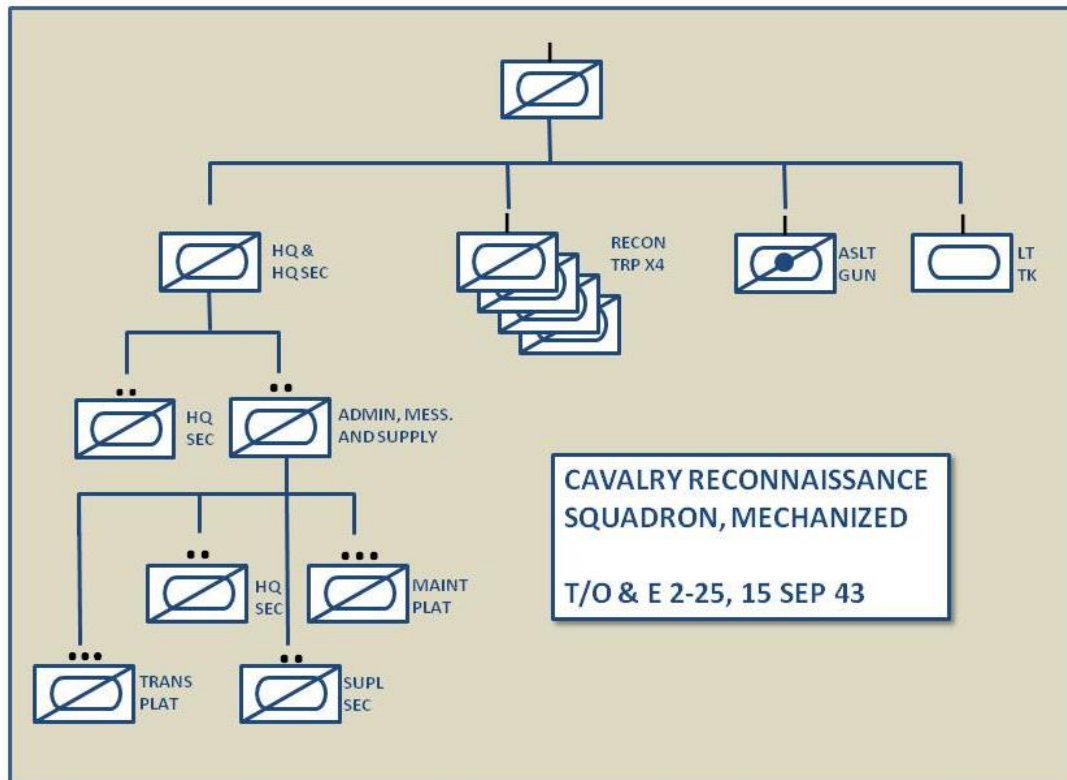
(1) In the individual, excellent physical condition, discipline, and high morale; an aggressive spirit; and high standards of proficiency in the technique of employing weapons and matériel.

(2) In the troop, the ability, through trained leaders, to operate as an efficient reconnaissance team. Attainment of these objectives can be realized only by painstaking training of individuals and the unit.

b. Intelligence training. It is essential that personnel in all grades appreciate fully the importance of combat intelligence. The individual must be given a clear, workable understanding of military intelligence and how he can contribute to its procurement. In addition to training in observation as outlined in FM 21-45 and in reporting information according to standing operating procedure, train the soldier to observe and report any information which may be of value. Each commander should receive intelligence training, compatible with his responsibility, to enable him to determine the importance of

Describing a complex, multifunction organization in words is a challenge many readers find daunting. At this point we will depart from the Field Manual and provide some clarification.

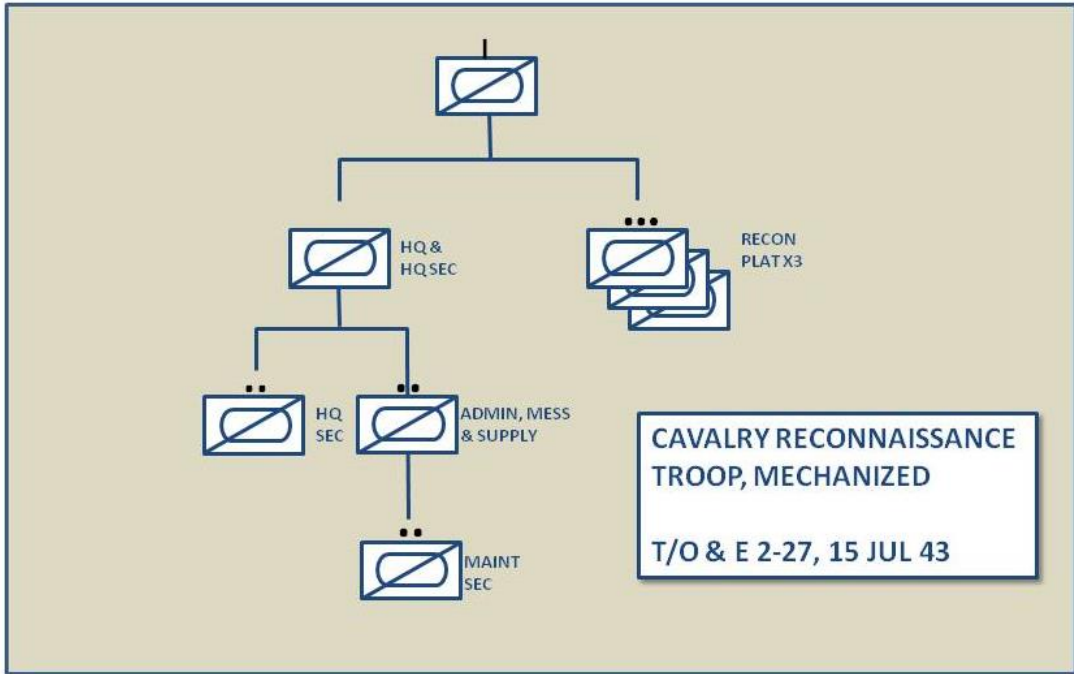
First, here is a “wiring diagram” of the cavalry reconnaissance squadron. This gives us a general picture of the organization for combat. There are slight differences between the squadron assigned to an armored division and the one that is part of a cavalry regiment (mechanized), but these are not of any concern to us. Just take a deep breath and try to form an idea in your mind of what we are working with:



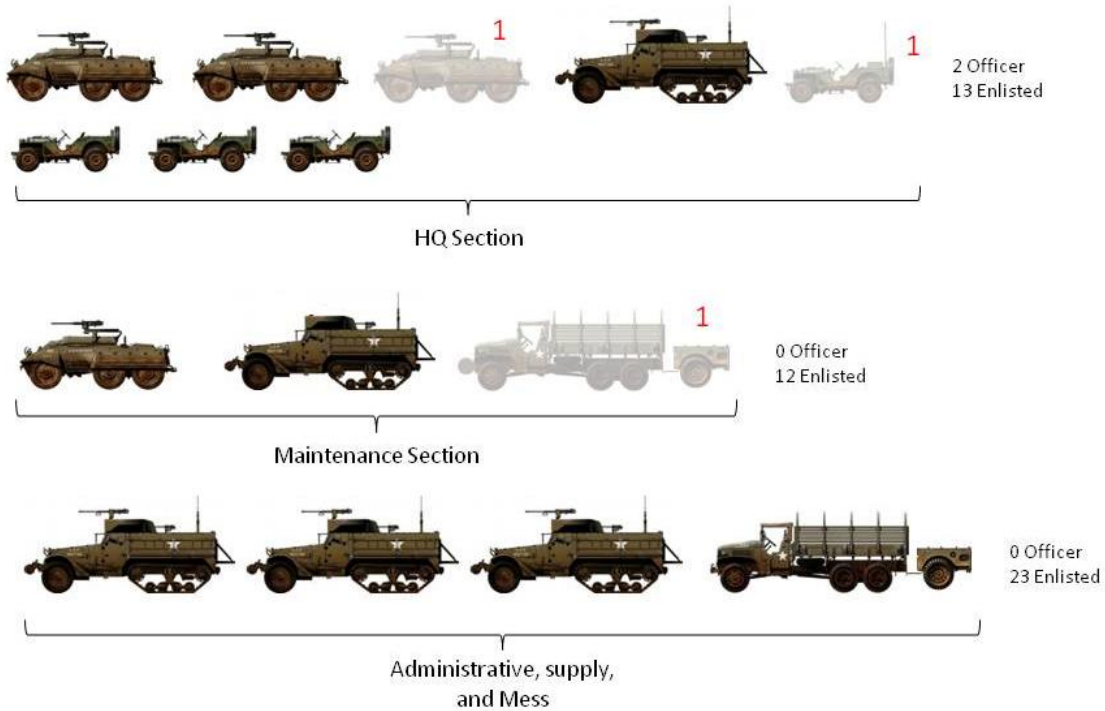
The squadron has a “squadron base” of a headquarters and headquarters troop (including the administrative, supply, and maintenance support elements) and two combat support troops: one of assault guns and one of light tanks. The maneuver units of the squadron are its recon troops (varying between 3 and 4 over the course of the war; by the 1943 table of organization and equipment (T/O&E) there were 4.

[If this idea is new to you, the T/O&E is the specified description of an Army unit, soldiers and equipment. The T/O&E for the cavalry reconnaissance squadron is 2-25, dated 15 September 43. The “2” identifies it as a cavalry-series T/O&E. Most such documents can be downloaded for free on www.militaryresearch.org.]

One feature that will help us organize this idea is that the squadron (cavalry-speak for “battalion”) and the troop (“company”) have similar organizations, and the different kinds of troops (recon, light tank, assault gun) have similar organizations. Here for example is a reconnaissance troop:



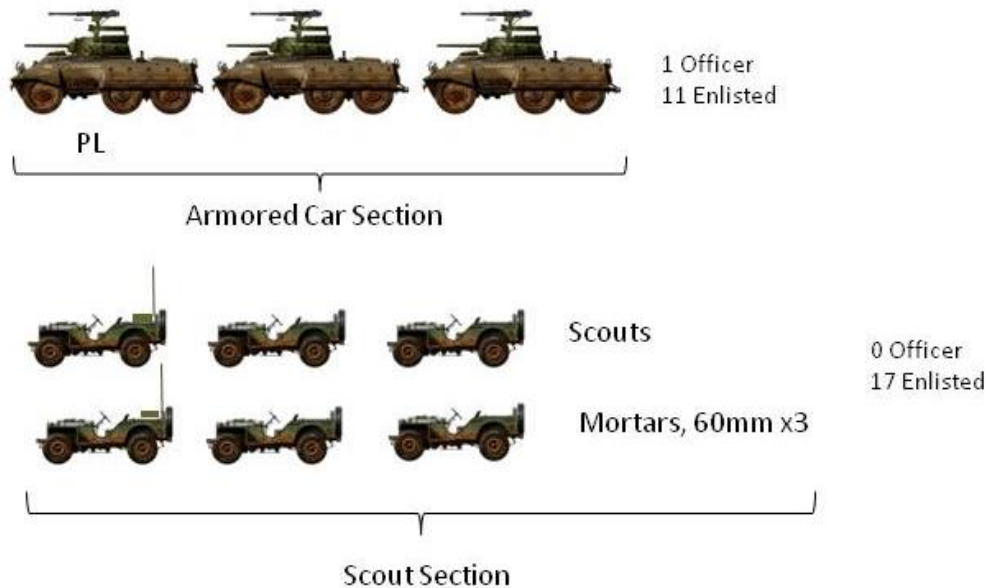
Like the squadron, the troop has a HQ and HQ and Service Troop that includes the CO and his principal assistants plus the clerks, jerks, mechanics and a few oxygen thieves. Three reconnaissance platoons comprise the maneuver units of the troop. Here is a way of visualizing the troop HQ and service troop:



The vehicles marked with “1” represent those that are present only in the infantry division reconnaissance troop; they do not appear in the armored recon squadron TO & E. The difference is there because the extra elements are part of one troop’s “slice” of the recon squadron’s base; since the infantry division troop is not part of a squadron it requires organic support elements.

The light tank company is usually split into platoons supporting the recon platoons; this is a common tactical practice (called “task organization”) and allows the commander flexibility in structuring his firepower and mobility.

Here is the reconnaissance platoon:

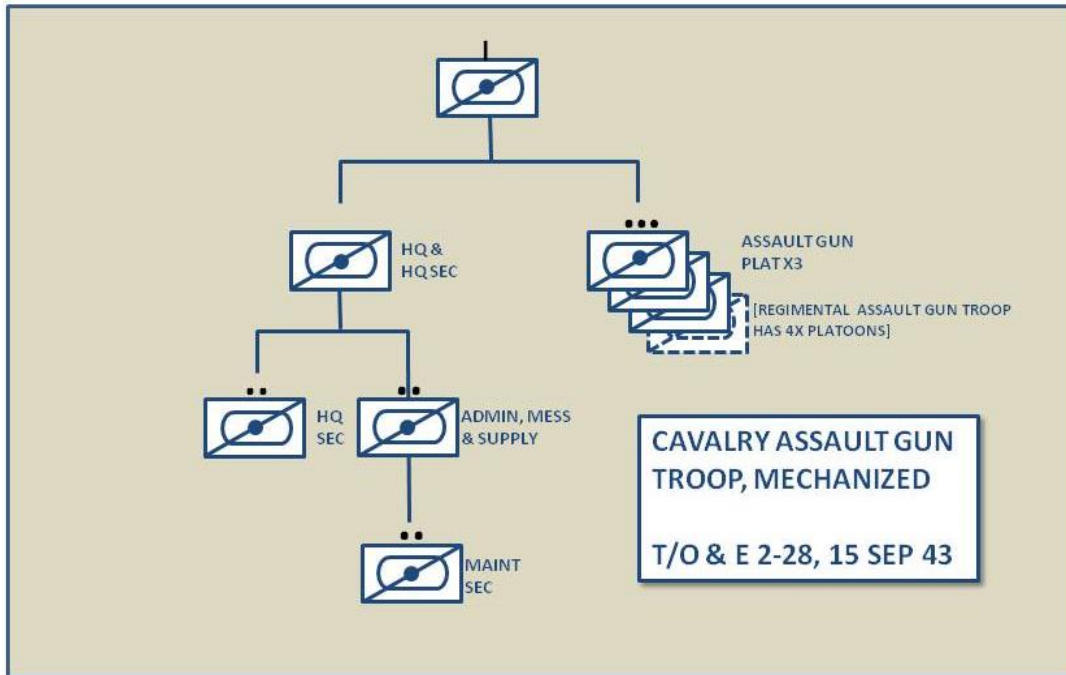


Remember there are three of these in the troop. The platoon has an armored car section that includes the platoon leader’s vehicle, armed with the M8 Greyhound armored car with 37mm gun, M2 cal. .50 machine gun, and a cal. .30. Six jeeps form the scout section, which is three scout vehicles and three support vehicles, each carrying a 60mm mortar.

It’s essential to remember that the platoon leader will almost always task organize into two “recon teams” with scout jeeps and an armored car or two. This allows the light scouts to move ahead, sneak and peek, while being covered by the weapons of the armored cars. The teams use what is now called “traveling overwatch”: the armored cars take positions that have good observation and fields of fire while the jeeps move ahead to the next objective (see para 27b). When the scouts are on the objective and still alive, the armored cars catch up, take overwatch positions, and continue movement forward.

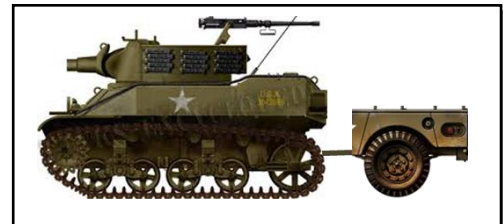
Even more important (and the FM emphasizes this), scouts are usually more likely to scout on foot than just ride around in jeeps (a bad reenactor habit).

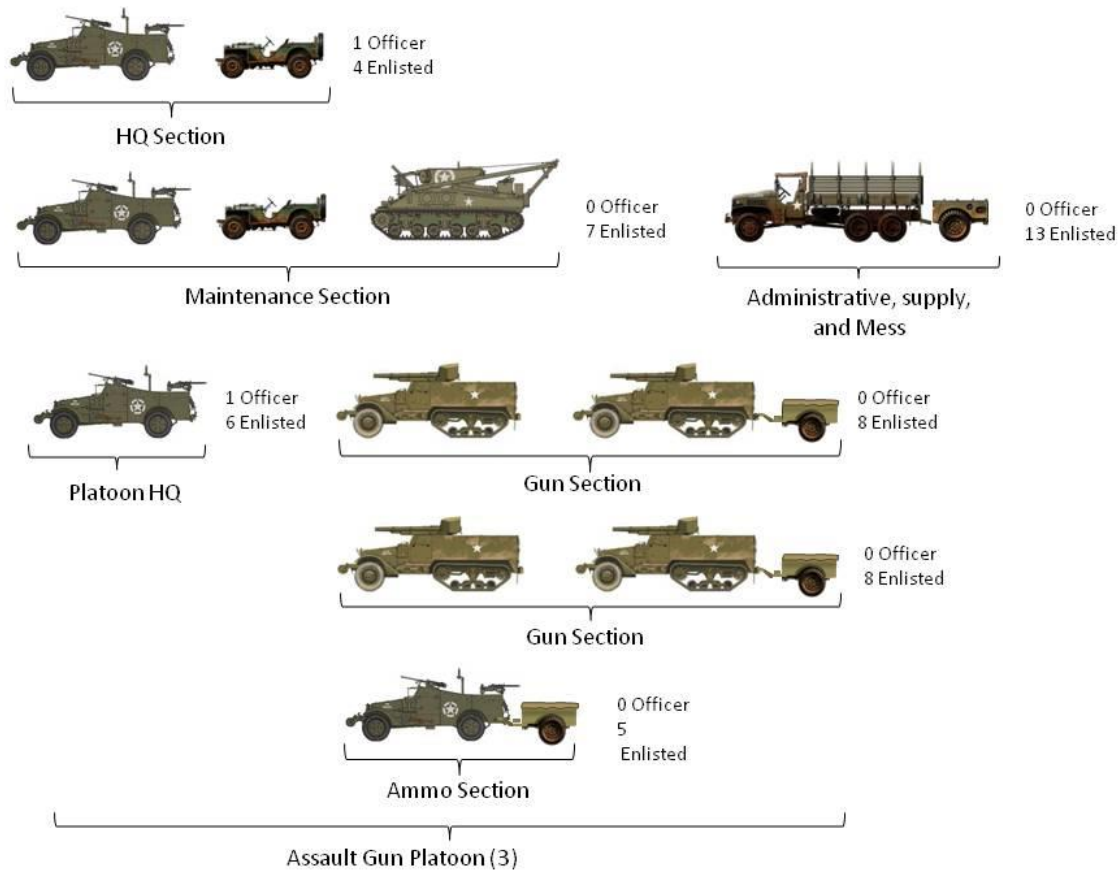
The assault gun troop is assigned to the squadron to provide direct fire support to the recon elements; as such, the platoons are usually farmed out to recon troops. Here is the assault gun troop:



This a huge lump of firepower. The basic weapon in this troop is the gun motor carriage, 75mm, M8, which is carried on a modified M3 half track. Each troop has three-gun platoons (four in a squadron assigned to a cavalry regiment), each platoon composed of two-gun sections of two “tubes.” Ammunition for the 75 is bulky, and tends to get expended rapidly in combat; this means resupply from troop or squadron is too slow and cumbersome for immediate use. Each gun section has a ammo trailer, and the platoon has an ammo section with a second trailer. The trailers are necessary to keep the guns firing, but they also limit off-road mobility. This is one of the reasons the FM specifies that vehicles should be placed in positions that will allow them to shift to another place without backing out.

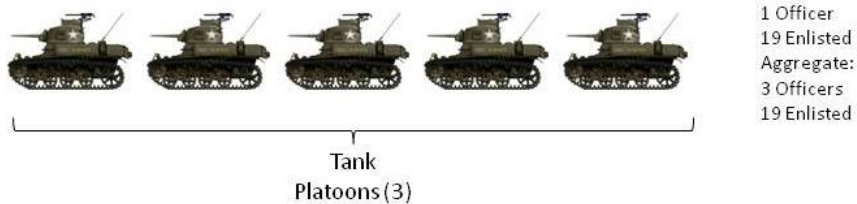
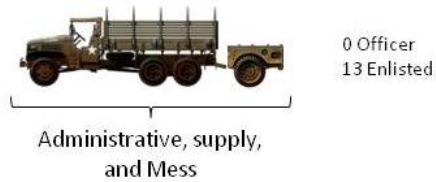
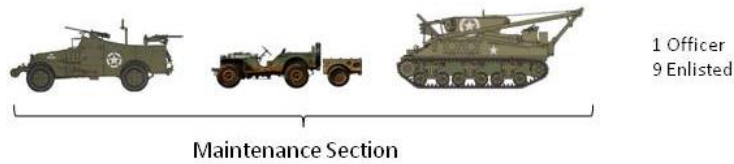
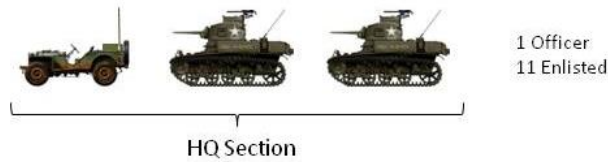
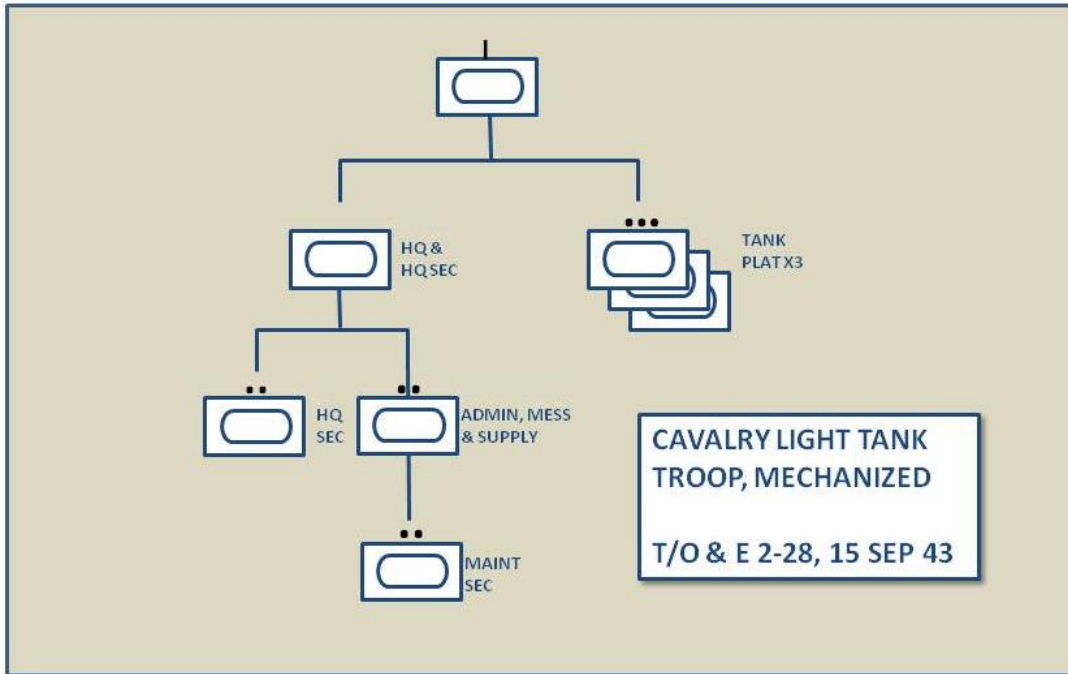
The choice of the 75mm GMC on an M3 chassis may have changed late in the war, but information is scant on this question. A logical alternative would have been the assault gun version of the M5 light tank, which carried a 75mm gun. This vehicle was assigned to the light tank battalions to support the M5 companies, and would be a likely substitute for the M3 GMC because of common repair parts with the M5’s in the light tank troop. However, the manual presumes the half track gun, so we will do so as well.





Finally, the squadron has an additional offensive firepower asset in the form of a light tank troop. This idea came from experience in North Africa. Recon units are not supposed to engage in offensive action—in fact, doctrine calls for them to avoid getting into a fight at all if they can help it, particularly if it interferes with their primary mission of gathering intelligence. Sometimes, however, a fight just happens. Probing forward of the OPL can lead to meeting engagements, ambushes, and unexpected enemy counterattacks that hit the recon elements first. To deal with this, the squadron commander has the light tanks.

They might be employed as a company for concentration, but this is unlikely. A recon squadron is usefully employed as a breakthrough force, tanks or not. The tank assets are more often parceled out to the recon troops (much like the assault guns) to form stronger recon teams. Adding a tank platoon to a recon troop can, for example, add some extra overwatch capability beyond that found in the armored car sections (though the M8's and the M5 light tanks both have 37mm main guns, the tanks are more numerous if wisely distributed, and they have more off road mobility. Because they are a separate entity, the commander has the task organization flexibility to place them to fit the tactical situation. Alternatively, he can hold the troop in reserve if the conditions call for it and commit them in mass at the key point.



Seventeen tanks (at full strength, which means “almost never” in combat) may seem like a large force, but against enemy heavy armor it may be more like a swarm of gnats. We do the best we can with what we have!

information received, and to report promptly to the appropriate agency the proper digest of information received.

8. SCOPE. a. Subjects for training are found in MTP 2-2. Since the primary mission of the troop in combat is recon-naissance, the following should be emphasized:

(1) How to observe and how to describe what has been observed (FM 30-10).

(2) Ability to move rapidly under all conditions of terrain and weather, either by vehicle or dismounted (FM 21-45 and 25-10.)

(3) How to obtain information by stealth while avoiding opposition (FM 21-45 and **FM 21-75** (when published)).

(4) Skill in concealment; dismounted as well as mounted scouting (FM 21-45 and **FM 21-75** (when published); TF 7-234, 7-275, and 7-280.)

(5) A high standard of map and aerial mosaic reading, including sketching and knowledge of conventional signs used by the enemy (**FM 21-25, 21-26, 21-45, and 30-22**; TF 5-12 and 7-233; TM 30-450 and 30-480.)

(6) Terrain appreciation. (**FM 101-5.**)

(7) Expertness in framing oral and written messages and reports. (FM 21-45.)

(8) Proficiency in the operation of all weapons (FM 23 series.)

(9) Skilful operation and efficient maintenance of vehicles. (FM 25-10; TM 21-300, 31-200, and pertinent Technical Manuals of the 9 series and the 10 series.)

(10) Proficiency in the use of expedients in the crossing of vehicles over unfordable streams by the use of rubber boats, amphibian vehicles, improvised rafts, or, block and tackle, and difficult terrain operations. This instruction should include precautions necessary in order to prevent damage to vehicles due to immersion. (FM 5-10 and 25-10; ch. 4 of this manual.)

(11) Proficiency in radio transmission and radio set maintenance, to include the training of all members of the troop in some aspects of signal communication. (Ch. 5 of this manual; FM 24-6 and 24-10; TM 11-454, 11-455, and 11-461.)

(12) Identification of enemy uniforms and markings, armored vehicles, and aircraft. (FM 30 series; TM 30-450 and 30-480.)

(13) Proficiency in the employment of demolitions and roadblocks and in the reduction and removal of road blocks. (FM 5-20.)

(14) Proficiency in road and bridge reconnaissance. (FM 5-10.)

(15) Methods to be employed in destroying organic vehicles and weapons when such action becomes necessary. (FM 25-10 and appropriate weapons manuals.)

(16) Proficiency in air-ground communication by panels, pyrotechnics, lights, and radio. (Ch. 5 of this manual.)

(3) **FM 21-75** was published shortly after this manual. It is available in the reference library, and worth reading for any infantryman or recon soldier.

This list of requisite skills is astonishing. I find no job description and knowledge/skills description that approaches this in complexity, breadth, and difficulty, including Commando/ Ranger training.

(14) A trained recon soldier should be able to estimate the weight limits of a bridge—not a simple task.

(17) Proficiency in the use of field expedients in the chemical decontamination of vehicles, arms, and equipment. (TM 3-220; TF 7-275 and 7-280.)

(18) Familiarity with handling of prisoners. (FM 30-15; TF 1-674.)

(19) Familiarity of officers and senior noncommissioned officers with qualifications and duties of liaison officers. (FM 101-5.)

(20) Elementary navigation; the use of the odometer to register distance from a known point; use of the compass, watch, sun, and stars to maintain direction; preparation and maintenance of a simple strip map. (FM 21-25 and 21-26; TF 7-233.)

(21) Methods to be employed in safeguarding military information, reports, and messages; to include signal security and the preparation of messages for transmission by non secret means. (AR 380-5; FM 30-25; TF 11-205, 11-324, and 11-325.)

(22) Proficiency in the location, installation, detection, passage, and removal of mine fields. (FM 5-25.)

(23) Proficiency in the installation, detection, and removal of booby traps and warning devices. (TF 5-954.)

(24) Ability to act as forward observers for artillery. (FM 6-40.)

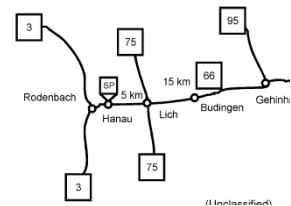
b. Upon completion of the initial training phase, individuals and units must continue to practice their varied duties to maintain the required degree of proficiency. The goal to be sought in training is to make members of vehicle crews sufficiently proficient in the duties of other members so that they may be interchangeable in an emergency.

c. Members of the troop must be able to operate and maintain themselves for extended periods in cross-country dismounted operations. For this reason, physical training must receive the constant attention of all commanders.

d. Individual training must develop such skill in the technique of handling weapons and other materiel that correct procedure is followed habitually. The scope of basic and technical instruction of individuals is detailed in MTP 2-2, which may be used as a general guide.

e. After basic and technical training of individuals has progressed sufficiently to permit integration into teams, small unit tactical exercises should be started. Unit tactical training should be designed to promote teamwork and leadership in the application to combat situations of technique and tactical doctrine. It is only by combined training of elements that maximum combat effectiveness of tactical groups can be assured. Tactical proficiency is developed by map and sand table and by exercises in the field under simulated war conditions. Operations of mechanized cavalry and reconnaissance aviation are complementary and every opportunity for operation with aviation must be taken.

(20) A strip map is a simplified map showing only roads and junctions, distances, and critical landmarks; to be used to inform road marches only.



9. METHODS. a. Training methods will include decentralization, balanced progressive programs, and applicatory tactical exercises, in keeping with established training doctrines and making maximum use of all available training aids. At times, it may be necessary to centralize training where the number of trained instructors or the supply of available weapons or other equipment is limited.

b. The troop commander is responsible for the training of his unit. However, he should delegate specific duties and responsibilities to subordinate leaders. He will further the training of such leaders in command and leadership concurrent with individual and collective training.

c. Each training phase must occur in logical sequence, and each subject must be developed through easily understood words and methods so that each individual receives a secure foundation from which to proceed to more advanced requirements. Experience has shown repetition of the application phase to be desirable, if time and facilities permit. Subsequent to the attainment of the desired proficiency, training in any subject must be repeated to insure maintenance of satisfactory standards.

d. Full use should be made of Training Films, Film Strips, and other training aids. For a complete list of publications for training, including Film Strips and Training Films, see FM 21-6 and 21-7.

9. Since most reenactors reject any training more complicated than how to boil water without setting fire to it, this discussion may seem idle; recon soldiers have a most demanding training regimen even by Army standards.

But it's also fun if it's what you want to do, like earning grim merit badges. The hobby at this writing (2020) has enough equipment to move a cavalry recon platoon with augmentation. I have no doubt there would be enough motivated reenactors, gear heads, gun bunnies, and inbred malcontents with bleeding knuckles and grease-stained coveralls, to man the vehicles and make it work as designed.

First, you build a sand table. See **TM 21-250**.

Section V

Duties of Personnel

10. HEADQUARTERS SECTION. a. Troop commander. The troop commander is responsible for the training, administration, maintenance, supply, and employment of the troop. In combat, he assigns missions to platoons, supervises their operations, and maintains control of and communication with them. The troop commander of the infantry division reconnaissance troop may remain for short periods at the division command post in his capacity of special staff officer.

b. Troop executive officer. (1) The executive officer, who also is motor officer, accompanies the forward echelon. As second in command, he assumes the duties of the troop commander in the latter's absence. He is in charge of the communication net; his car contains the message center. He supervises the training and operation of the headquarters section, except for the liaison and communication detachment in the cavalry reconnaissance troop of the infantry division.

10. Keep in mind, that troop commander has to be able to screen the front of the *entire division* and scope out whatever is moving against it.

b. For obvious reasons, the executive officer tends to be a fatigued, distracted man with an explosive temper. If you need warmth and sympathy, make an appointment to talk to the Old Man. If you want the wherewithal to get your vehicle fixed and moving, take a deep breath and hope the XO comes through.

(2) As troop motor officer, he supervises the training and work of troop mechanics and the training of drivers. He makes frequent inspections of the motor vehicles and advises the troop commander on matters pertaining to vehicle maintenance and supply. He requisitions spare parts and controls their distribution. (FM 25-10.)

c. Liaison and communications officer. Liaison between the infantry division reconnaissance troop and division headquarters is effected by the liaison and communication detachment, consisting of an officer with vehicles and crews. The troop liaison officer at division headquarters assists in the transmission of information and informs the troop commander of changes in plans or operation of the division. The liaison officer should accompany the troop commander when the latter visits division headquarters in order that he may have full knowledge of the situation and the projected employment of the troop. He is responsible for the training of the personnel of his own section and of the communications personnel of the troop. Duties of the liaison officer are covered in **FM 101-5**.

d. Communication chief. The communication chief assists the liaison and communications officer of the infantry division reconnaissance troop in training communication personnel. He will perform similar duties under the supervision of the troop officers designated as communications officers in reconnaissance troops of mechanized cavalry squadrons, wherein no communications officers are provided specifically by Tables of Organization. In the field, he assists the executive officer in supervision of communication personnel and in establishing the troop command post, and assumes delegated responsibility for encoding and decoding of messages. He rides in the troop commander's car, but may be shifted when needed to the executive officer's vehicle.

e. Liaison agents. Liaison agents perform messenger and liaison functions. They ride in ¼-ton trucks. They must be thoroughly trained in map reading and in movement without benefit of maps.

f. Bugler. The bugler sounds calls, and serves as a messenger. He drives a ¼-ton truck.

g. Drivers. Drivers operate vehicles as assigned, perform first echelon maintenance, and must be capable of replacing gunners or radio operators. For training of drivers, see FM 25-10, TM 21-300, and TM 21-301.

h. Radio operators. Radio operators operate and maintain radio sets installed in the vehicles in which they ride. (For training of radio operators see ch. 5.) They assist in en-cryptographing and decryptographing messages, and act as assistant gunners or relief drivers.

c. The liaison officer is uniquely a part of the infantry division's cavalry troop. This is not an accident. There is no intermediate headquarters between Captain Saddlesoap the troop commander and the major general commanding the division. The troop needs close contact and coordination with division, and the liaison officer is responsible for maintaining it. Radio contact was iffy at longer ranges (and not much better at shorter ranges) and wire comms aren't an option when the division and the cav troop are moving. The personal touch is needed. Late in the war there was even an initiative at Army Ground Forces to provide the cav troop an aviation section with two light aircraft, more for liaison than for scouting.

d. The communications chief is a senior NCO. Radios were and are balky and prone to petulance, and comms chiefs have to bear a lot of anger and abuse when the commander's need to communicate is frustrated.

e. An *agent* is somebody, usually of lower rank, who has one critical job; a man who "makes something happen" (from Latin *ago, agere*, "to do or to make"). In this case, they are well-informed messengers—that is, they can answer questions, not just hand over a scrawled note. It's a thankless job, but at least you have your own jeep. That's a big deal.

11. ADMINISTRATIVE, SUPPLY, AND MESS SECTION.

a. First sergeant. The first sergeant assists the troop commander in administration of the troop. He is in immediate charge of the enlisted personnel and records of the troop. When the troop is in action, he assists the executive officer in establishing the troop command post and supervising the activities of the forward echelon. He maintains a record of all combat orders and messages.

b. Mess sergeant. The mess sergeant is in charge of the troop mess under the supervision of an officer designated by the troop commander as mess officer. The executive officer is mess officer in the field, but in training this duty may be rotated among officers of the troop. The mess sergeant supervises training and operations of cooks, cooks' helpers, and kitchen police. He is responsible for estimating ration needs and providing the first sergeant with the information required to complete the ration section of the morning report. In combat or active reconnaissance operations, the mess sergeant establishes the kitchen at the rear echelon, but assists the mess officer by going wherever required to assure that the troop is fed efficiently. He rides in the kitchen truck.

c. Supply sergeant. The supply sergeant obtains and delivers supplies and is responsible for troop property and records. He commands the troop train and supervises plans for resupply, movement and distribution of supplies, to include arrangements for traffic control, guides, train security, and rendezvous points. He prepares daily strength and expenditure reports for Classes I, III, and V supplies. He is responsible for training and supervising ammunition agents, motor supply corporal, and armorers. He rides in a ¼-ton truck with the service element of the troop.

d. Ammunition agents. Ammunition agents are assistants of the supply sergeant. They keep posted at all times on the status of ammunition supply, and prepare ammunition expenditure reports. They help the supply sergeant to distribute ammunition to the troop.

e. Troop clerk. The troop clerk is the first sergeant's assistant and performs duties pertaining to the administration of the troop. In addition, he must be skilled in both mounted and dismounted scouting and patrolling, map reading, duties of messenger, traffic control, and duties of guide.

f. Cooks. Cooks prepare and deliver meals under the supervision of the mess sergeant. They must be capable of acting as relief drivers and aiding in defense in the troop rear echelon.

g. Ammunition handlers. Ammunition handlers assist the ammunition agents and drivers in loading and unloading ammunition and other supplies carried in half-track vehicles of the troop train in which they ride. They also are responsible for operating machine guns mounted on vehicles.

b. Mention is made of the mess officer. A company or troop did not have a full time mess officer: the job was an additional duty for one of the lieutenants, a man who generally had no cooking or mess management experience. He learned on the job, and it wasn't his main job.

"Additional duties" are the bane of life as a lieutenant. I was once "VD control officer" in addition to leading a platoon. I didn't have time to catch the clap, much less control it.

g. Ammo handlers are usually assigned from the ranks of the less intellectually gifted. Wear ear plugs when they are working near you.

h. Basic privates. Basic privates are provided in Tables of Organization for replacement of personnel absent, sick, in confinement, or for other routine reasons. Some should be trained in the duties of each position filled by privates first class or privates.

12. MAINTENANCE SECTION. a. Motor sergeant. The motor sergeant is the principal assistant of the motor officer. He is in direct charge of the mechanics.

b. Mechanic chief. The mechanic chief must be able to organize and direct a maintenance team. He must be able to detect and diagnose mechanical difficulties in vehicles and initiate and supervise repair. He supervises the operations of the troop mechanics in the recovery and repair of damaged vehicles and such other work as may be assigned by the motor sergeant. He rides in a vehicle of the maintenance section.

c. Car commanders. Car commanders command the cars in which they ride and supervise training and operations of enlisted personnel; they assure march discipline and first echelon maintenance. When in command of an armored car, the car commander assists the gunner by loading the 37-mm gun and machine gun; if provided with an antiaircraft gun, he is responsible for operation of the weapon. He must be trained as an alternate driver, gunner, and radio operator.

d. Motor supply corporal. The motor supply corporal assists the motor maintenance sergeant in the performance of his duties and advises him in matters pertaining to motor vehicle supply. He assists in the supervision of the operations of the motor maintenance section personnel; knows at all times the status of motor supplies, and cooperates under the maintenance sergeant with the troop supply sergeant in requisitioning, obtaining, and distributing gasoline, oil, lubricants, spare parts, and maintenance equipment. He rides in one of the vehicles of the motor maintenance section.

e. Armorers. Armorers repair the troop weapons and establish and operate the machine-gun belt-filling station. In addition, they must be skilled in both mounted and dismounted scouting and patrolling, map reading, acting as messenger, traffic control, and the duties of a guide.

f. Mechanics. Mechanics, assisted by vehicle drivers, perform second echelon maintenance for troop motor transportation (par. 108). In the reconnaissance troop of the infantry division, three mechanics are provided in addition to those authorized for other cavalry reconnaissance troops. This personnel with its additional tool sets makes possible the performance of second echelon maintenance which, in troops of the cavalry reconnaissance squadron, would be performed by squadron maintenance personnel. Me-

chanics must be capable of operating vehicular weapons and voice radio.

g. Radio repairman. The radio repairman is responsible for the maintenance of troop radios under the supervision of the communication sergeant. He assists the communication officer and communication sergeant in the training of all radio operators in preventive and scheduled maintenance. He drives a vehicle of the maintenance section.

13. ARMORED-CAR SECTION. a. Platoon leader. The platoon leader commands and trains the personnel of the platoon as individuals and as a unit, and executes tactical missions directed by the troop commander. He is responsible for first echelon maintenance of motor vehicles in his platoon. He supervises operations and missions of the elements of his platoon. He takes position where he can best control the action of his unit. When the platoon is on reconnaissance, he rides well forward in the platoon formation. If moving cross country in a deployed formation, he will be located centrally between the forward security detachment and the remainder of the platoon.

b. Platoon sergeant. The platoon sergeant assists the platoon leader and commands the platoon in his absence. He rides or goes where he best can assist in the control of the platoon or an element thereof. When on reconnaissance or moving as a platoon, the platoon sergeant rides near the rear of the column. When the platoon subdivides into reconnaissance teams, he leads a team.

14. SCOUT SECTION. a. Section leader. The section sergeant has the duties of car commander of the vehicle in which he rides. He commands the scout section and is responsible, under the supervision of the platoon leader and platoon sergeant, for the training and operations of its personnel. He may be detached as commander of a security detachment or patrol.

b. Squad leaders. The squad leader is the car commander of the vehicle in which he rides. He may be the second in command within a reconnaissance team. He assists the team leader in supervising and controlling operations of personnel of the team, and the operation and maintenance of vehicles and equipment. He assumes command in the event that the team leader becomes a casualty.

c. Gunners. Gunners are responsible for the care, cleaning, functioning, and firing of the guns of their respective vehicles. (See appropriate Field Manuals of the 23 series.) When in an armored car [is] provided with an antiaircraft machine gun, the gunner will assist the car commander in the operation of the antiaircraft weap-

13. This is a confusing transition. To this point we were talking about the troop headquarters assets; now suddenly we begin discussing the reconnaissance platoons of the troop. I can only guess the doctrine writer needed coffee.

So you don't get lost: the recon platoons (there are three in the troop) each have an armored car section and a scout section; see inset, p. 12.

14. And here, as promised, is the scout section.

b. Here is where we pay the price for the sloppy text. A "reconnaissance team" may be formed from elements of the armored car section and the scout section—maybe an M8 and a scout squad supported by one of the 60mm mortar teams in the scout section.

on by traversing the turret. They must be capable of replacing drivers and radio operators.

d. Riflemen. Riflemen, together with section and squad leaders, all of whom ride in the ¼-ton trucks of the scout sections, may be used to form parties for dismounted scouting, patrolling, or combat. In addition, they act as radio tenders and machine gunners or relief drivers. Their training must emphasize dismounted operations.

d. Read the last sentence carefully: getting a reenactor to leave a vehicle is like telling a homeless drug addict to get out of Portland, Oregon. But most of the scouts' work will be done on foot, and scouts who stay in their jeeps under fire tend to die in groups of four.

Section VI

Drill, Ceremonies, Inspections

15. DRILL, CEREMONIES, AND INSPECTIONS. a. The procedures, formations, and movements for dismounted drill, ceremonies, and inspections follow those prescribed in **FM 22-5**.

b. Mounted drills and ceremonies are conducted as prescribed in FM 2-7 (when published).

15. Examples of reenactors participating in prescribed drill and ceremonies are like verified sightings of Bigfoot. Unlike Bigfoot, they are real, and real soldiers do them.

CHAPTER 2

EMPLOYMENT OF CAVALRY RECONNAISSANCE TROOP, MECHANIZED, INFANTRY DIVISION

Section I

General

16. MISSION. The cavalry reconnaissance troop, mechanized, infantry division, is organized, equipped, and trained to perform reconnaissance missions. It is the mobile reconnaissance element available to the division commander. The troop performs close and battle reconnaissance within zones or areas, or along designated routes or axes. It performs distant reconnaissance exceptionally.

17. METHOD OF OPERATION. The troop employs infiltration tactics, fire, and maneuver to accomplish reconnaissance missions. It engages in combat only to the extent necessary to accomplish the assigned mission and to avoid destruction or capture. The troop should be reinforced before departing on a mission when sustained combat or the crossing of obstacles is anticipated. Infantry, field artillery, tanks, tank destroyers, and engineers are suitable attachments.

18. COORDINATION. Reconnaissance aviation furnishes higher commanders with information of large enemy concentrations and movements. The employment of the reconnaissance troop is based on this information and information received from other sources. The operation of the reconnaissance troop is coordinated with non-divisional reconnaissance agencies and with the reconnaissance elements of divisional infantry, field artillery, engineers, tank destroyer, and other attached units.

Section II

Reconnaissance

19. GENERAL. The troop is employed to gain timely information upon which the division may base decisions and plans. Contact is gained with large enemy forces at the earliest practicable moment and maintained thereafter. The troop seeks to identify hostile units and to determine their strength, composition, disposition, and movement. Terrain features and conditions which may affect operations are reported in addition to information of the enemy.

20. DEPTH, RATE OF ADVANCE, AND FRONTAGE. a. The time interval by which the reconnaissance troop precedes the division in an advance must be determined in each instance. Visibility, terrain, anticipated enemy contact, nature of information sought, and other factors which affect the rate of advance are considered.

b. The reconnaissance troop can march from 150 to 200 miles daily on good roads at a rate of 35 miles per hour. When engaged in active reconnaissance, units can advance at a rate of 10 miles per hour on open terrain under favorable conditions. Unfavorable conditions may reduce the rate to that of dismounted reconnaissance.

c. The troop can reconnoiter a zone 10 miles wide with one platoon in support initially (par. 29).

21. ROUTES, ZONES, AND AREAS. a. To avoid duplication of effort and to facilitate control, a zone, area, axis, or route is assigned to each reconnaissance unit. Boundaries are designated to fix responsibility. They do not prohibit maneuver by units in adjacent zones or areas. The division commander assigns an area or zone of responsibility to the troop and informs all other reconnaissance agencies within the division.

b. Reconnaissance of a route is prescribed when it is desired to determine whether or not a particular route is being used by the enemy or is practicable for use by elements of the division.

c. Reconnaissance of a zone is performed in front of the division when it advances. The troop must be aggressive so that the division is not delayed. However, the reconnaissance troop must be allowed adequate time. The more detailed the information desired, the more time must be allowed.

c. That is, with two platoons forward on parallel axes and one platoon in support.

21. Defining a recon task as "route, zone, or area" is confusing at first. You must look closely at how the mission is defined; once you have that in mind, the meanings are clear.

d. Reconnaissance of an area is performed to search for information in a definite locality. Other elements of the division may or may not advance into or through the area.

22. RECONNAISSANCE BY FIRE. Fire on a suspected enemy position may cause the enemy to disclose his presence by movement or by returning fire. This method is employed at the risk of disclosing the presence of the reconnaissance unit.

23. CONTROL. a. An axis may be prescribed to control direction of advance of reconnaissance units. Phase lines and objectives may be designated to control rate of advance, or the distance to be covered in a period of time may be prescribed. Phase lines should be roads, railroads, towns, or prominent terrain features.

b. Radio provides the principal means of controlling and directing reconnaissance elements. Flags and arm-and-hand signals may be employed where practicable. (See FM 2-7 (when published).) Vehicular or dismounted messengers may be used to transmit messages, maps, sketches, or overlays. Radio silence may necessitate the use of messengers for all communication. Lateral communication between reconnaissance elements is maintained by radio or messenger. Lateral contact is established where practicable on phase lines and at designated objectives.

c. Assembly points are designated so that elements can reorganize if dispersed. A new assembly point is announced at each halt. The position selected should permit dispersion of vehicles and should afford concealment and defilade.

24. ORDERS AND RECONNAISSANCE INSTRUCTIONS.

a. The reconnaissance mission is assigned to the troop as a unit. Each mission is given a priority when more than one is assigned. The troop commander allots tasks and coordinates operations of platoons.

b. Missions must be specific. If they are not, commanders request clarification. Instructions to all echelons must be complete and must include exactly *what* information is to be secured; *where* the information is to be sought; and *when* the mission is to be executed. Essential details include—

- (1) Pertinent information of the enemy and friendly troops.
- (2) Plan of operation of the division commander.
- (3) Specific information desired.
- (4) Zone, area, route, or axis.
- (5) When, where, and how information is to be reported to the higher commander.
- (6) Time of departure.

22. Just my view, but recon by fire is generally a waste of time and ammunition unless your enemy is unusually stupid and impulsive, and often the only result is to disclose your own position.

23 a. See Operations course in Continuing Education. Without control measures, any operation is basically a bunch of people running around in the woods without a coherent purpose. Like . . . a “tactical.”

c. Armored recon operations are by their nature very dispersed (see **20** above), and it's extremely hard to keep far-flung elements working together. Beyond a certain point if maneuvers are not controlled and coordinated the task of getting everybody together again is difficult and time consuming. The assembly point is the armored force's equivalent of a “rally point.”

b. The idea of having specific objectives is usually ignored by reenactors. The mission of a recon unit is to gather information. This requires somebody (usually the S-2 or (at division) the G-2 to let the recon force commander know just what information is important. This list of things to find out is called the **Essential Elements of Information (EEI)**. Without this focus, a reconnaissance is just a joy ride on which people get killed.

(7) Phase lines, when desirable, and objectives, and the time they are to be reached.

(8) Expected duration of mission.

c. Whenever possible, platoon and team leaders are assembled for initial orders to insure that measures for mutual support and for cooperation with other troops are understood. Objectives and routes are indicated graphically by the troop commander on the best map or map substitute available and are copied by platoon and reconnaissance team leaders. After active reconnaissance has started, orders to platoon and team commanders are disseminated by radio, messenger, or by the troop commander or executive officer in person.

25. TRANSMISSION OF INFORMATION. Transmission of information is facilitated by standing operating procedure. This procedure establishes priorities which apply in the absence of specific instructions. The use of standing operating procedure simplifies orders and facilitates the transmission of essential information. Items of information which should be assigned priorities are:

a. Location and time of each enemy contact, giving strength, composition, and direction of movement of hostile forces. First contact with the enemy is especially important.

b. Number, type, location, direction, and speed of movement of enemy armored vehicles, airborne troops, naval combat, and landing forces.

c. Identification of enemy units.

d. Number, type, location, and direction of flight of hostile aircrafts.

e. Condition and type of routes and bridges.

f. Location of mine fields, other obstacles, and contaminated areas, and routes by which they may be avoided.

g. Terrain features and conditions which may affect operations.

h. Location and movement of friendly troops.

i. Location of supplies.

26. REPORTS. Teams (par. 27) and platoons on reconnaissance report factual information. Reports are relayed by radio or messenger to higher headquarters. The troop commander may enter a platoon radio net to intercept messages or secure more detailed information. A log is maintained by platoon and troops commanders to record data upon which to base reports. When information is transmitted on marked maps or sketches, conventional signs and symbols should be used. (FM 21-30.)

c. Keep in mind that an armored reconnaissance, more than most tactical tasks, requires great freedom of decision by the force commander. There is no time to stop and get a lot of detailed instructions. You're on your own, guided by your skill, your experience, and the EEL.

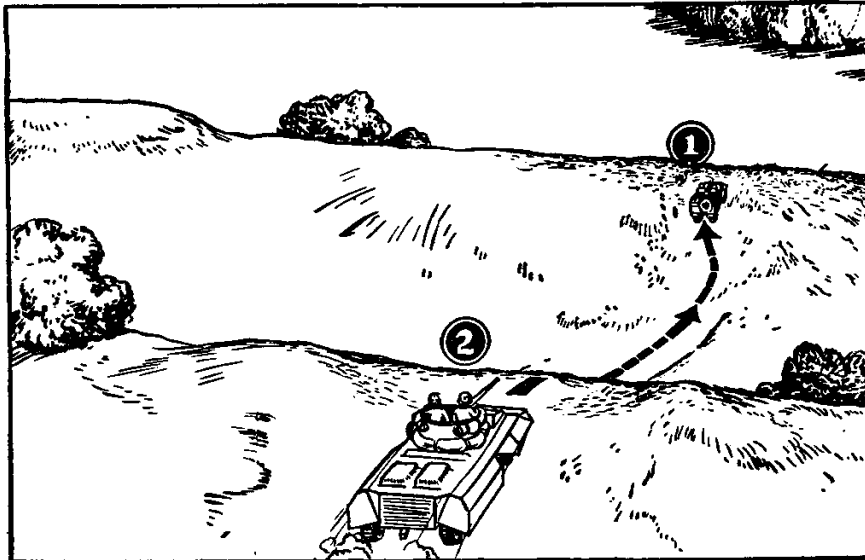
But there are limits to that freedom of action. Remember that General Gibbon's orders to Custer emphasized that his task was to reconnoiter, find the location of the hostiles and report back so the total force could concentrate. We all know how that worked out.

25. Note too that radio communication and messengers are not very reliable when the recon elements are well away from higher headquarters. Most decisions have to be made on the spot, summoning experience, flexibility, audacity, and a quick rattle of rosary beads. What makes this possible is the SOP: the local rules for how to act in a given situation. That's why we have standing operating procedures.

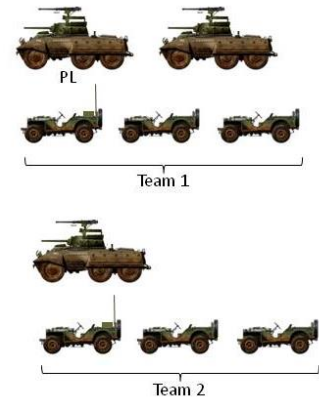
26. We have two critical kinds of reports in this situation: the **situation report** (SITREP), which is generally a routine, scheduled communication on a regular time basis or when a scheduled event occurs (crossing a phase line, for example), and a **spot report** (SPOTREP) when something unexpected or unscheduled happens (e. g., you just ran into the enemy).

27. OPERATION OF RECONNAISSANCE TEAMS. a. Reconnaissance teams composed of armored cars and ¼-ton trucks operate under platoon control; exceptionally, teams detached to occupy observation posts (par. 30) may operate under troop control. Teams move across country wherever practicable when enemy forces are believed to be near. Roads are covered by observation unless their detailed reconnaissance is included in the mission (par. 33). Echelons of a team move by bounds (fig. 1), utilizing available cover and concealment. The leading echelon, a ¼-ton truck or trucks, moves to successive observation points along a route or axis of advance. The team leader rides in the second echelon, directing the advance of the team and following the leading echelon to successive bounds as they are secured. Additional ¼-ton trucks are utilized to reconnoiter between bounds or to the flanks. Figure 2 shows methods of operation of a team composed of one armored car and two ¼-ton trucks.

b. Terrain and the situation may require the use of dismounted patrols (FM 21-75 (when published)) or reconnaissance by fire to supplement observation. Guns on armored cars, mortars, and automatic weapons support the movement of ¼-ton trucks and dismounted men. Areas favorable for the use of mines are examined prior to committing the bulk of the patrol (par. 35).



27. Here is a platoon formed as two teams—1 and 2. The platoon leader has chosen to accompany Team 1. These teams will generally (always in zone recon) move on parallel axes, off road where possible unless the mission is route reconnaissance.



When the platoon is reinforced by light tanks or assault guns (as happens often to suit a given mission) these assets are distributed by the platoon leader. Note that this is a big tactical responsibility for a second lieutenant. Welcome to the cav, kid.

The movement described (which only happens when the platoon is advancing beyond the OPL) is typical and still practiced. Nowadays we call it "traveling overwatch." Note that bounds are not a great idea here—that is, leapfrogging, armored cars out front, then jeeps. It's generally better to keep the greyhounds to the rear to provide fire support for the scouts.

Note also that the scout squads are split—this means that one will be "scout heavy" and one will be "mortar heavy", since there are three mortar teams. This distribution is planned by the platoon leader based on the situation and the mission.

As a rule, it is better not to have most of the platoon's force forward. If, God forbid, the forward scouts should get into a fight, extracting them can be a problem if there isn't enough backup.

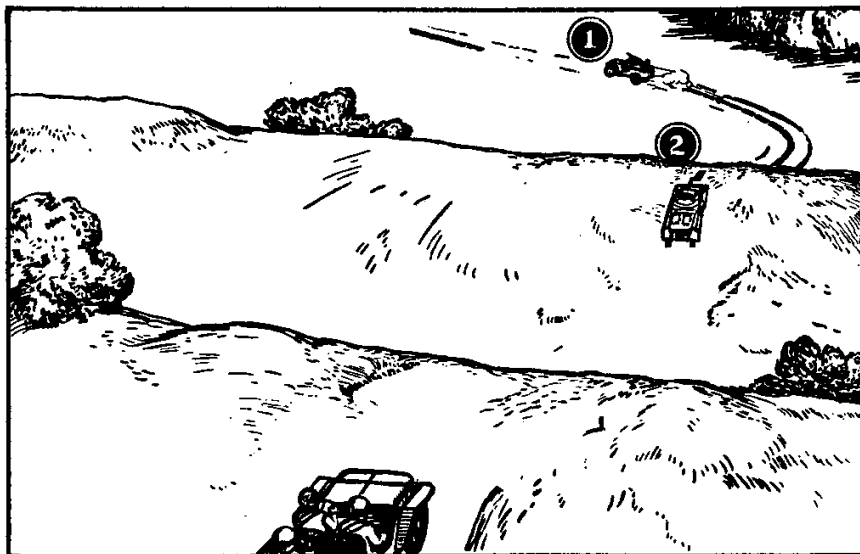


Figure 1. Reconnaissance elements advance by bounds. Each vehicle (2) covers the advance of the vehicle immediately preceding (1).

c. Reconnaissance teams attempt to secure observation points from which enemy forces can be observed (par. 30). Contact is maintained with enemy forces the size of a company or larger pending instructions from the platoon leader. Enemy patrols are reported and avoided if practicable.

d. Moving vehicles take cover when fired upon; those not in motion support by fire. Dismounted personnel reconnoiter to determine the enemy's strength and dispositions and to discover routes by which the enemy position can be bypassed. Dismounted reconnaissance parties are covered by the fire of suitable weapons. A report is made to the platoon leader who directs subsequent action. If the enemy withdraws, the team continues on its mission.

e. When the team is attacked by a small enemy patrol, it may defend, to hold an observation point, bridge, or defile in order to accomplish reconnaissance missions. When attacked by a large force, the team conducts a delaying action to secure freedom of movement for an advance in a new direction in order to continue on the assigned mission. A report is made to the platoon leader, who directs subsequent action.

28. OPERATION OF PLATOONS. a. The platoon is the basic reconnaissance unit. It is organized to operate under troop control within a designated zone or area, or along a prescribed route or axis. The frontage for a platoon reconnoitering a zone should not exceed 4 miles. The number of reconnaissance teams formed and

c-d. Keep in mind that the forward scouts are generally deployed *on foot* when terrain permits. The jeep should be covered and concealed to the rear, but not so far to the rear (usually just in terrain defile) that the scouts have problems remounting and hauling ass as needed. The best practice is to avoid being seen at all.

e. The platoon leader has to have a clear map of the area in his head, checked against the paper map (if he has one). In case of emergencies, the priority is continuing the information-gathering mission, not getting into a scrap in which you will very likely be outgunned. Decisions must be made quickly and executed even faster.

28. Look at the figure above showing a recon platoon organized for zone recon and imagine that platoon deployed to cover a *regimental front*. That's a lot of terrain to cover, and there will be a lot of open spaces.

their composition depend upon the frontage assigned, routes available to the enemy, terrain, and the rate of advance required.

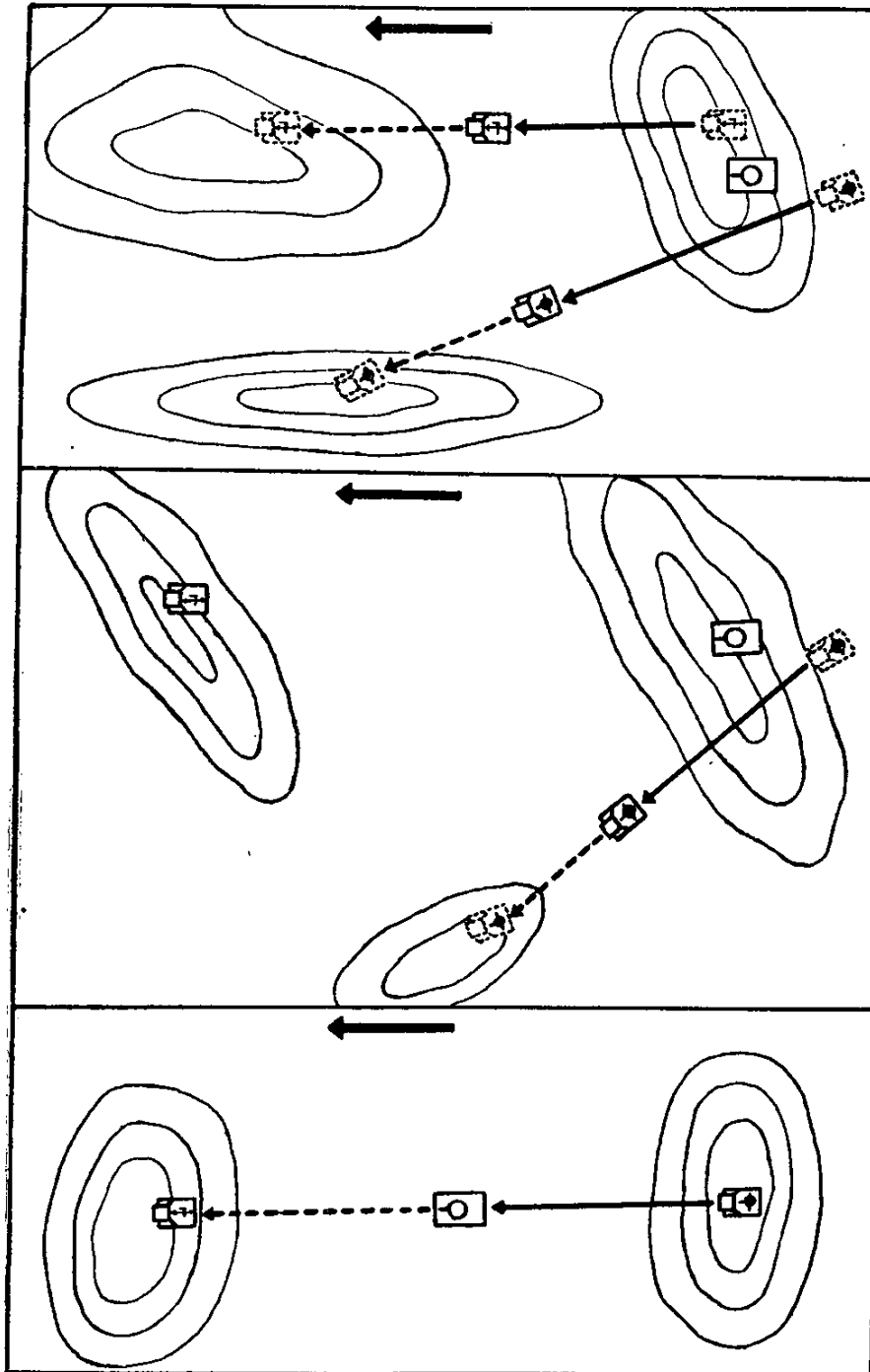


Figure 2. Note in this illustration of a recon team moving from terrain feature to terrain feature that scout teams and mortar teams are moved as scouts: a mortar team that is not setting up and firing can easily dismount and earn their pay by being infantry scouts. The mortars are generally not dismounted and set up to fire unless the tactical situation calls for it; setting up and breaking down the mortar takes time, and the platoon usually doesn't have a lot of that to spend.

In the lower part of the figure we see a team composed of an armored car, a scout jeep, and a mortar jeep. The wise team leader sends the scouts forward; then the armored car catches up. The mortar team is last to join the party, since having mortar support from the rear is handy if the forward elements start getting shot up and have to withdraw under fire.

Figure 2. A reconnaissance team operating under trying conditions of observations. A team may be composed of three, four, or five vehicles.

Three reconnaissance teams are considered the maximum number which can be formed within a platoon. Teams are composed of armored cars and ¼-ton trucks where conditions are favorable. Conditions may necessitate the formation of teams composed of one type of vehicle only or the platoon may operate without vehicles. The platoon leader should retain a support initially.

b. Platoon leaders control teams by voice radio, supplemented by visual signals and messengers when practicable. When control is difficult, movement is regulated by prescribing objectives or phase lines (par. 23).

c. When an element of the platoon reports contact with the enemy, the platoon leader estimates the capabilities of the enemy force. He confirms reports of large enemy forces by personal reconnaissance. Enemy strength may necessitate a change in plan to accomplish the platoon mission. The platoon leader reports the situation to the troop commander and states his plan of action.

d. The platoon avoids enemy patrols. Elements of the platoon maneuver to unopposed routes and continue on the mission. It may be necessary to pin the enemy by fire to permit maneuver. Movement of the platoon in bypassing an enemy patrol may be limited to a single route. When an enemy force the size of a company or larger is encountered, the platoon maintains contact pending instructions from the troop commander.

e. The platoon is the smallest unit to initiate an attack. When it becomes necessary to engage in combat with an enemy force which threatens the success of the mission, the platoon attacks. Surprise, speed, and coordination are essential. The enemy force is located accurately. Vehicles are used for maneuver where practicable. When reconnaissance indicates enemy strength beyond the capabilities of the platoon, reinforcement by other elements of the troop is requested before an attack is initiated.

29. OPERATION OF THE TROOPS. a. The reconnaissance troop is organized to operate as a unit under division control. The troop commander receives reports from platoons and relays information to division headquarters. The troop liaison officer at division headquarters assists in the transmission of information and informs the troops commander of changes in plans or operations of the division.

b. Reconnaissance troops of infantry divisions supplement the operations of corps reconnaissance elements. The corps commander assigns areas or zones of responsibility to divisions and to corps. Within division, areas or zones assigned by the corps commander, reconnaissance troops may be assigned reconnaissance missions or liaison responsibilities. The troop of a flank division may operate toward an exposed flank. It will be desirable

↑**28 (cont'd).** As a matter of experience, forming three recon teams is unlikely to be practical unless the platoon is at full strength.

e. Unless the mission is a raid, we generally don't "initiate an attack." It's unlikely a few jeeps and greyhounds will outnumber or outgun an enemy. The point here, however, is that if you are going to fight, do it as a platoon as a *minimum*. If the mission involves an attack (an area recon that may develop into a raid, for example) it's a good idea to task organize a reinforced platoon with tank and/or assault gun elements and possibly some armored infantry. That is the essence of task organization: put together the force to accomplish the task, don't just throw units away without thinking through the consequences. This is why the squadron has a tank troop and an assault gun troop. Late in the war, in fact, Army Ground Forces toyed with adding an armored infantry platoon to the squadron.

b. You will find many mentions of something called a "cavalry group (mechanized)." These were GHQ resources, doled out to the forward commands as needed. A cavalry ↓

frequently for a troop to attach a liaison detail to the corps reconnaissance unit.

c. The troops can reconnoiter a zone 10 miles wide with one platoon in support. Reconnaissance is conducted to the division front before opposing forces close. When the width of the division zone exceeds the capabilities of the troop, the responsibility for reconnaissance in part of the zone is assigned to other units or the troop is reinforced. The troop commander prescribes platoon zones, areas, routes, or axes (par. 21).

d. The troop operates with two platoons assigned initially to active reconnaissance (fig. 3). The third platoon follows in support. The support may be employed later to pass through a gap or weak point in the enemy's security screen, to pass around his flank, to assist another platoon, to perform a supplementary reconnaissance mission, or to maintain liaison.

e. Platoons are controlled by voice or CW radio supplemented by vehicular messengers. Movement is regulated by prescribing objectives or phase lines. The location or axis of advance of troop headquarters must be known by all elements of the troop.

f. Active reconnaissance missions should be rotated so that platoons have opportunity for maintenance and rest.

g. The troop reports all contact with enemy forces to division headquarters. Information of enemy forces is transmitted also to units whose security is threatened. The troop commander maneuvers his support to avoid enemy patrols reported by platoons.

h. It may be desirable to relieve reconnaissance units when opposing forces close. Division reconnaissance troops then may be employed on reconnaissance missions toward an exposed flank, may be used to maintain liaison with adjacent units, or may be placed in reserve.

↑ group was composed of two cavalry squadrons (same organization as other cav squadrons). One battalion carried a regimental designation (e.g., 6th Cavalry Squadron), the other was a numbered separate squadron; the first gave its traditional name to the group ("6th Cavalry Group"). These were usually reinforced with other GHQ resources (Tank, TD, armored infantry), essentially becoming task forces. This would evolve into the Cold War Armored Cavalry Regiment, which differed from the group in that the augmentation elements became organic (that is, a permanent part of the ACR), including a tank company (medium) and self-propelled 155mm howitzer battery per squadron.

f. Figure 3. Cav troops forward need to be rotated fairly frequently, as they do a lot of maneuver, burn fuel and rations and ammo with support rather far behind, and endure a lot of exposure to enemy resistance. They can wear out faster than the main maneuver units of the division.

h. Once the battle develops and enemy forces are located and inventoried, it makes sense to pull the cav back and engage the enemy with the heavy-hitters. There is still plenty of security on the flanks and in the rear areas (controlling enemy infiltrators, for example) to keep the recon troop busy.

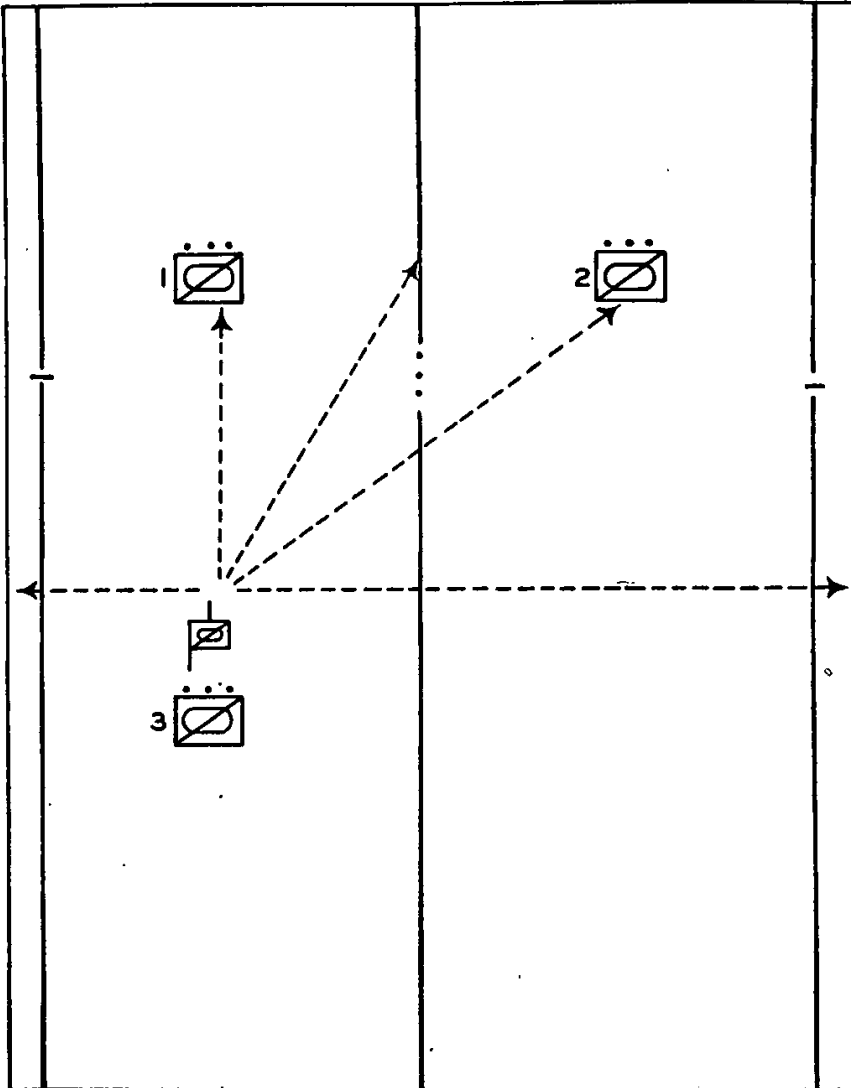


Figure 3. The troop operates with two platoons assigned initially to active reconnaissance. The third platoon follows in support. The support may be employed later to pass through a gap or weak point in the enemy security screen, to pass around his flank, to assist another platoon, to perform a supplementary reconnaissance mission, or to maintain liaison.

i. The troop may be employed without vehicles to conduct battle reconnaissance and to operate over terrain impassable to motor vehicles. When reconnoitering without vehicles, the troop employs dismounted patrols, observation posts, and listening posts. Vehicles may be left in rear divisional areas or concealed in forward areas ready for immediate use. For dismounted patrolling see **FM 21-75** (when published).

i. As you might guess, this is not a favorite mission for the cav recon. However, terrain may well make it necessary. When I was a troop commander in the 6th Armored Cavalry Regiment back in 1968, I infuriated my recon guys by making them practice dismounted patrols, Ranger-style. But they swallowed their pride and eventually acquired the skills.

30. OBSERVATION AND LISTENING POSTS. **a.** Observation posts are established to observe movement of enemy troops or activity in enemy installations. Listening posts are occupied to detect enemy movement or activity when visibility is limited. Localities for observation and listening posts are chosen after careful map study when terrain reconnaissance is impracticable. The actual site is selected on the ground, located on a map, and reported to commanders. Locations of observation and listening posts are plotted accurately on a map and are used as reference points in reporting information. Positions are approached in daylight by concealed routes or during hours of darkness. After posts are occupied, movement in daylight is limited.

b. An observation post must afford a field of view for at least one observer, and concealment for personnel and equipment. A convenient route of withdrawal is desirable. High ground and the edges of woods or towns are favorable sites. Observers should not occupy conspicuous buildings, isolated trees, or prominent crests.

c. Personnel occupying observation posts is held to the minimum required for continuous observation, reasonable security, and adequate communication. The degree to which the position is organized is determined by the length of time it is to be occupied. Observers and sentries are posted, weapons are sited, communications are installed, and fox holes are dug. Camouflage supplements natural concealment. Vehicles are concealed close to the position where practicable.

d. Listening posts are established along routes available to the enemy or near enemy concentrations. Personnel is limited to the minimum required for continuous operation and for communication. The degree to which the position is organized is determined generally by the proximity of the enemy and the length of time the post is to be occupied.

e. A radio dismantled from a vehicle, supplemented by visual signals, messengers, and wire, may be used for communication. Radio is used sparingly to lessen the possibility of interception and the danger of disclosing the position to the enemy.

31. EFFECT OF TERRAIN AND WEATHER. **a.** Operations of the reconnaissance troop are affected greatly by terrain. Open terrain affords good observation and favors vehicular movement across country. Wide zones are covered in dispersed formations. Thorough reconnaissance can be conducted at a maximum rate. Difficult terrain canalizes movement, favors the use of obstacles by the enemy, and increases the possibility of ambush. The width of zones is reduced and units advance with increased caution. Dismounted reconnaissance may be required frequently. Heavily wooded or broken terrain may limit observation and may restrict

a. A blinding flash of the obvious. It's difficult to observe things at night because it's too dark and night vision technology was in its infancy. So after dark the OP became an LP.

c. Again, the infantry stuff. An important note on setting up OP's: you may find it wise to dismount some of your machine guns and break out the tripods the Army so generously provides, and which are probably still packed in cosmoline (a tough grease used to keep rust away from metal things that are not being used) and dig the weapons in at the OP's. **Warning:** this infuriates cav and armored infantry soldiers. How dare they expect us to fire from the ground. Be sympathetic, but be firm.

e. Recon soldiers are not used to laying wire for field phones. They like to be moving so fast that wire is impractical. But if LP/OP's are being put in place, communications security calls to laying wire.

31. The first sentence of this paragraph is a blinding flash of the obvious. The terrain neither knows nor cares about our plans, and it feels no obligation to cooperate. Defiles (narrow passages for movement) slow us down and make us bunch up. Obstacles throw our schedules off again and again. In dense woods it's hard to observe because of all the trees, and the trees may be too close to let vehicles pass, making us road bound, usually at the worst possible places.

vehicular movement to roads. Natural obstacles such as hill masses, bodies of water, and dense woods may require time-consuming passage or wide detour.

b. The troop commander assigns zones, routes, or axes after careful estimate of the terrain to be covered. The estimate is based on detailed map study when the troop operates on unfamiliar terrain. The composition of reconnaissance teams and initial formations are determined. They are modified subsequently with variations in terrain.

c. Rain and fog require reconnaissance teams to operate at reduced distances and intervals since control is difficult. Observation is limited. Frontages are narrowed and the rate of advance is reduced. It may be necessary for dismounted men to precede vehicles.

d. Extremes of temperature may require relief of personnel more frequently and increased maintenance of vehicles.

32. NIGHT RECONNAISSANCE. a. Reconnaissance is slow and less effective at night. Motors are audible for considerable distances and observation is difficult. Night reconnaissance is limited ordinarily to dismounted patrolling, observation of routes, and the use of listening posts.

b. Night reconnaissance is planned carefully after detailed map study. Reconnaissance of routes is made in daylight where practicable. Each unit leader prepares a sketch showing the route to be followed, the road net of the area, landmarks which can be recognized easily at night, compass bearings for major changes of direction, and distances from the initial point to prominent landmarks along the route.

c. Patrol leaders check equipment prior to departure to insure that it is muffled. Radio dial lights are masked.

d. Definite means of identification and methods of signaling are determined. Shielded colored flashlights and audible signals may be used for identification and to transmit prearranged messages. Such signals must be varied. Plans for control are simple and definite. Assembly points are designated in localities which can be found readily in darkness.

e. Units move to successive objectives by bounds. The degree of caution with which the advance is made is determined by the known or suspected proximity of enemy forces. Dismounted patrols precede vehicles by bounds when the enemy is believed to be near. The length of each bound is limited by the range of the method of signaling used.

f. Halts are made in positions where approaching men and vehicles are outlined against the sky, and dismounted men are posted at sufficient distance that sounds can be heard above the noise of

engines. Engines which can be started quietly may be stopped at halts.

33. RECONNAISSANCE OF ROADS. **a.** Reconnaissance of roads is conducted to determine whether or not a particular route is being used by the enemy or is usable by elements of the division. Route reconnaissance is both tactical and technical. Technical route reconnaissance within the division area is the responsibility of the engineer battalion. Engineer reconnaissance elements are attached to the reconnaissance troop or accompany the troop when technical reports on the condition of roads are desired. However, any condition along routes which may affect the tactical employment of the division is reported by the reconnaissance troop.

b. A road is observed by leading elements from successive observation points off the road. Detailed investigation of the roadway is accomplished by rear elements, or by leading elements when they have determined that the road is clear of enemy. Elements advancing on the road adopt formations which provide security, and offer poor targets to hostile fire. Dismounted patrolling may be employed to supplement observation from vehicles. Careful examination is made of areas in and adjacent to the roadway favorable for the use of mines.

34. RECONNAISSANCE OF TOWN. **a.** A town is approached from a flank or from the rear. Detailed reconnaissance with field glasses precedes mounted reconnaissance around the town when time and the terrain permit. A dismounted patrol enters the town for detailed reconnaissance. The remainder of the unit takes position to cover an exit. Care must be taken by the patrol to avoid being trapped within the town by hostile forces.

b. Patrols move cautiously within a town. Detailed observation is made from covered positions. Rear elements protect the advance of forward elements.

c. The patrol moves along streets with a single file on each side. Individuals move close to buildings, halting in doorways or behind other suitable cover to observe windows, cellar gratings, and roofs on the far side of the street. Streets and intersections are crossed by individuals in a single bound. When the patrol is fired upon, men take cover. Reconnaissance is made to determine the location, composition, and strength of the enemy.

d. When vehicles follow a dismounted patrol through a town, they advance by bounds along routes which have been reconnoitered by the patrol. They move in staggered formation close to buildings. Intersections and other critical localities are designated as successive objectives. Men in vehicles are alert. Vehicular

34 a. This wording is confusing. When you approach a town, it is in front of you. Logic tells us that an enemy fortifying the town will place forces on that side since you are likely to approach from that direction. Hence, approach from the flank(s) or circle around to the rear and hope they haven't thought of that tactic.

Always proceed with dismounts in front. If you lead with vehicles, the enemy will fire on them from above when they cannot maneuver, shooting them like fish in a barrel and in the process blocking the streets.

weapons are manned where personnel is available. They are sited at halts on positions favorable for enemy snipers.

35. RECONNAISSANCE OF OBSTACLES. a. The leading vehicle moves cautiously when approaching defiles where obstacles could be used by the enemy to advantage. Vehicles are halted in covered positions and reconnaissance of the defile is conducted dismounted. Automatic weapons and antitank guns are sited to cover patrols. A search is made for evidence of mines, demolitions, and barricades. The area is examined carefully for trip wires. Convenient routes around obstacles are apt to be mined.

b. When an obstacle is discovered, it is reported promptly to the unit leader. Patrols are sent beyond and to the flanks to locate defenders. Enemy strength and dispositions are determined. Reconnaissance is made for routes by which the obstacle can be avoided. The unit leader determines a plan of action and reports to higher headquarters. Unless subsequent action is directed by higher headquarters, the unit leader proceeds on his mission (pars. 27, 28, and 36).

36. RECONNAISSANCE OF A BRIDGE OR DEFILE. Visual reconnaissance is made for enemy positions before leading elements of a reconnaissance unit cross a bridge (fig. 4). Dismounted patrols reconnoiter approaches. They precede leading vehicles across the bridge when ambush, mines, or booby traps are suspected (fig. 5). Elements in rear cover the crossing of leading vehicles and the reconnaissance of the far side. Vehicles in rear cross when the leading element has secured the far side. The passage of a defile is conducted in a similar manner.

37. RECONNAISSANCE OF HOSTILE CAMP, BIVOUAC, OR INSTALLATION. Hostile camps, bivouacs, or installations are approached from the flank or rear by dismounted patrols. Vehicles are concealed at a distance. Information gained by patrols is sent by messenger to a command vehicle for transmission. Enemy security measures (fig. 6) may necessitate distant observation in daylight and the use of listening posts at night (par. 30).

38. RECONNAISSANCE OF HOSTILE COLUMN. a. A moving column is reconnoitered from a flank. An observation post is established where terrain and visibility are favorable, or dismounted patrols are sent to observe the enemy at close range. Information is sent by messenger to a command vehicle for transmission. A column at the halt which cannot be observed from a single position is reconnoitered by patrols moving to successive positions along a flank.

35. An unwritten principle of war is "when possible, choose a stupid enemy." Failing this, we just have to assume the enemy is at least as smart as us. A stupid enemy places obstacles randomly. If they use this approach, we can just drive around them and report and mark them for clearing or demolition. A wise enemy will place obstacles at points where we *cannot* drive around them. Look for obstacles in those places.

NOTE: This does not apply to nuisance mines hidden along routes to pick off the occasional vehicle (we call these "IED's" nowadays). I had eight tanks blown out from under me this was when I was young. In conventional warfare, however, such obstacles may be placed to slow down your advance or make you bunch up. This usually happens when the enemy holds high ground or other good observation and fields of fire. Stay alert—stay alive.

36. Defiles are dangerous places. Enemy units tend to use them to create kill zones. A favorite dirty trick is to let half a formation cross the defile or bridge, then fire on the middle of the column, cutting it in two and allowing fire to concentrate on the lead elements. This is evil and not very sporting. Try it: you'll see what I mean.



Figure 4. Do this to prevent the scenario described in 36.

Figure 4. Prior to crossing a bridge or passing through a defile, a commanding point is gained from which visual reconnaissance may be made.

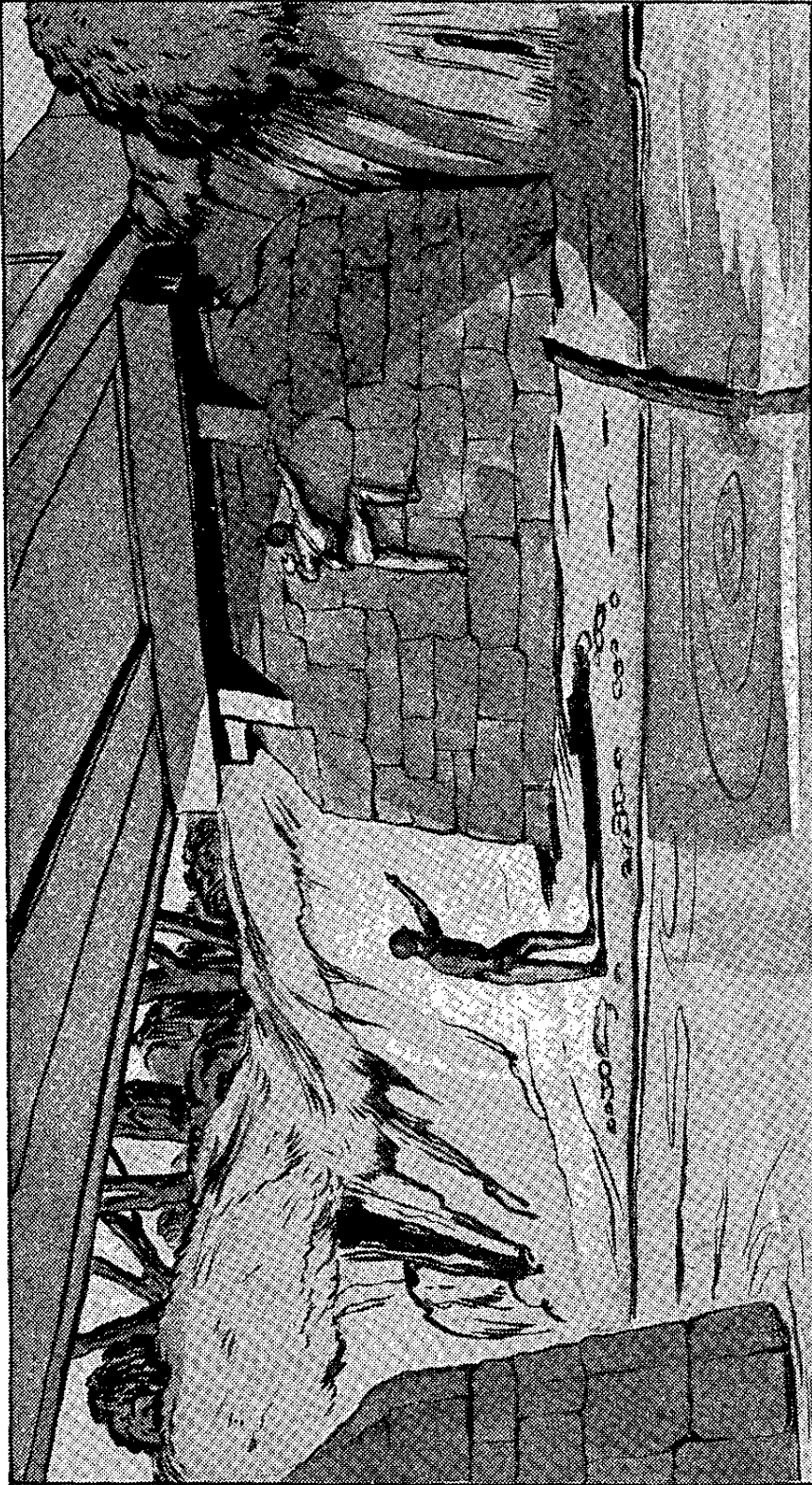


Figure 5. Bridge reconnaissance includes inspection for booby traps, mines, or demolition charges, and purposely weakened constructions.

b. Patrols which have been cut off or surrounded may be able to continue observation of the enemy. They remain concealed in daylight and withdraw under cover of darkness, using routes determined and reconnoitered previously.

Section III

Security

39. GENERAL. The reconnaissance troop or any element of it acting alone is responsible for its own local security. The troop contributes to the security of the division by reporting the location of enemy forces and by giving timely warning of ground and air attacks. Information and warnings are transmitted to higher headquarters and directly to units whose security is threatened.

40. SECURITY ON RECONNAISSANCE. a. The search for information of the enemy provides the greatest measure of security for the troop on reconnaissance. Crews observe constantly while vehicles are in motion. Distance and interval are maintained between moving vehicles, preferably not less than 100 yards. Teams and platoons move by bounds with vehicles constantly in position to support the advance of preceding vehicles. Covered routes are used where available. Dangerous positions to the flanks are reconnoitered before the bulk of the team or platoon arrives within effective range. Mounted patrols sent beyond visual range include at least two vehicles for mutual support.

b. Observers are posted at halts to provide timely warning of approaching aircraft and ground units. Vehicles are dispersed. Maximum use is made of available cover, concealment, and natural obstacles.

c. Air scouts are designated specifically. Upon the approach of aircraft, moving vehicles are dispersed and concealed. Men take cover. They do not fire at aircraft unless ordered by commanders. Orders to fire are not issued unless planes attack.

d. The principles to be observed are illustrated in figures 7 to 17, inclusive. See also paragraphs 44 and 45.

39. Reconnaissance units are extremely vulnerable in most combat operations. They are light and highly mobile, but lacking the level of firepower available to the enemy. They have no security except that which they can provide by themselves.

40. Forward of the OP line in the security zone, reliance on security by the recon force increases stress and fatigue. For this reason, among others, recon elements have less useful exposure time than stationary troops in the main force. They will wear out faster than the forces they screen or protect from surprise. This in part explains why the squadron has four recon troops (p. 18); two can be placed forward and two kept in reserve, allowing frequent replacement for rest and refit. This applies to the reconnaissance squadron of the armored division; the infantry division recon troop has only three platoons; however, the infantry division is generally part of a mutually supporting multidivisional complex. The armored division is designed for exploitation and pursuit, which has more significant all-around security requirements since the AD is supposed to do its best work behind enemy lines, exploiting a breakthrough.

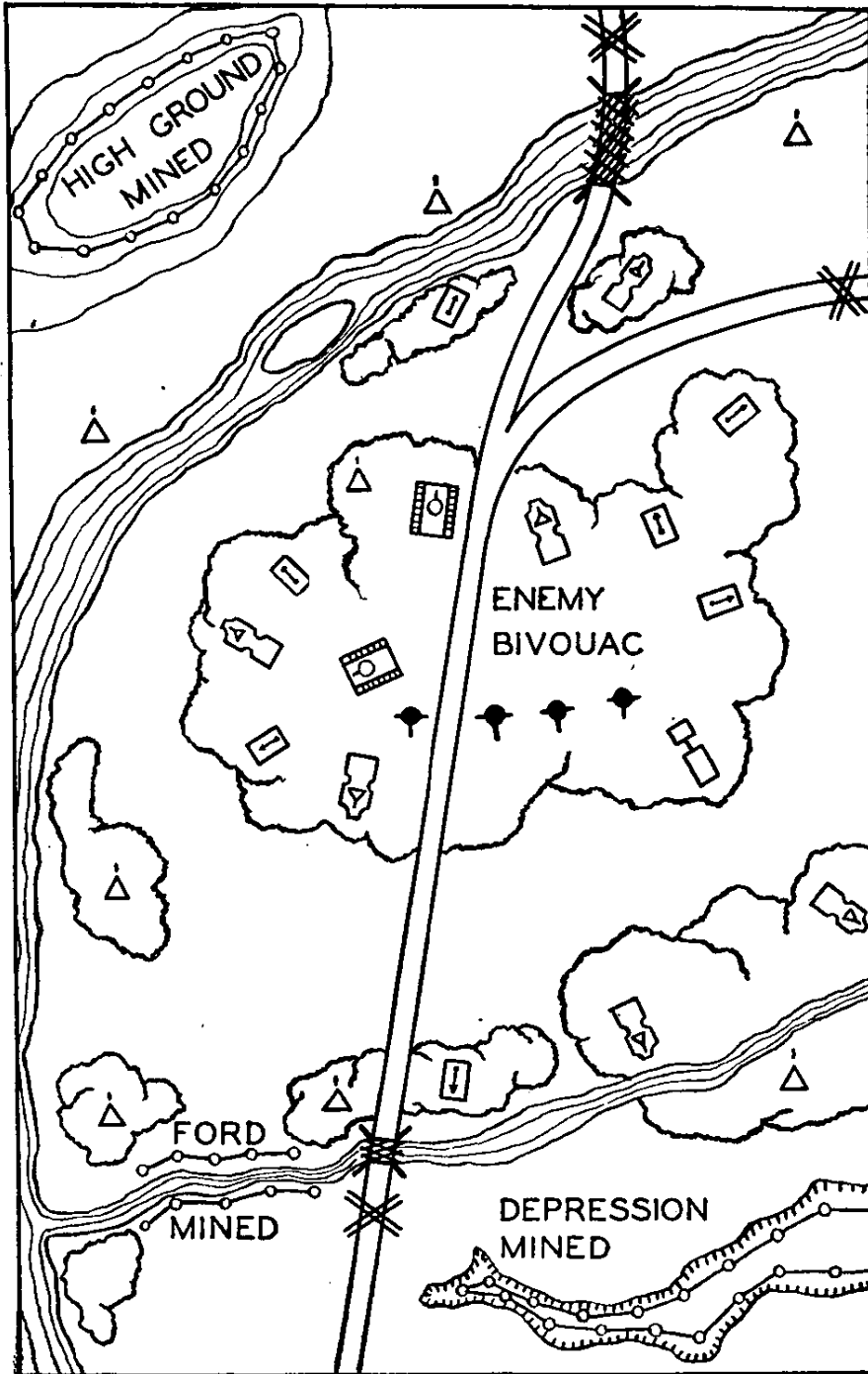


Figure 6. Reconnaissance of hostile bivouac. It can be expected that roads, bridges, likely observation points, and positions offering concealment for vehicles will be mined, obstructed, and covered by emplaced weapons. Bridges will be prepared for demolition.

41. SECURITY ON MARCHES. When the troop marches as a unit, security detachments are employed to the front, flanks, and

rear. The strength of detachments is the minimum consistent with security. Advance, flank, or rear guards for the troop should not exceed three-vehicle reconnaissance teams unless contact with the enemy is imminent (fig. 18). When the troop marches cross country, a covering detachment composed of a platoon or a reconnaissance team is used.

42. SECURITY AT HALTS AND IN BIVOUAC. **a.** When a reconnaissance team or platoon halts, a march outpost is established to provide security. Vehicles are dispersed and concealed. Sentinels are posted at sufficient distance to give timely warning of the approach of hostile aircraft or ground forces. Vehicular weapons are manned. Reconnaissance elements observe the principles illustrated in figures 19 to 31, inclusive.

b. When the troop bivouacs, an outpost is established. Troops may be drawn from the support platoon. The outpost is no stronger than is consistent with security. Barriers provide additional security. A bivouac is reconnoitered and selected in daylight, but occupied after dark to prevent observation by the enemy. Bivouac areas must be large enough to permit vehicles to disperse under cover, and must have at least two exits. Principles to be observed in establishing and operating outposts are illustrated in figures 32 to 35, inclusive.

(1) Vehicles are disposed within the bivouac area so that their weapons furnish all-around protection. Vehicles are concealed from ground and air observation and are faced toward a route of departure. At least two routes of departure which have been reconnoitered are designated for use. Crews bivouac near their vehicles. One member of the crew of each vehicle on the perimeter of the bivouac should be awake at all times. Prone shelters are dug by all personnel for protection against hostile air attack and artillery fire. Mortars are emplaced and alternate positions are selected. Automatic weapons are sighted and half loaded. Range cards are prepared for mortars, 37-mm guns, and automatic weapons.

42. Two common errors made by reenactor mounted units (especially) are: halting on an obvious artillery registration point like a hill top or a road junction, and failing to put out security.

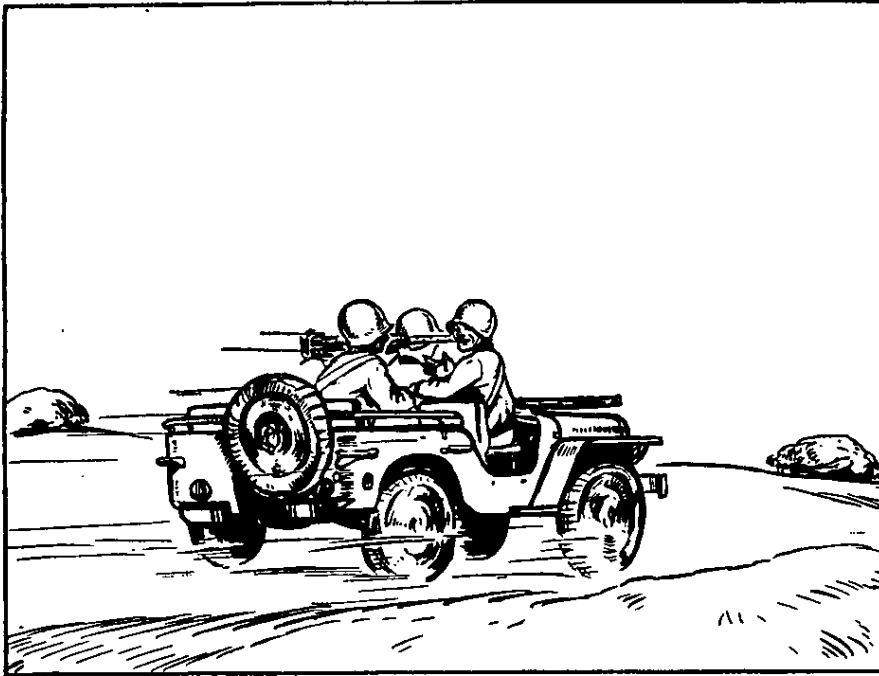
Security is easy. Halt the vehicles in a way that provides cover by fire in all directions, and where necessary (that is, where the crews can't see, as in wooded areas) put out temporary OP's.



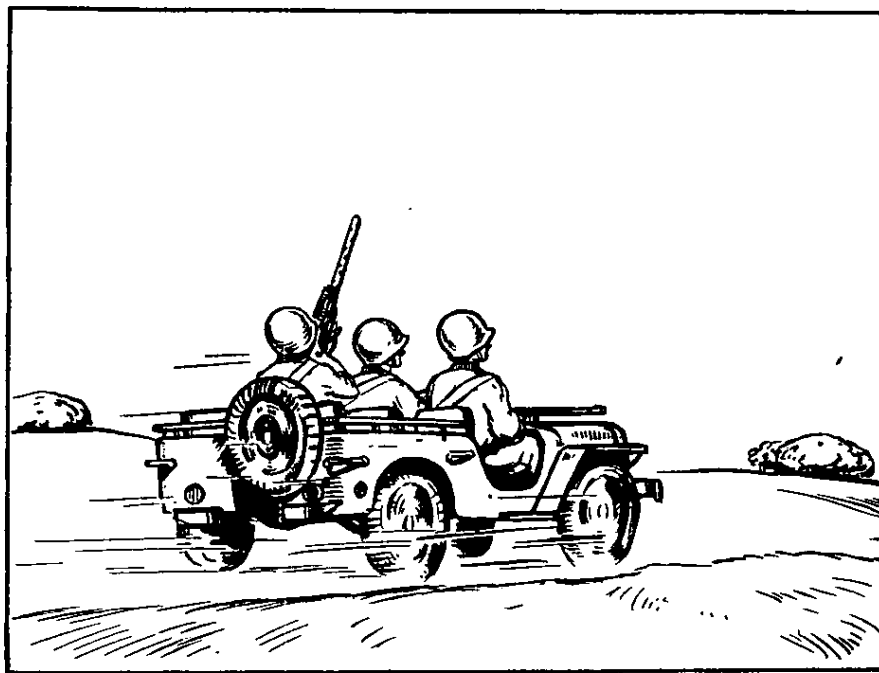
Figure 7. Here is a problem. Recon units mounted are vulnerable when they are road-bound. Choosing to follow a road just because it is faster and not as bumpy as off-road invites ambush, a tactical fool's mate. That said, the armored cars (which are basically chopped-down deuce and a halves) have rather poor cross-country mobility because they are too large to pass between trees and have a rough time on obstacles. The jeeps are more mobile, but also more vulnerable.

So, what do we do? Easy (well, not easy but a worthwhile effort): You are already leading with jeep scouts and the AC's follow to provide over-watch support. Run the jeeps off road where possible and follow with the AC's on the road. And where there is no way to pass an obstacle or a defile off road, halt and dismount the scouts, reconnoiter the defile and the far side.

Figure 7. All movement should be cross country unless the terrain prevents it.



① *Wrong.*



② *Right.*

Figure 8. Antiaircraft weapons are alerted for antiaircraft fire at all times.

Figure 8. True, reenactor tactical exercises usually don't involve an air threat. However, if you're playing it for real it makes sense to orient the AA weapons up. This not only saves time (important, because air attacks come at you fast and don't stay around long), but it also prevents panicky fire that endangers the others in the vehicle.

I personally don't care much for pedestal-mounted machine guns on jeeps. A jeep is a terrible fighting platform, with no protection and a high profile. EXCEPT in the march AA role, in which a fraction of a second can count, MGs are best dismounted.

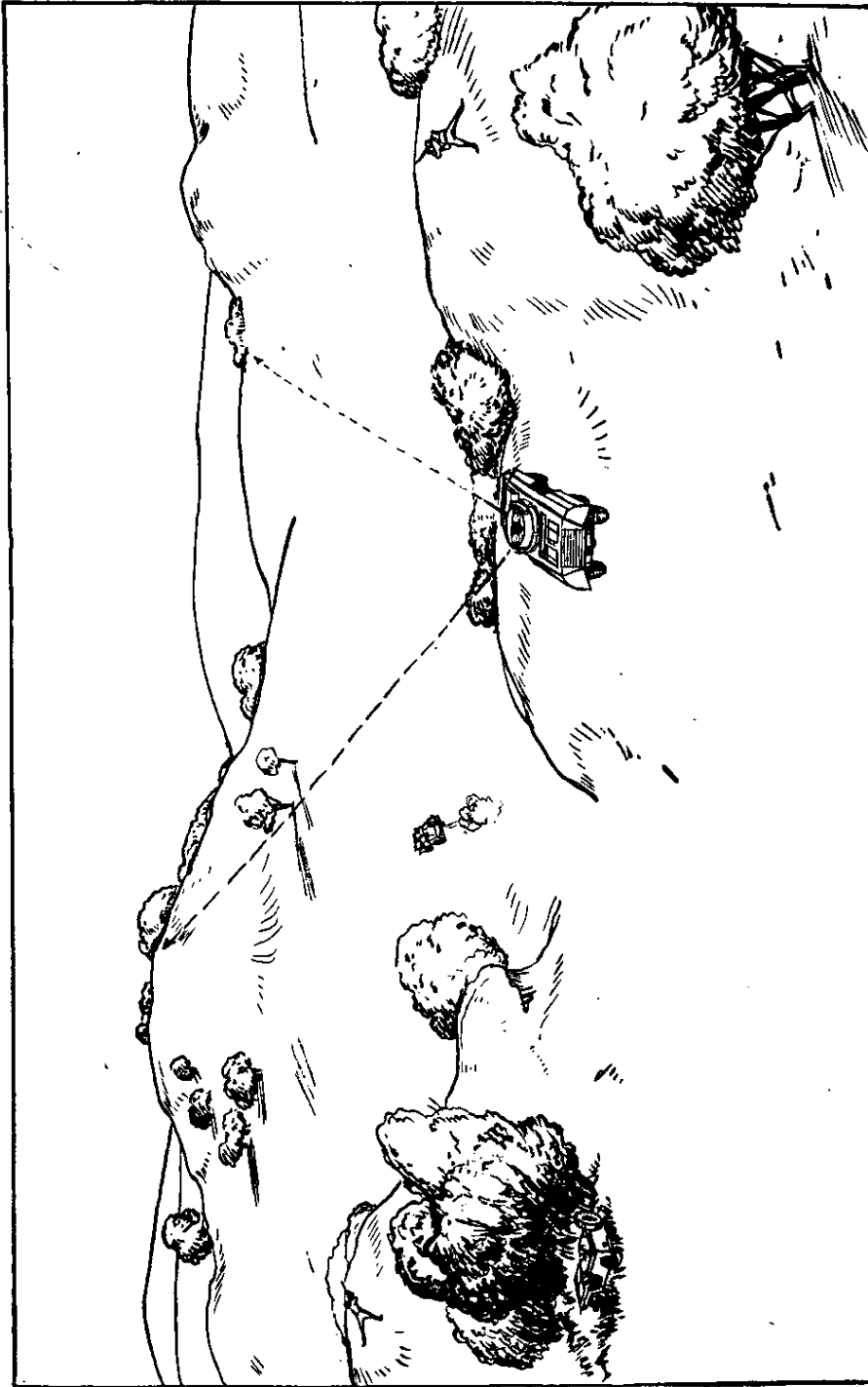


Figure 9. I've been a recon troop commander. At the platoon level, the moments of greatest anxiety come when you don't know where your vehicles are or what is happening to them. Whenever possible, keep everybody in sight of somebody else.

Figure 9. When advancing in the presence of the enemy, place vehicles in position to report the advance of the leading vehicles.



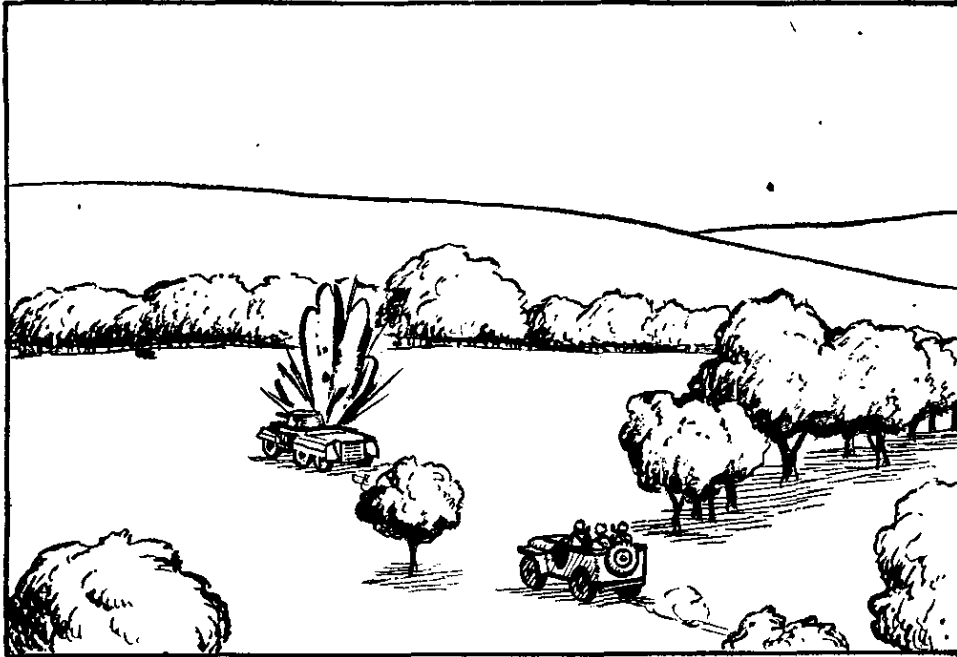
① *Wrong.*



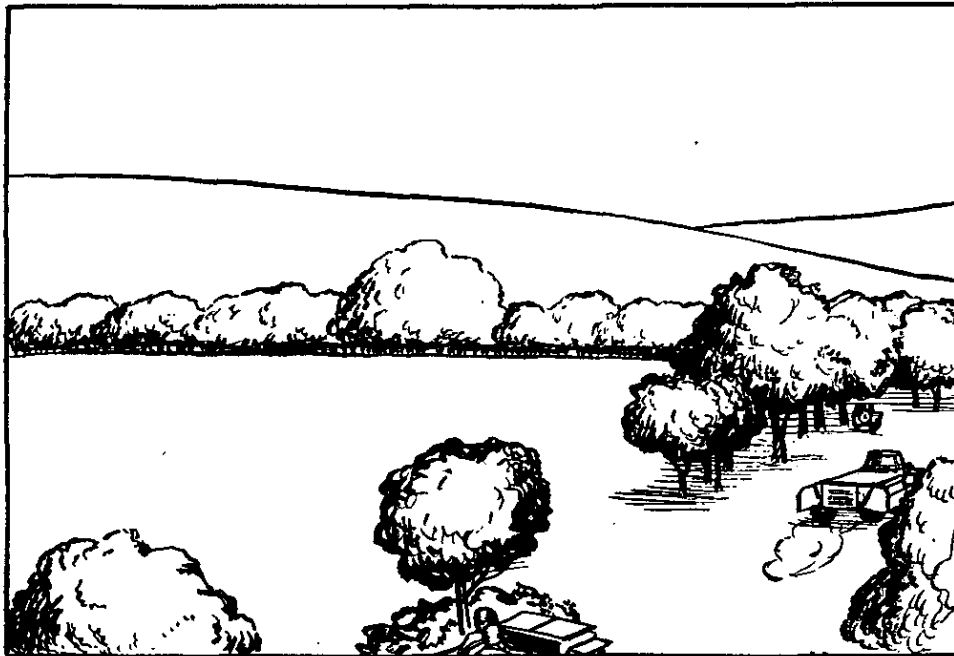
② *Right.*

Figure 10. This is a swell idea, like many that find their way into doctrine manuals, but the road is where the road is, and a two-mile detour usually won't work. It's an "if possible" rule.

Figure 10. Do not advance in front of a light background; use dark background to cover advance.



① *Wrong.*



② *Right.*

Figure 11. Okay, think of it like this: a recon vehicle is like a mechanical GI. When it is under fire or likely to be under enemy observation, it moves like an infantryman, from cover to cover, making use of terrain and vegetation and everything else that can be used to make it to the next observation point.

Figure 11. Do not take a short cut through open fields go around in order to advance under cover.

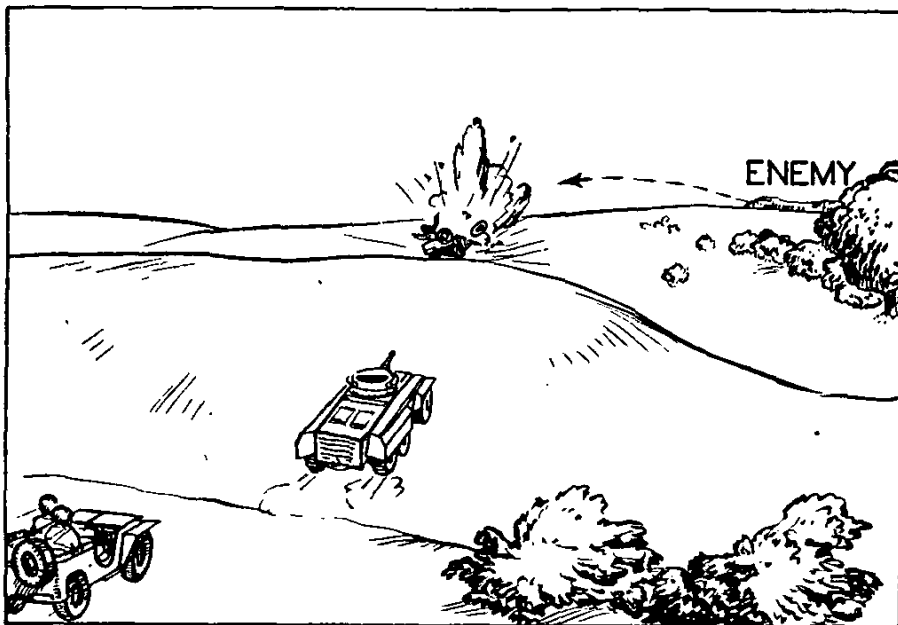


Figure 12. In open terrain, vehicles advance from fold in the ground to fold in the ground, taking every advantage in the terrain to reduce exposure to enemy fire.

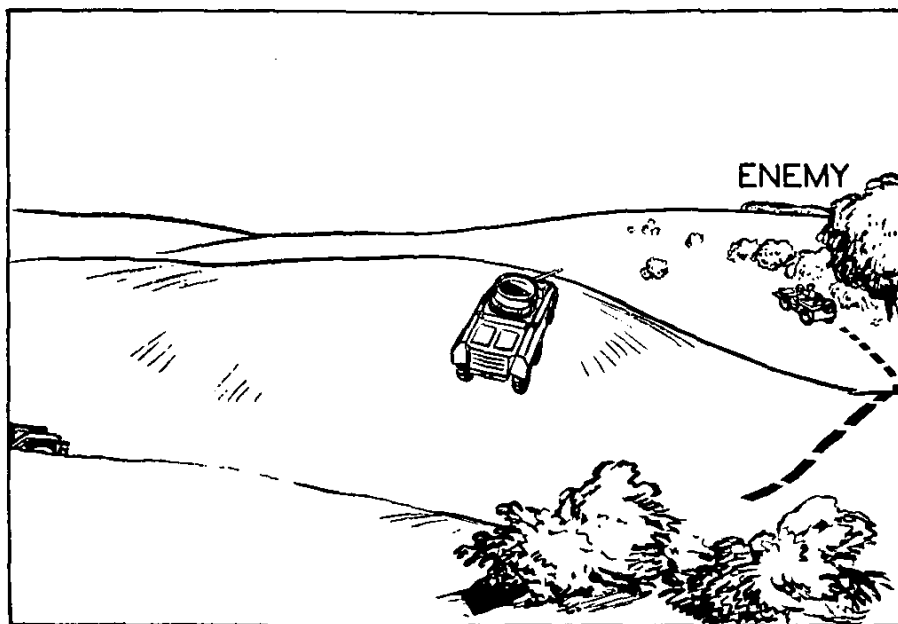
(2) Sentinels are posted to cover routes of approach. Mines and warning devices supplement the outpost line. A radio equipped $\frac{1}{4}$ -ton truck may be sent to a distant point to provide observation and warning of enemy approach.

(3) Each sentinel is given the following information:

(a) Routes of approach to the bivouac he is to observe.



① *Wrong.*



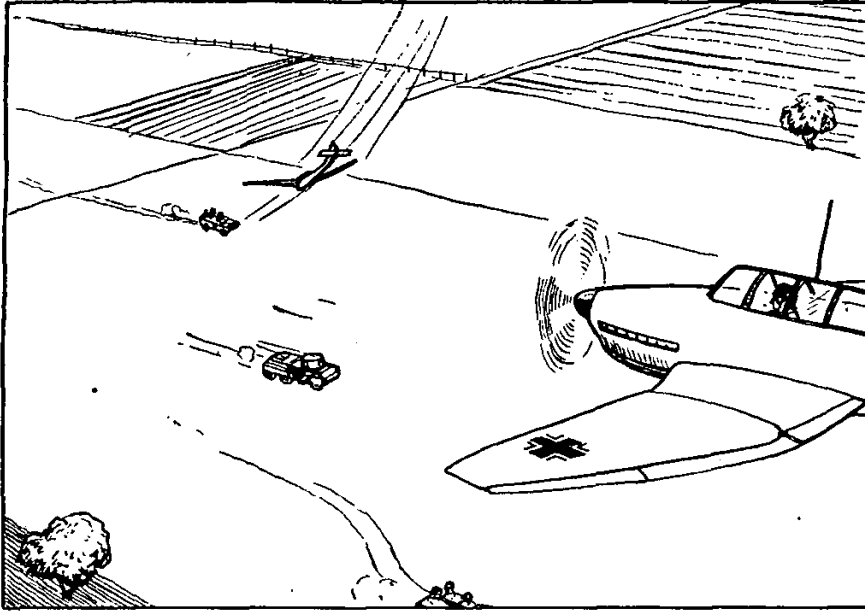
② *Right.*

Figure 13. Do not cross a treeless ridge when it can be avoided; make use of the ridge as cover for a change of direction.

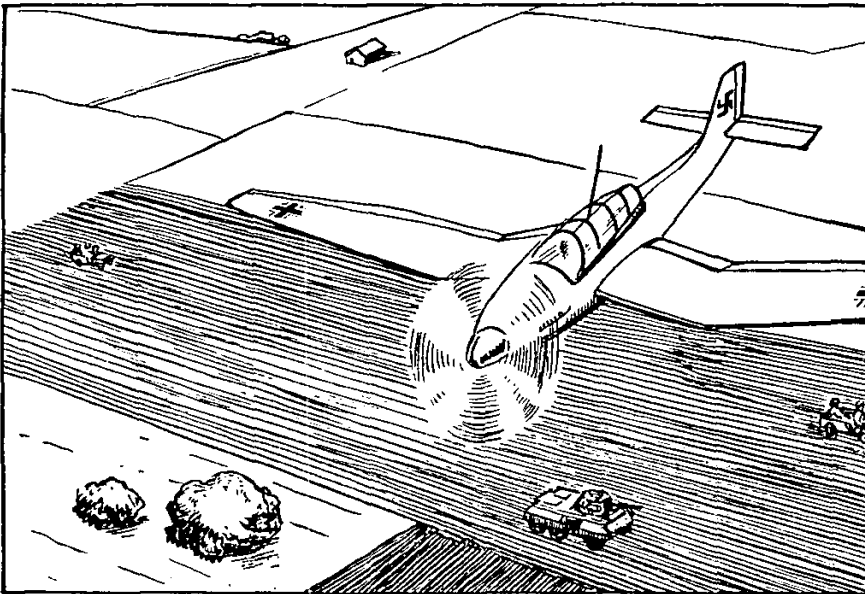
(b) Names of terrain features such as roads, villages, or streams in his area.

(c) Location of the main body and of adjacent outguards.

- (d) Number of friendly patrols operating in the vicinity, and the direction and time of their expected return.
- (e) Instructions concerning challenging.

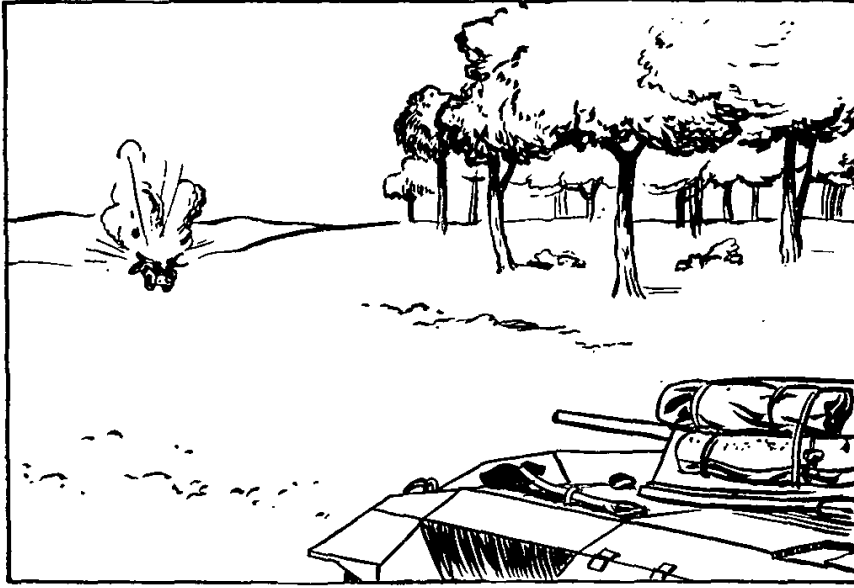


① *Wrong.*

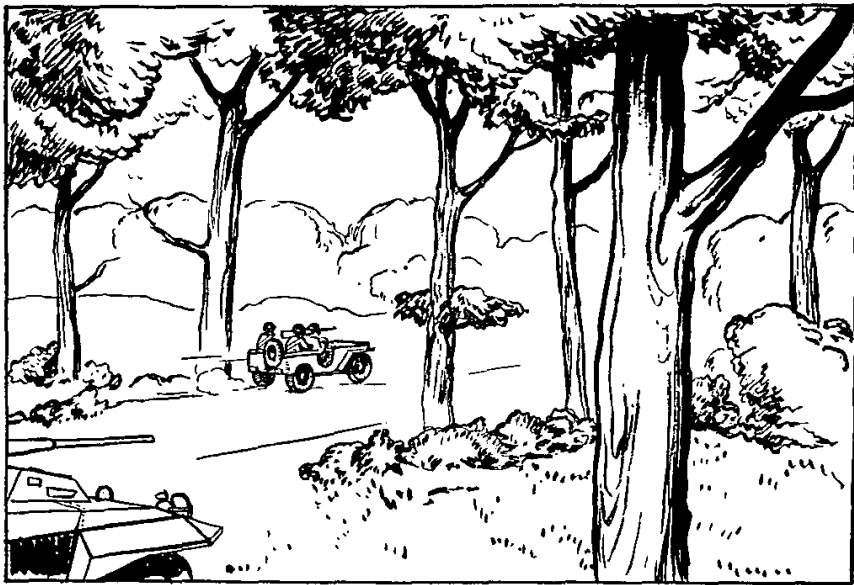


② *Right.*

Figure 14. Do not drive over a light-colored field when it can be avoided. Use dark background for movement as far as possible.



① *Wrong.*



② *Right.*

Figure 15. Think about it: the enemy will use the same woods for concealment. Driving past an ambush site without recon invites . . . ambush.

Figure 15. Do not drive by wooded areas; use the woods for concealment.

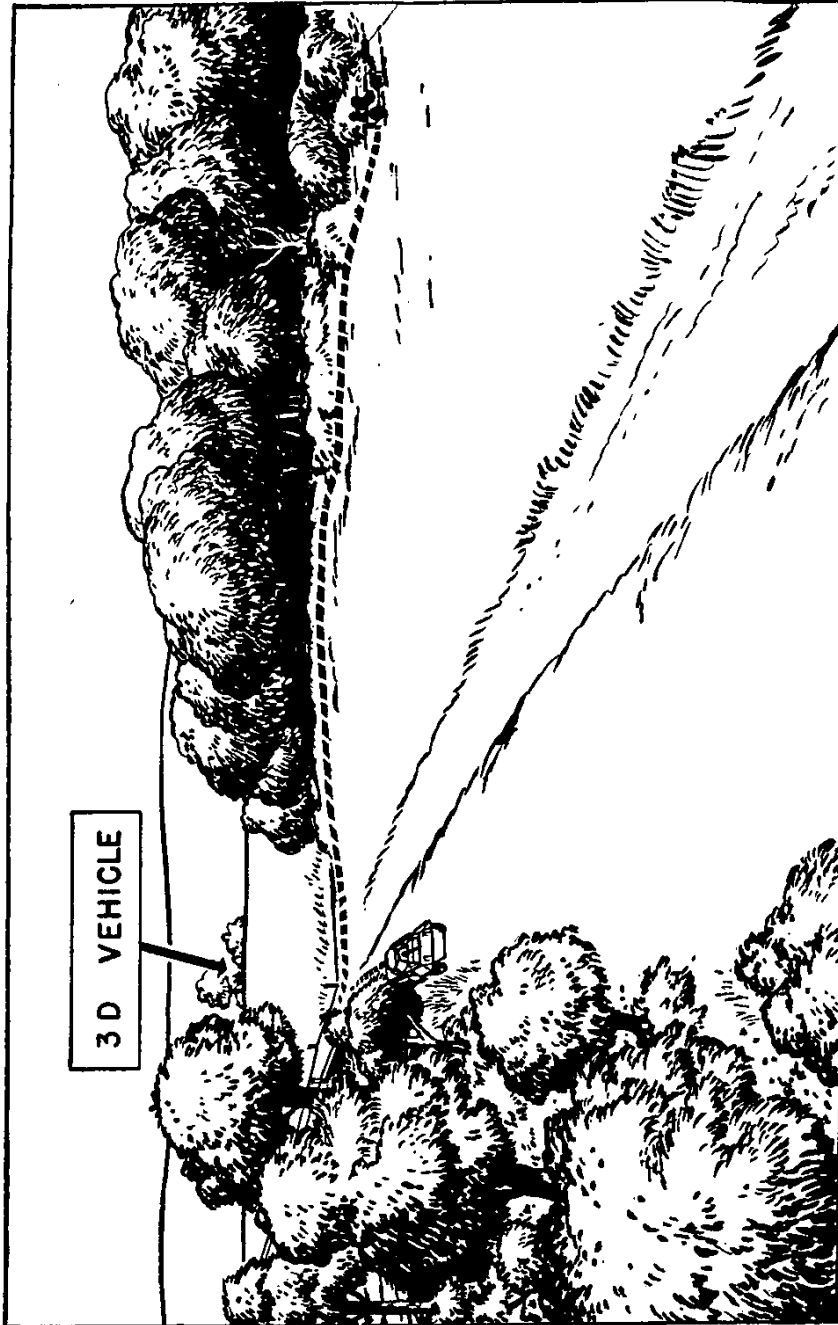


Figure 16. Defiles are dangerous for several reasons. In this case the problem is that a mounted unit generally has to advance on a narrow front (even single file). This means every vehicle but the one in front has its fires "masked"—that is, the gunners can't shoot without hitting the vehicle in front (an event that can cause hard feelings). Get through the defile fast and spread out as soon as you emerge so maximum fires can be brought against the enemy as soon as possible.

Figure 16. Spread out as soon as you clear a defile; patrol is less vulnerable to enemy fire, fire of rear vehicles is not masked.

warning of the approach of hostile aircraft or ground forces. Vehicular weapons are manned. Reconnaissance elements observe the principles illustrated in figures 19 to 31, inclusive.



Figure 17. A jeep is harder to hide than a trained soldier, and if you remain mounted too much the three or four guys in the vehicle can die together. Don't be shy about getting out and doing your job properly. Reenactors in particular have their butts glued to the canvas seats. Don't do that.

Figure 17. Supplement vehicular reconnaissance with dismounted patrolling.

b. When the troop bivouacs, an outpost is established. Troops may be drawn from the support platoon. The outpost is no stronger than is consistent with security. Barriers provide additional security. A bivouac is reconnoitered and selected in daylight, but occupied after dark to prevent observation by the enemy. Bivouac areas must be large enough to permit vehicles to disperse under cover, and must have at least two exits. Principles to be observed in establishing and operating outposts are illustrated in figures 32 to 35, inclusive.

(1) Vehicles are disposed within the bivouac area so that their weapons furnish all-around protection. Vehicles are concealed from ground and air observation and are faced toward a route of departure. At least two routes of departure which have been reconnoitered are designated for use. Crews bivouac near their vehicles. One member of the crew of each vehicle on the perimeter of the bivouac should be awake at all times. Prone shelters are dug by all personnel for protection against hostile air attack and artillery fire. Mortars are emplaced and alternate positions are selected. Automatic weapons are sighted and half loaded. Range cards are prepared for mortars, 37-mm guns, and automatic weapons.

(2) Sentinels are posted to cover routes of approach. Mines and warning devices supplement the outpost line. A radio equipped ¼-ton truck may be sent to a distant point to provide observation and warning of enemy approach.

(3) Each sentinel is given the following information:

(a) Routes of approach to the bivouac he is to observe.

(b) Names of terrain features such as roads, villages, or streams in his area.

(c) Location of the main body and of adjacent outguards.

(d) Number of friendly patrols operating in the vicinity, and the direction and time of their expected return.

(e) Instructions concerning challenging.

(f) Signals to be used.

(g) Means of identification of friendly vehicles and personnel at night.

(h) Where messages are to be sent.

(i) When he is to be relieved and direction of withdrawal in case of attack.

(4) Sentinels force vehicles which attempt to pass through the outpost to stop. Methods employed should not cause damage to men or vehicles. Removable blocks may be placed across roads or trails which enter the outpost to cause vehicles to stop or slow down for challenging.

c. Contact between outguards is maintained by visiting patrols. A definite system of recognition must be prescribed.

d. The reconnaissance troop furnishes information and warnings of air and ground attack directly to the outpost of the division, as well as to division headquarters. The reconnaissance troop may be attached to the division outpost to perform reconnaissance missions.

43. SECURITY OF TROOP TRAIN. **a.** The troop train accompanies troop headquarters in an advance. The support platoon affords protection when present. Vehicles of the train are equipped with radio to provide communication within the train and with

(1) This circular, guns-pointed-out arrangement is called a "lager"—not because it involves beer, but a reference to the Afrikaans word *laager* (camp), a circle of wagons set up at a halt by Boer settlers to guard against attacks by the Zulus and other enemies (they made quite a few). It was later used against the British, who adopted the word and the idea.

The advantages are obvious: all-around observation and security, and no guns are masked.

If there is no way to form a lager, you can halt on the road and orient to point the weapons to the sides, alternating directions by vehicle. We called this a "herringbone." I think the word is new, but the practice is not.

Mention is made of range cards. See this elsewhere. We should really do this, even though the practicality of a range card is limited by blank ammo.

(2) I have seldom seen reenactors post OP's or sentinels; I have often seen them embarrassed as a result. True, nobody dies because of this mistake; but you will have more to brag about after the battle if you do it right.

troop headquarters. Automatic weapons are provided on vehicles for antiaircraft defense and rocket launchers for antimechanized protection.

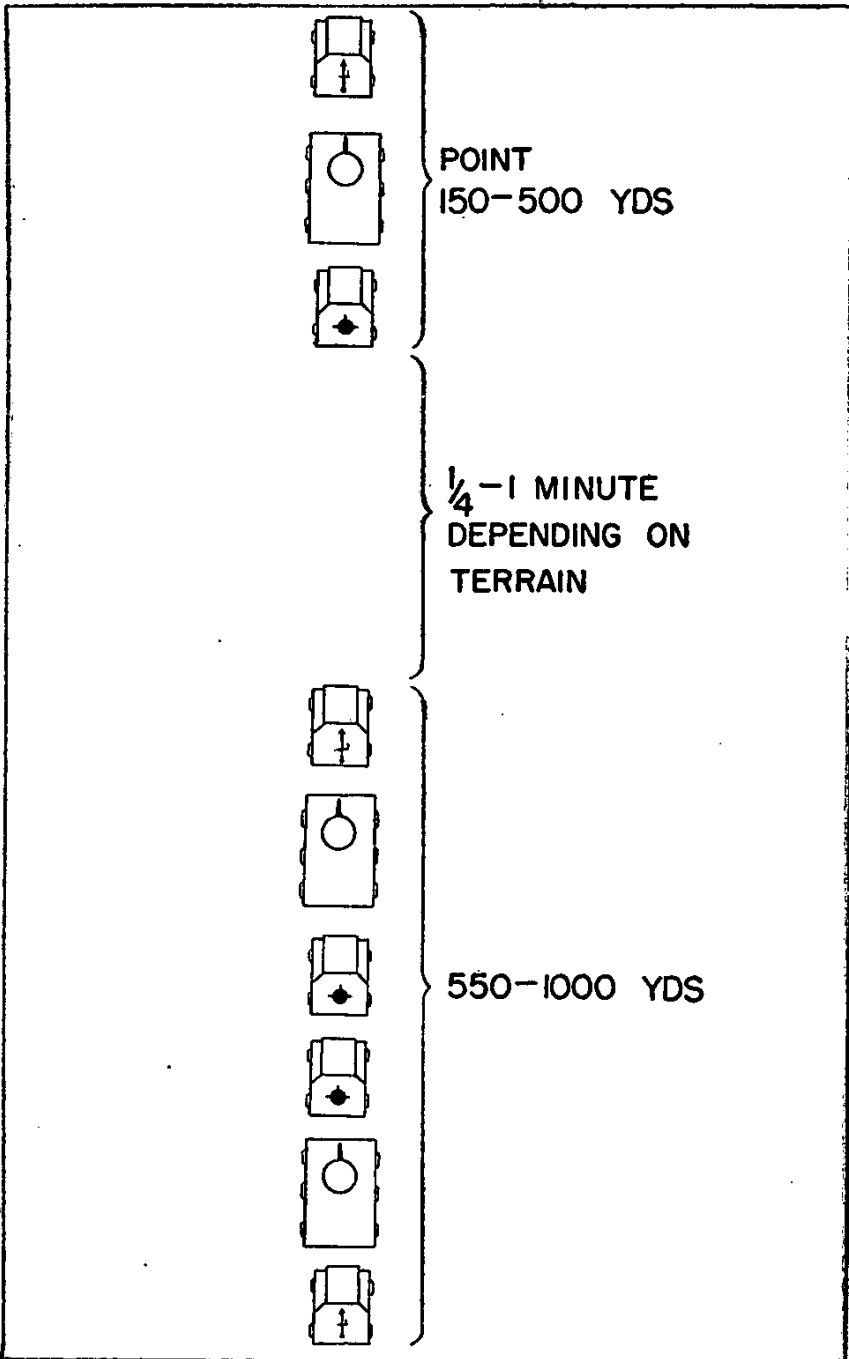


Figure 18. See page 54, (1).

Figure 18. Platoon as an advanced guard for the troop.

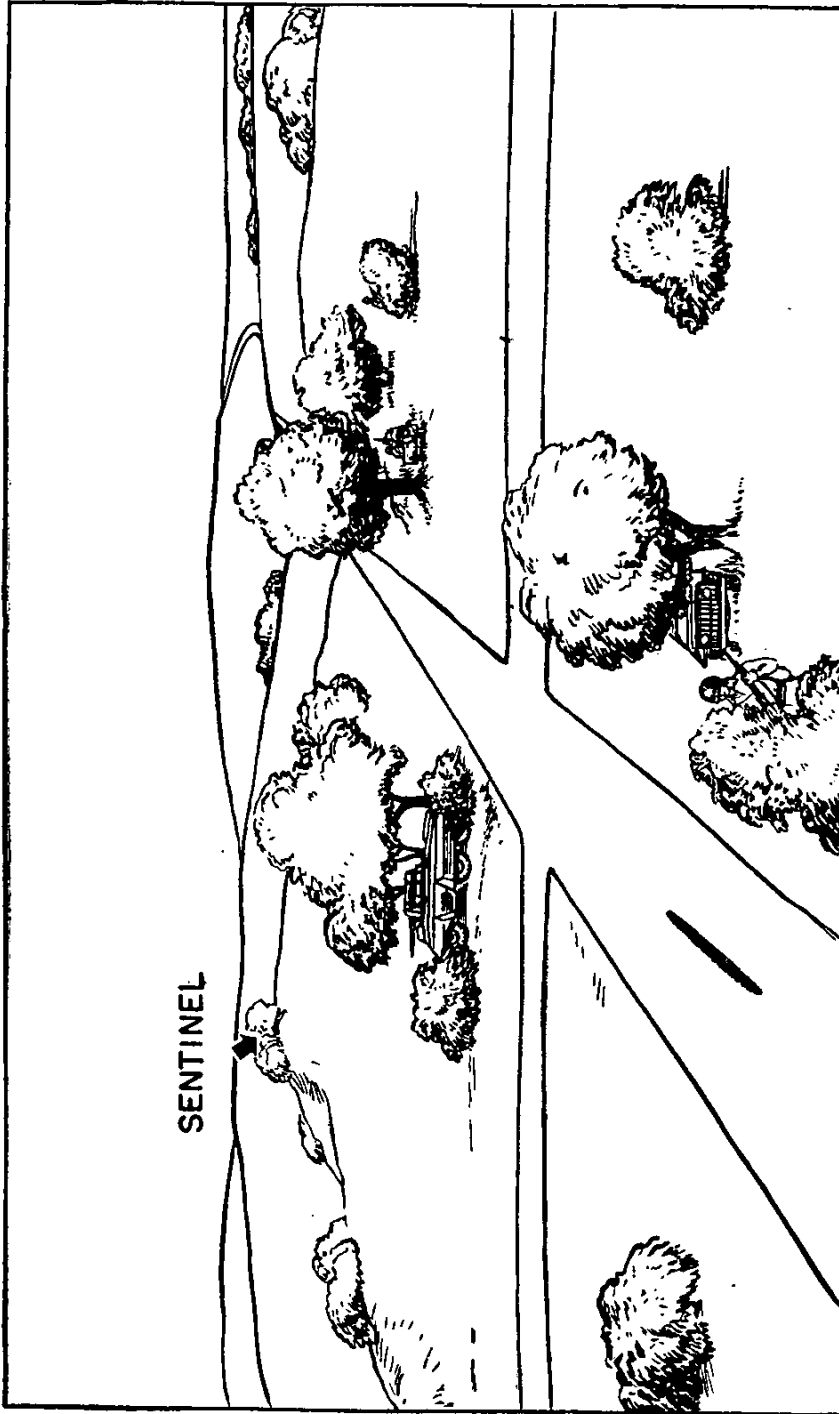


Figure 19. When a reconnaissance team halts, it immediately forms a march outpost providing all-around security.

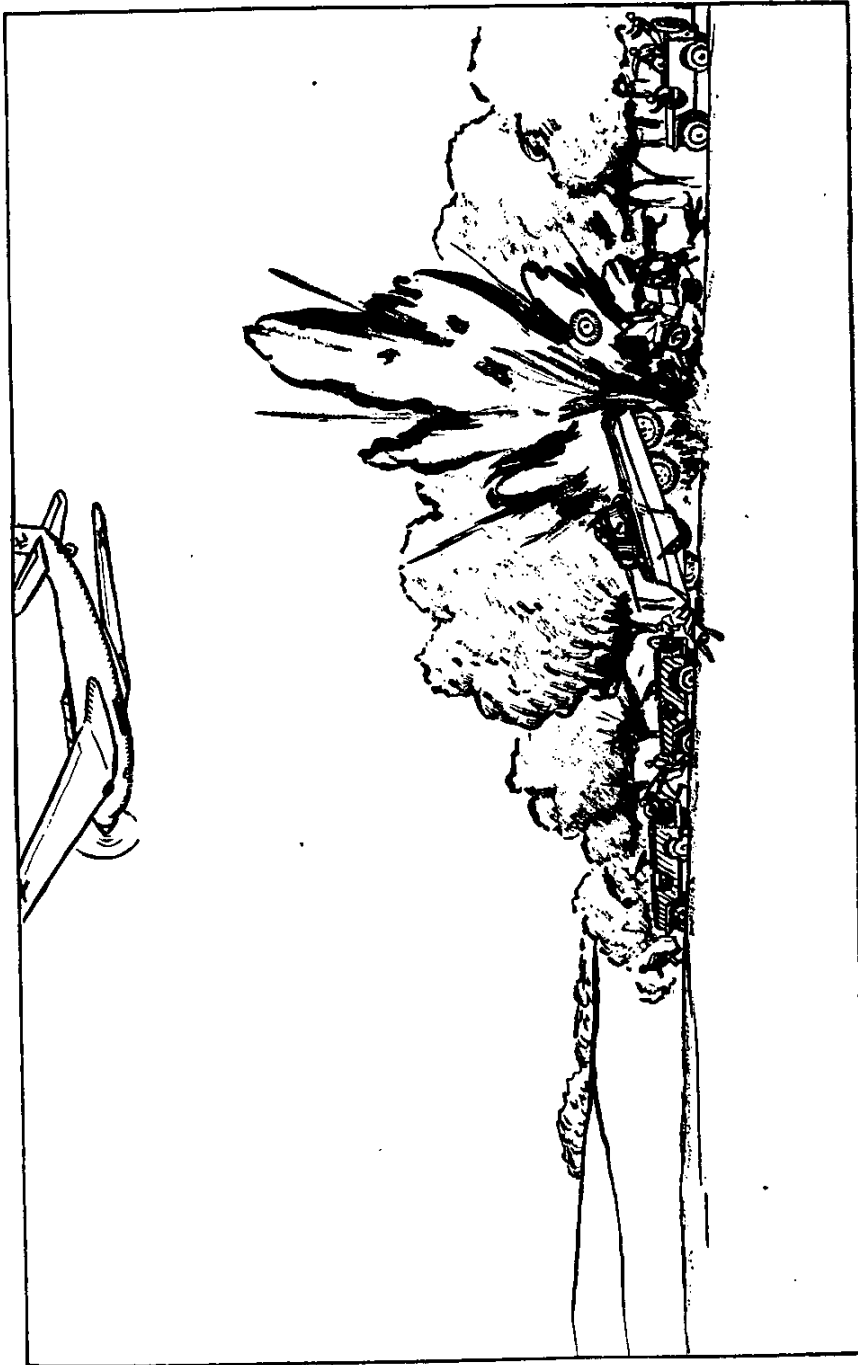
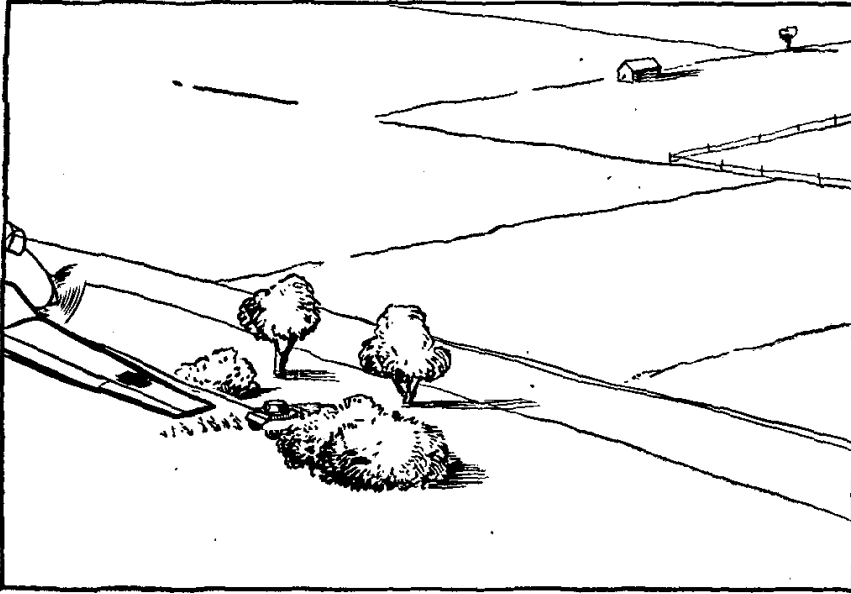
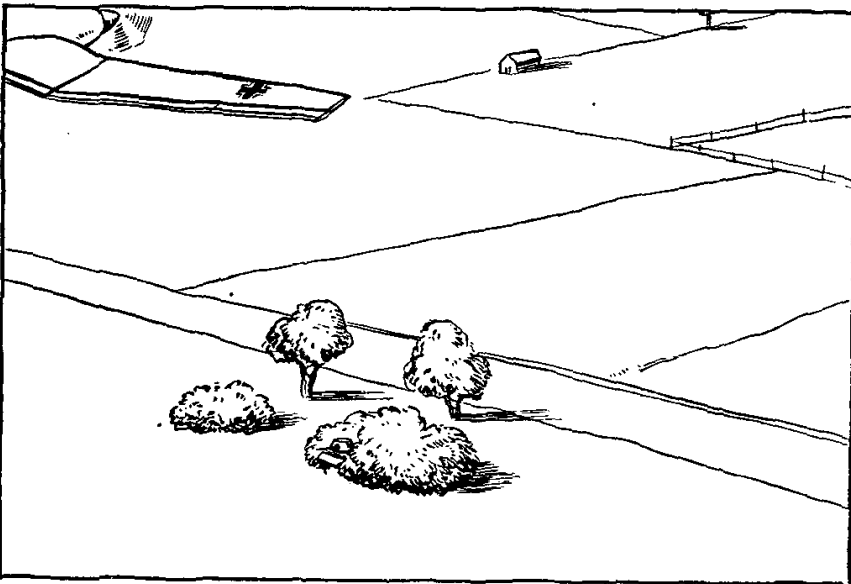


Figure 20. Do not close up during a halt. Halt with proper march distance so as not to present a massed target.



① *Wrong.*



② *Right.*

Figure 21. This refers to a factor well understood by snipers: the idea of **positive**, **negative**, and **neutral** ground. Positive ground is the first place an enemy will look for you (like the only clump of trees for miles). Negative ground is a place where you will be seen ("outstanding in the field"). Seek neutral ground—concealment, but not too obvious or eye-catching. You may have to help nature along a bit by cutting branches to garnish the vehicle and break up straight lines and obvious distinctive features. This requires a little work, but remember: getting killed can be effortless. *Think like trained soldiers.*

Figure 21. Do not halt in the open between bushes. Drive into bushes, leaving vehicle with good field of fire but difficult to recognize from the air.

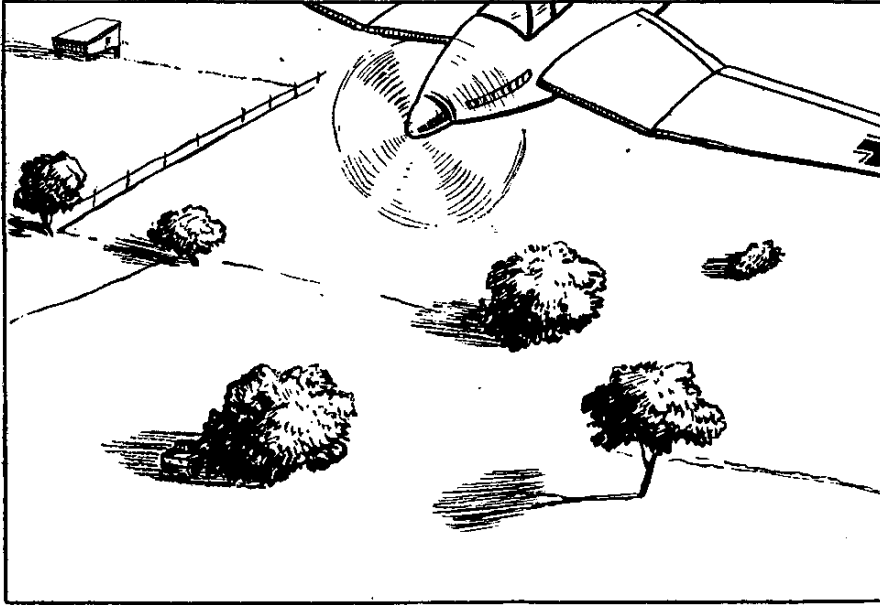
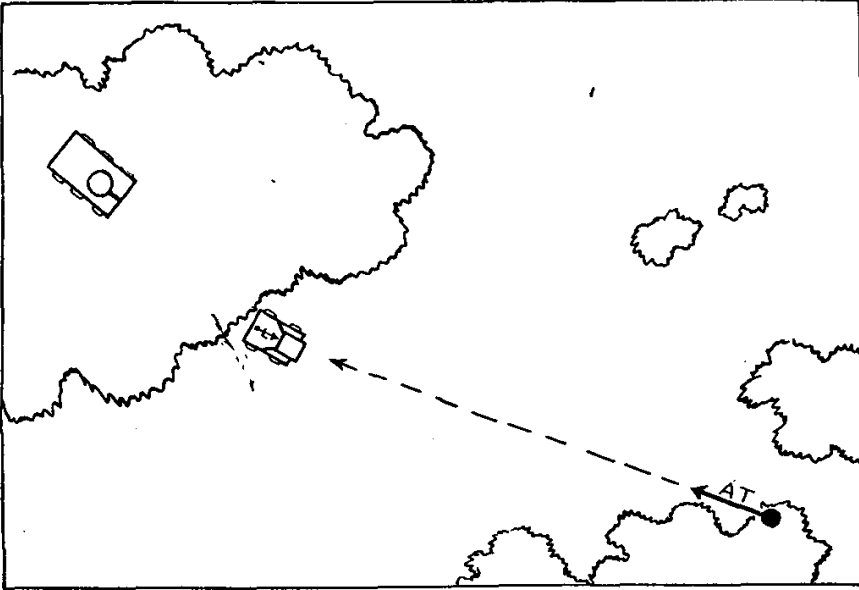


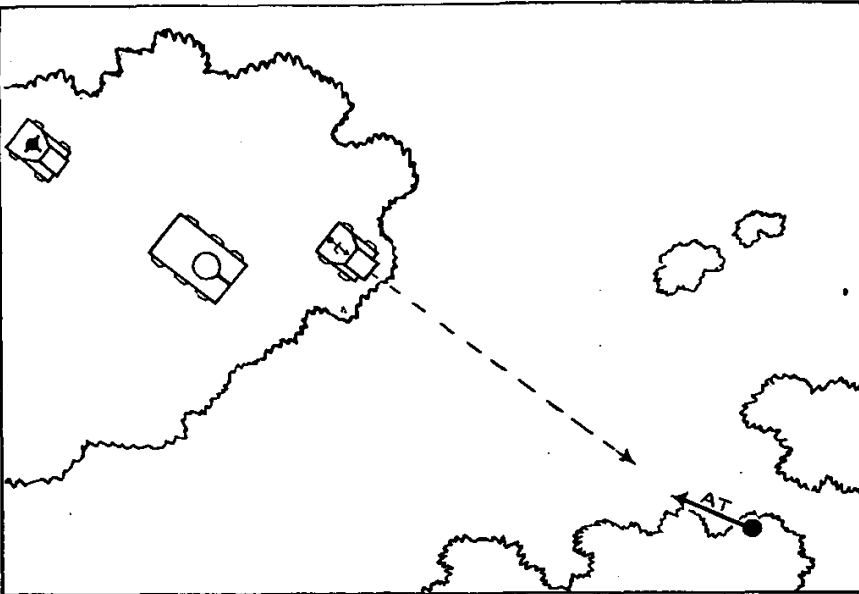
Figure 22. Here is the way to handle all of this. A skilled mounted recon leader learns the rules and always keeps them in mind, second nature. As you move, be aware of the terrain around you, always thinking about how you will use it to accomplish your mission—and how a trained enemy will use it to keep you from doing it.



Figure 22. Use shadow of trees when halted. Halt on the shady side of the woods' edge, not on the sunny side



① *Wrong.*

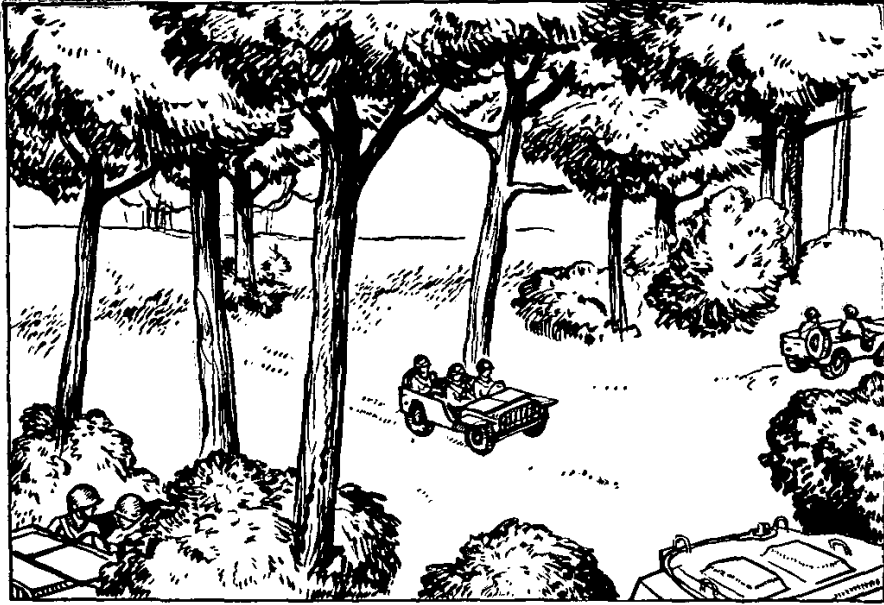


② *Right.*

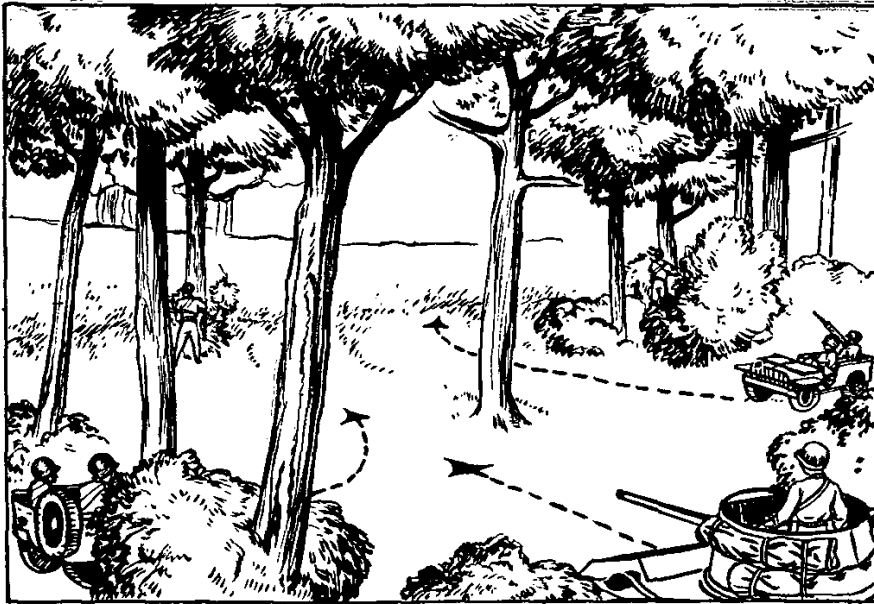
Figure 23. This is a practical problem. The M8/M20 armored cars move through woods like a basketball in a pinball machine. It's a major pain in the ass. If you've driven one of these beasts through the trees, you understand.

Answer: do the best you can, and don't get into a position where you can't move forward or back out (see Figure 24).

Figure 23. Do not halt outside the edge of a woods. Halt as deep in the woods as possible.

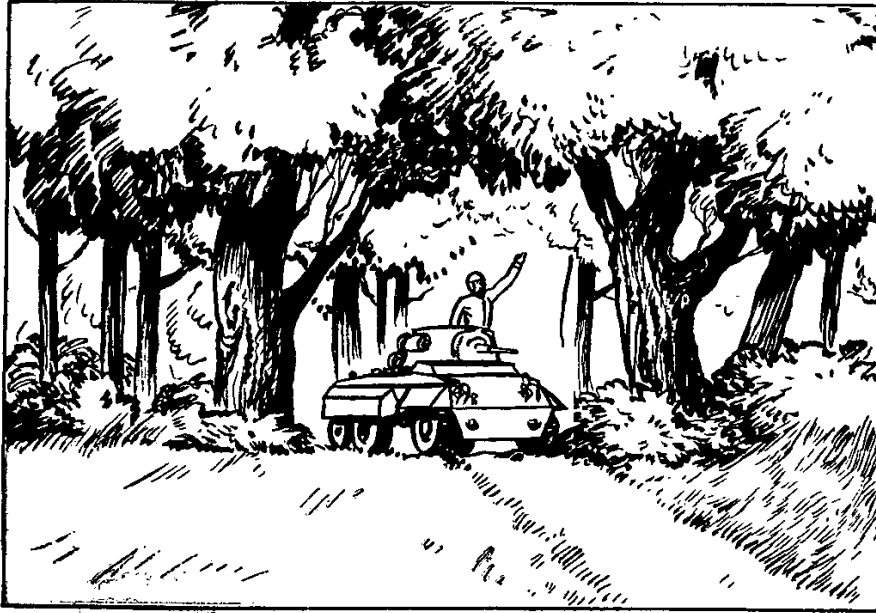


① *Wrong.*



② *Right.*

Figure 24. Do not halt so vehicles will have to back to move out. Head vehicles so they can be moved forward. Turn turrets so AT guns will give all-around protection.



① *Wrong.*



② *Right.*

Figure 25. Get comfortable with using a ground guide—it reduces your risk of getting wedged in the woods, and it's a safety factor for reenactors (corollary: always assume the infantrymen in the woods around you are idiots).

Figure 25. Do not remain in turret when moving into concealment; dismount and assist driver by signaling direction.



① *Wrong.*



② *Right.*

Figure 26. Place vehicles at least 50 yards apart. Face them so they can move out readily. Take advantage of concealment.

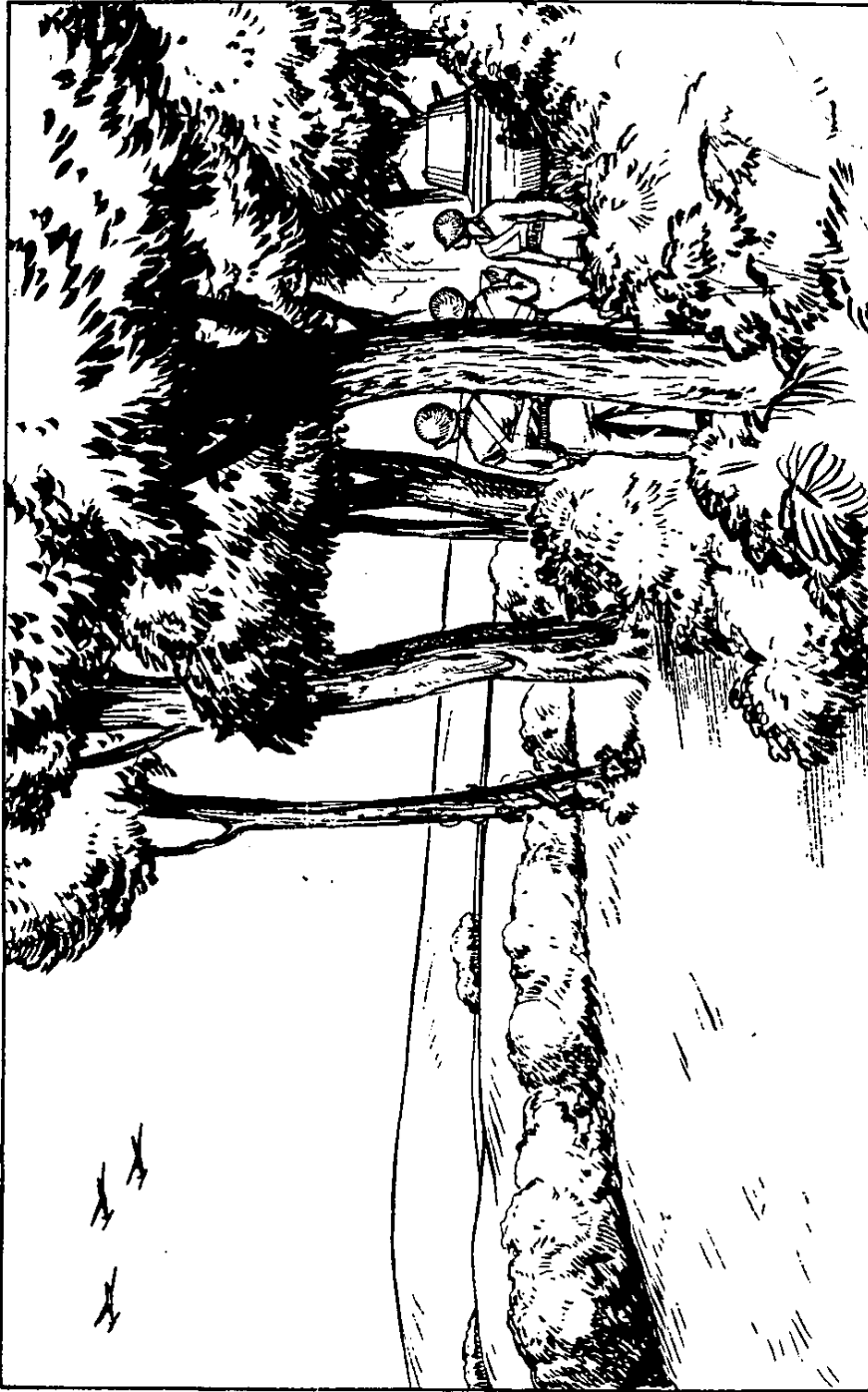
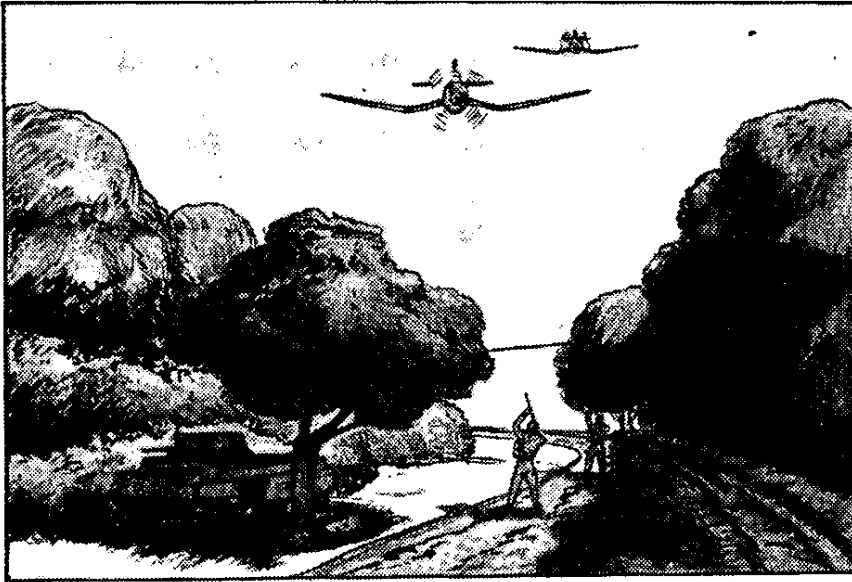


Figure 27. Keep the vehicle crews in the shade and under cover. Avoid movement in the open.

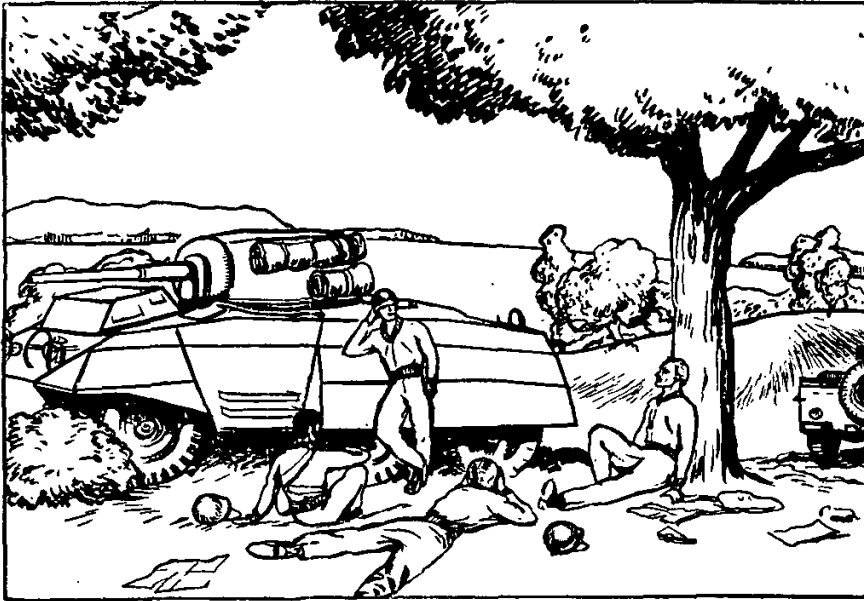


① *Wrong.*

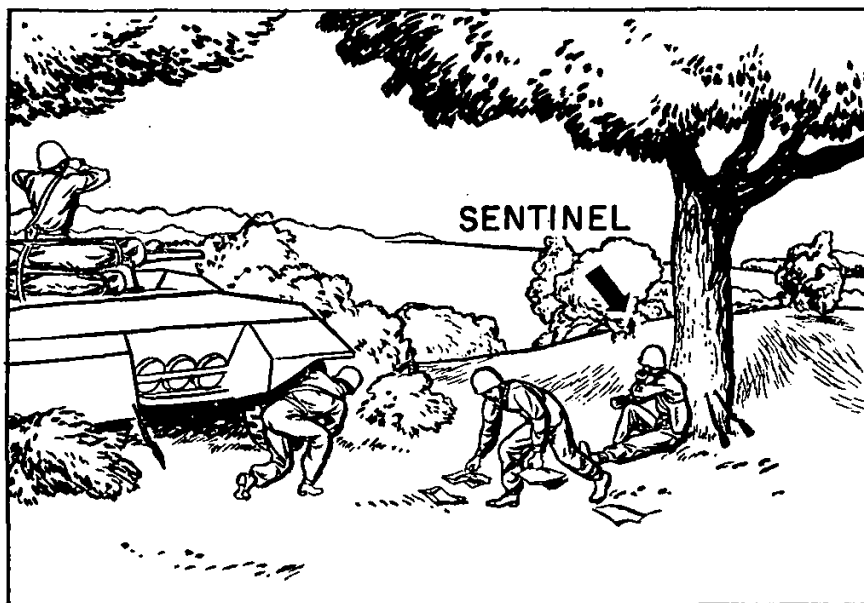


② *Right.*

Figure 28. Do not fire at hostile planes unless fired on; they may not locate you.



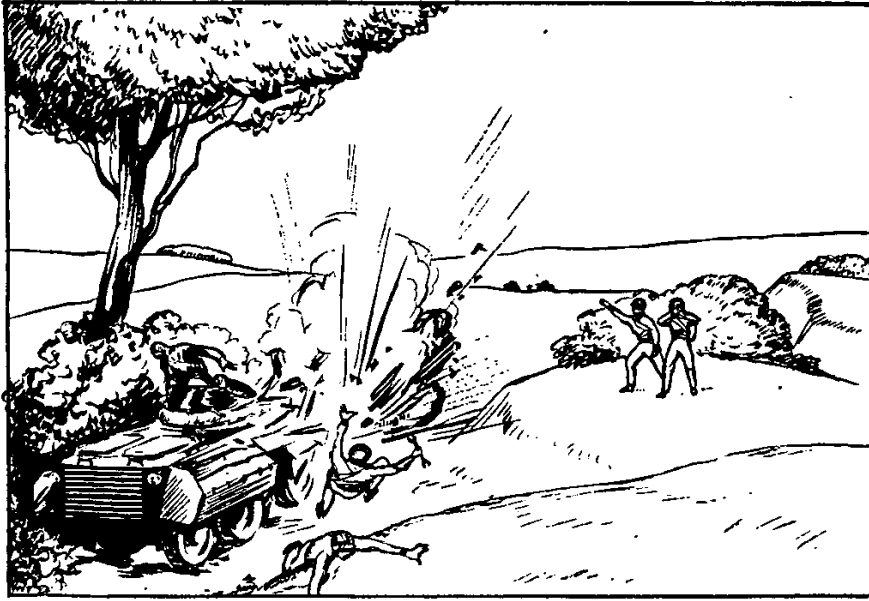
① *Wrong.*



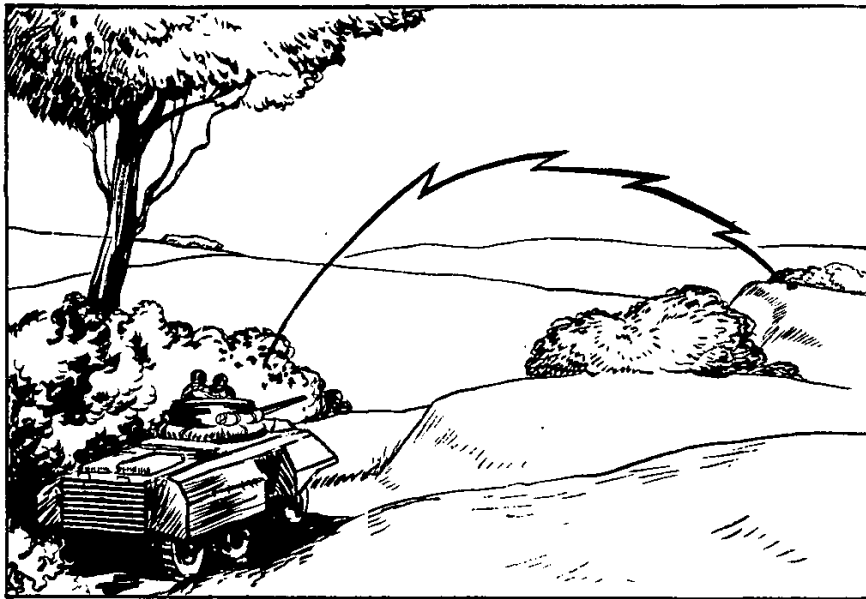
② *Right.*

Figure 29. I call this the "don't be a %&@\$ reenactor rule."

Figure 29. Do not allow men to loaf at the halt. Inspect vehicles; keep at least one gun manned; keep observer alert; police halt site before continuing.



① *Wrong.*



② *Right.*

Figure 30. Do not expect scouts close in to give adequate warning of mechanized attack. Post warning detachments well out.

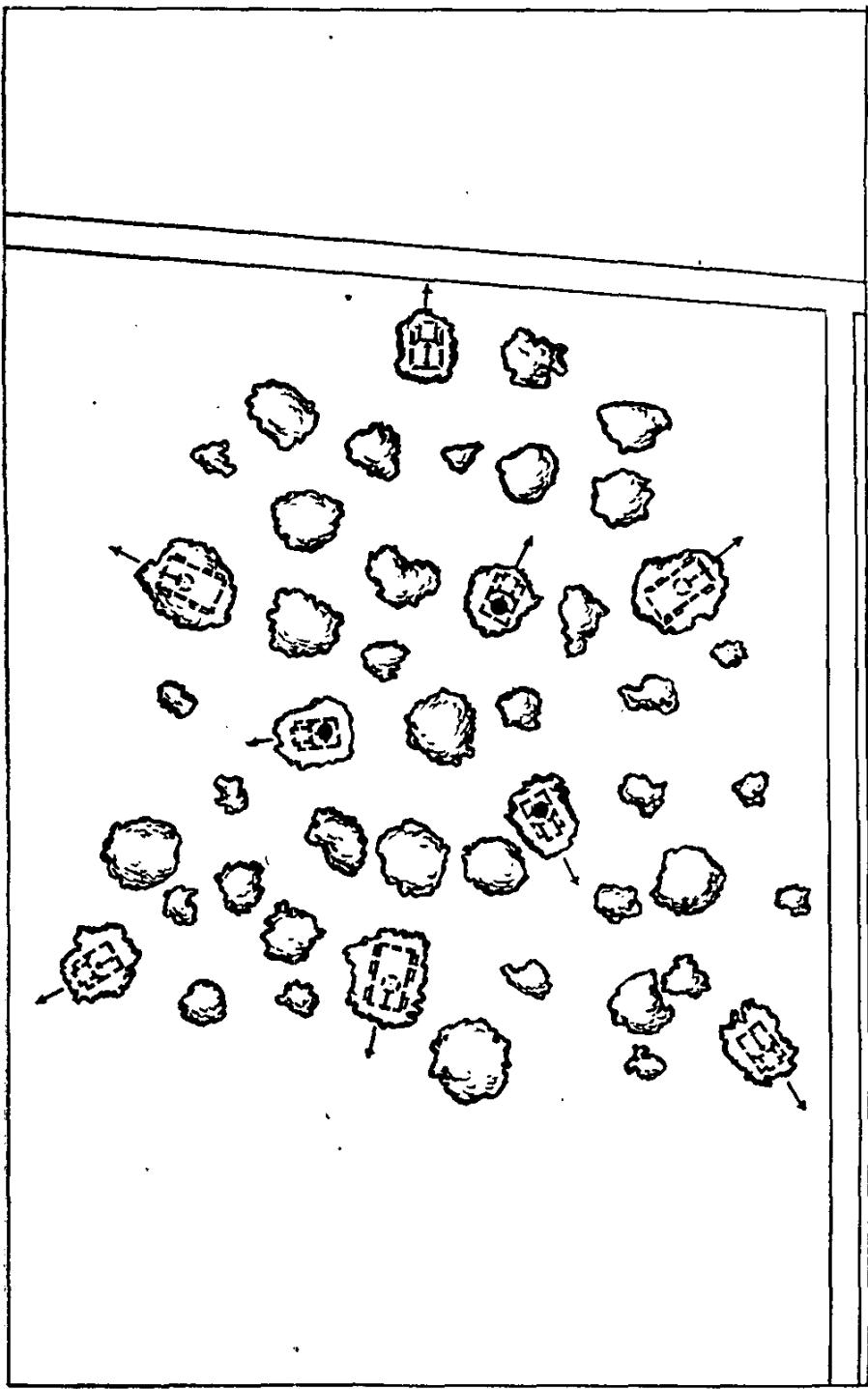


Figure 31. Disposition of vehicles of reconnaissance platoon to provide maximum security.

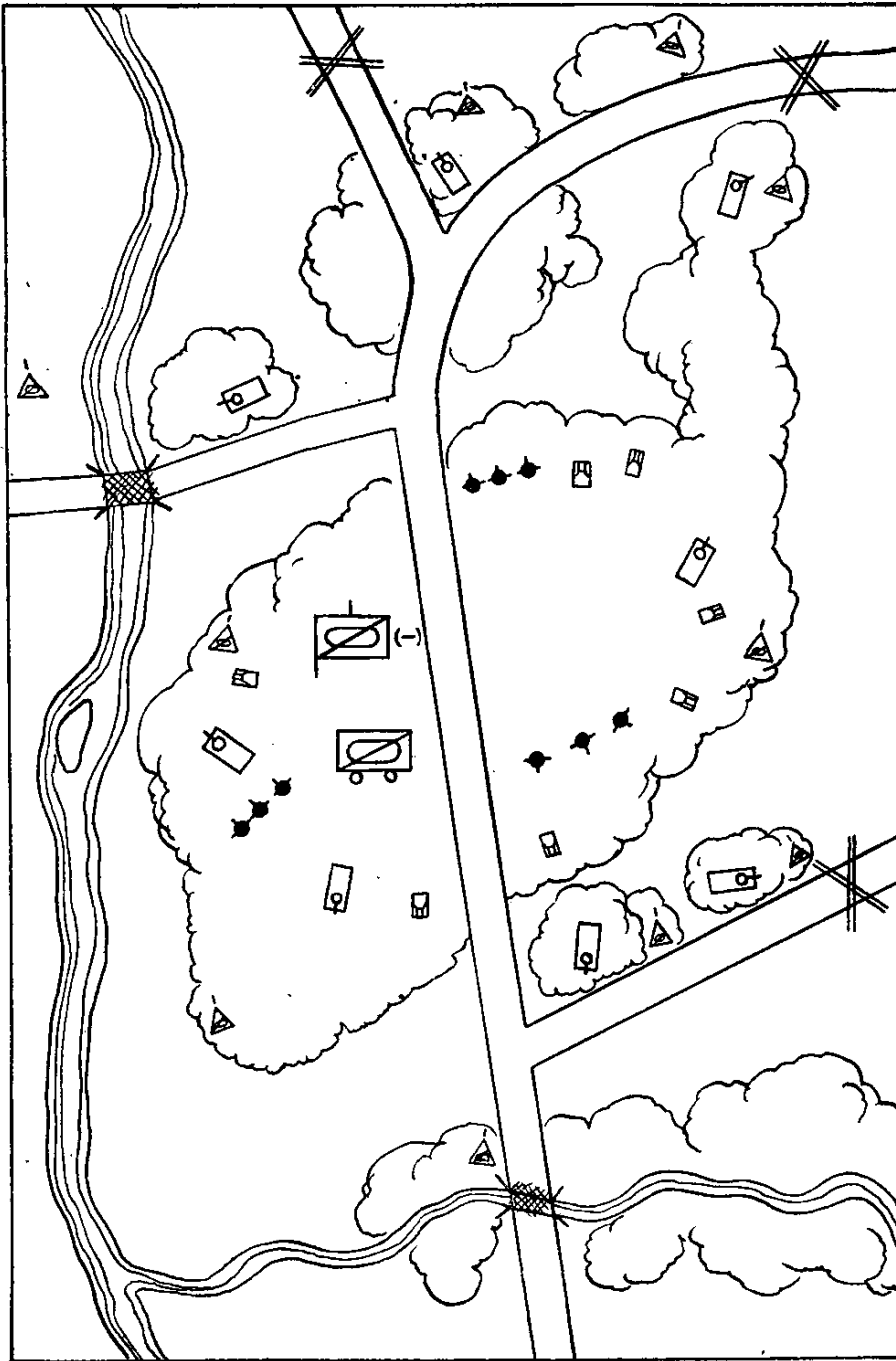


Figure 32. Organization of troop outpost. Cover avenues of hostile approach. Place train in center for greater protection. Use obstacles. Prepare bridges for demolition. Place mortars to cover approaches. Post observation groups.

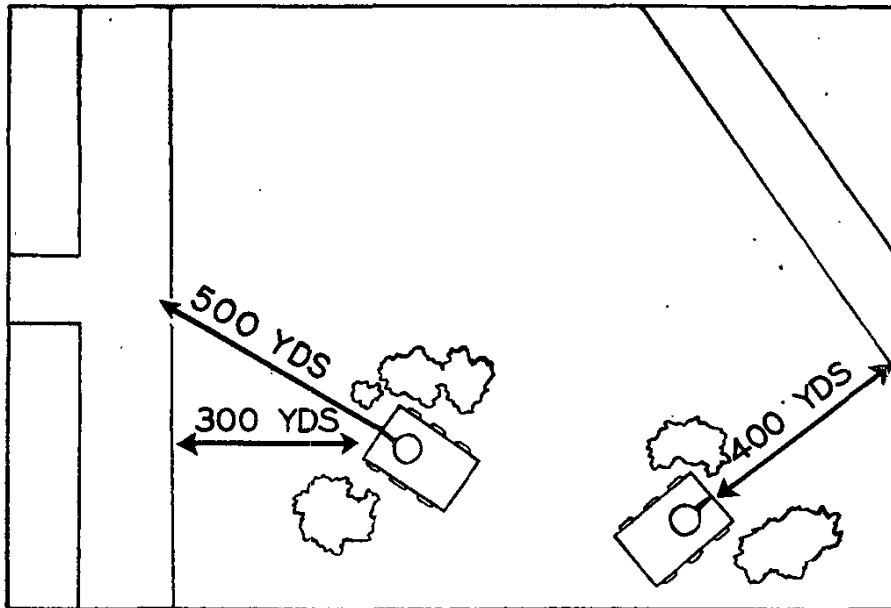
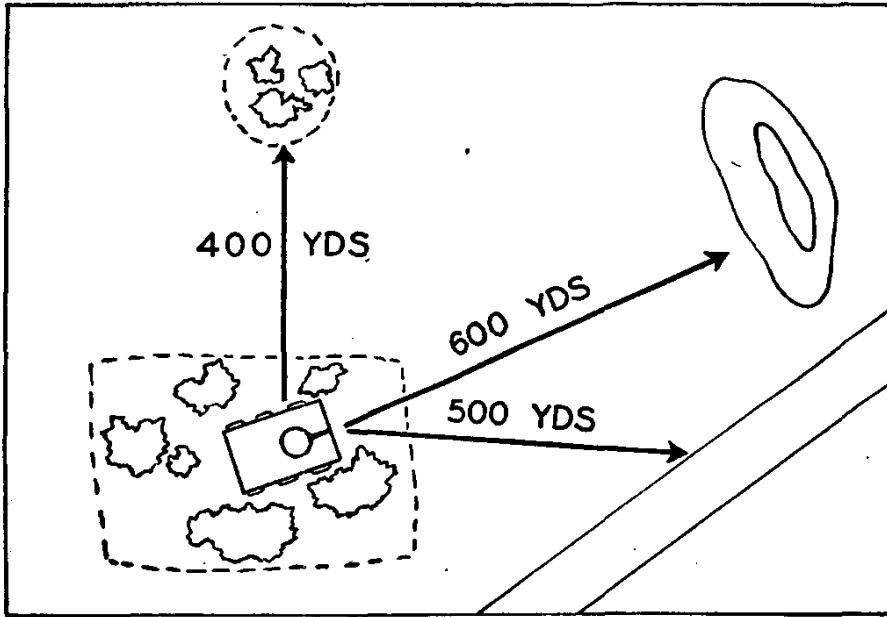
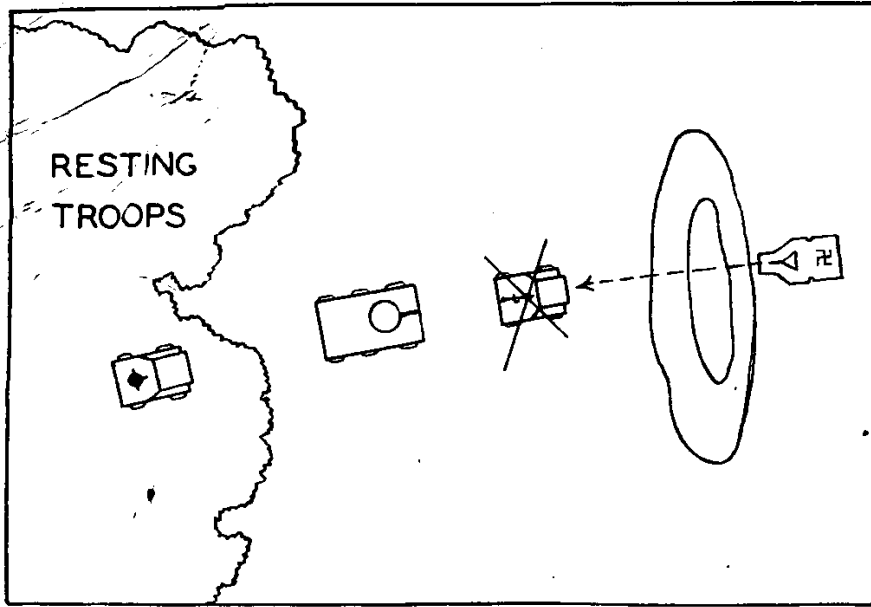
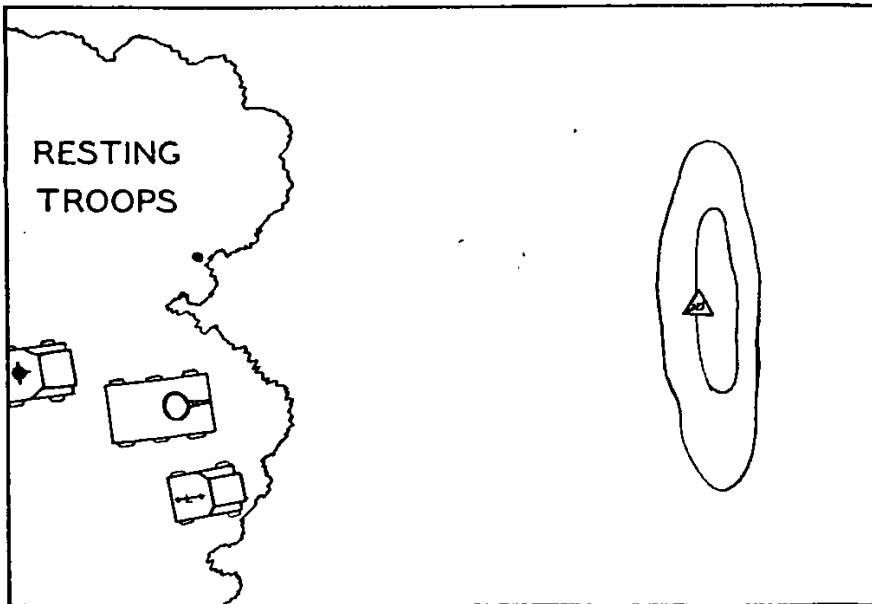


Figure 33. Vehicles on outpost are placed to block avenues of approach by fire. Ranges to important terrain features must be determined at once.

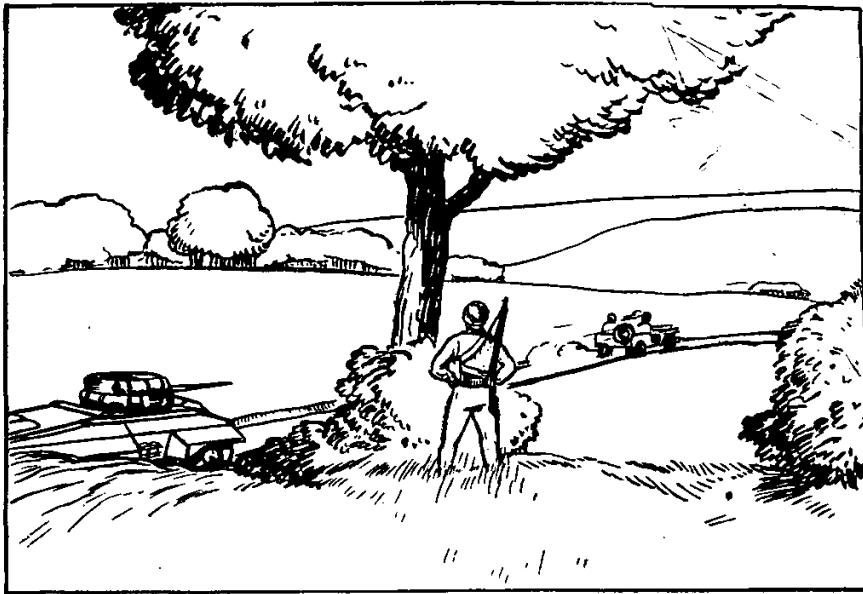


① *Wrong.*

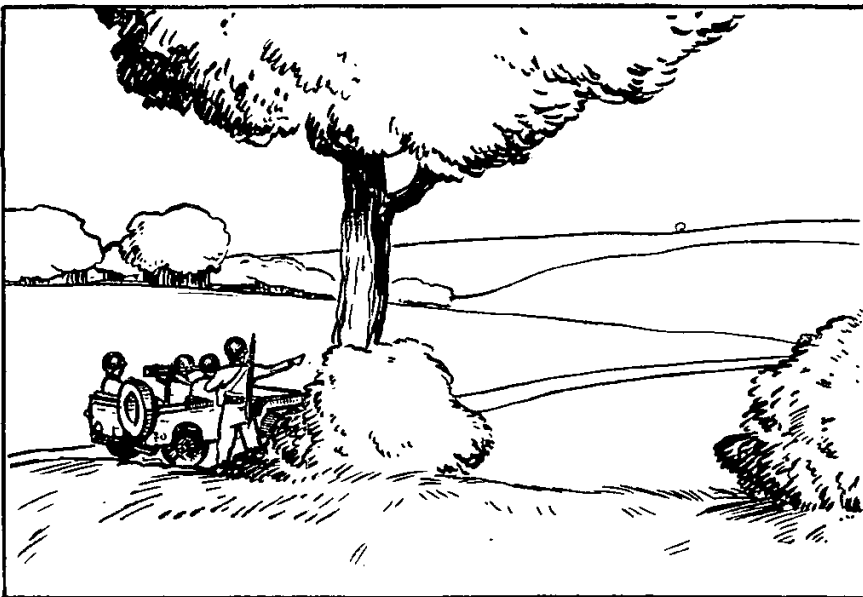


② *Right.*

Figure 34. When the observation point is bare, keep vehicles under nearby cover. Send dismounted observer forward under protection of weapons.



① *Wrong.*



② *Right.*

Figure 35. Stop friendly vehicles traveling toward the enemy: ask the mission; explain the situation and location of your post.

- (f) Signals to be used.
- (g) Means of identification of friendly vehicles and personnel at night.
- (h) Where messages are to be sent.

(i) When he is to be relieved and direction of withdrawal in case of attack.

(4) Sentinels force vehicles which attempt to pass through the outpost to stop. Methods employed should not cause damage to men or vehicles. Removable blocks may be placed across roads or trails which enter the outpost to cause vehicles to stop or slow down for challenging.

c. Contact between outguards is maintained by visiting patrols. A definite system of recognition must be prescribed.

d. The reconnaissance troop furnishes information and warnings of air and ground attack directly to the outpost of the division, as well as to division headquarters. The reconnaissance troop may be attached to the division outpost to perform reconnaissance missions.

43. SECURITY OF TROOP TRAIN. a. The troop train accompanies troop headquarters in an advance. The support platoon affords protection when present. Vehicles of the train are equipped with radio to provide communication within the train and with troop headquarters. Automatic weapons are provided on vehicles for anti-aircraft defense and rocket launchers for antimechanized protection.

b. When the train operates between supply points and the troops, the train commander provides security with organic means unless attachments are made by the troop commander. Personnel of all vehicles are alert for enemy air or ground activity. Information is transmitted to the troop commander by radio or messenger. The train commander, through prior map or road reconnaissance, must be prepared to change direct: on and route of march to avoid encounter with enemy forces. When warned of approaching aircraft, the train moves off the road, disperses, and halts, using available concealment to escape detection.

44. ANTI-AIRCRAFT SECURITY MEASURES. a. General. The reconnaissance troop provides security against air reconnaissance and air attack employing measures for warning, concealment, dispersion, and fire. Anti-aircraft security is prescribed in standing operating procedure (figs. 7 to 17, inclusive).

b. Warning. (1) Air scouts are designated in each vehicle to observe for hostile aircraft and give timely warning of their approach. On the march, they observe from the vehicles; at the halt, they are posted nearby. Security detachments are provided with signaling equipment if posted beyond visual range. All individuals are trained in the identification of hostile aircraft (FM 30-30). Air alarm may be transmitted by radio, visual signals, prescribed: whistle signals, firing of weapons, or voice.

(2) Units and individuals are governed by the following rules, upon receipt of the air alarm warning:

(a) When in column, all vehicles seek cover, or disperse if no cover is available, and halt.

(b) Personnel in open vehicles not naming antiaircraft weapons dismount and disperse.

(c) Movement is resumed on command after airplanes have passed.

(d) Platoon and teams halt but do not fire at aircraft unless attacked, since they hope to avoid detection.

(e) Dismounted men seek cover and remain motionless.

(f) Orders to fire at aircraft are not issued unless planes attack. When fire is ordered, all suitable weapons are used.

(g) Men do not look up at aircraft during daylight or at night when flares are used, because faces are detected readily.

(h) It is important that movement cease when flares illuminate an area.

(3) Units over which enemy planes have passed should be alert for attack by combat aviation which may follow if the unit has been discovered.

c. Concealment. (1) The presence of troops is disclosed to an air observer by movement, regular formation or outline, reflection of light, dust, smoke, fresh tracks, and new installations. Measures taken for concealment aim to defeat visual reconnaissance and photography. Concealment is not effective unless complete. Constant attention is required for effective camouflage.

(2) Natural concealment requires less time, skill, and material, and is more effective than camouflage. Vehicles are concealed under heavy natural cover, such as dense woods. In partly open country, they should be driven into woods or brush. (TF 5-646, 5-648, and 5-649.)

(3) If natural concealment is not available, vehicles halt on broken ground. Natural or artificial means are used to camouflage their natural outline.

(4) Camouflage should appear natural. Tree branches, brush, weeds, leaves, grass, or dirt are used to cover materiel that is partially or wholly exposed. Regularity of pattern, angles, and shadows must be avoided. (FM 5-20.)

(5) Care must be taken that tracks do not disclose the location of vehicles. Tracks may be obliterated for short distances by sweeping or by covering them with brush or leaves. Paths made within a bivouac area are concealed from air observation.

(6) Open fires and unshielded lights should not be permitted. Smoke may disclose the location of a bivouac during daylight.

d. Dispersion. Vulnerability to air observation and attack is lessened by dispersed formations. Dispersion may be accomplished

c. Reenactors are notoriously bad about using camouflage and deception. In fairness, so are most soldiers at first. The rules don't really get learned until you have been in combat for a while and see the results of stupid.

(4) Here is a bit of experience: *use natural garnish wisely.* First line of camouflage is picking a good spot; once you are there, don't cut down all the vegetation around you and pile it on your jeep or M8. This will be obvious to the enemy. Gather garnish from other areas. If you're piling on branches, remember that the underside of a leaf is lighter than the top: put them in place top side up or there will be a bright spot for the enemy to see.

FM 5-20 is a good read.

by increasing width and depth of formations, by moving in multiple columns, by distributing units in small groups within bivouac areas, and by halting vehicles at extended distances. The troop should have a prearranged system for dispersion in the event of air attack.

45. ANTIMECHANIZED SECURITY MEASURES. **a.** Mobility and skillful use of cover and concealment are the principal means of security against mechanized forces. Warning service, similar to that provided for antiaircraft security, is established.

b. Advantage is taken of natural obstacles, such as streams, lakes, marshes, thick woods, and mountainous country, which restrict enemy mechanized operations. Artificial obstacles, such as barricades, ditches, demolitions, and mines, provide additional security for bivouac areas.

c. When the troop defends against mechanized forces, fire of organic weapons is employed. The 37-mm guns with which armored cars are equipped are effective against most tanks at ranges up to 400 yards and against lightly armored vehicles up to 1,000 yards.

46. SECURITY AGAINST CHEMICALS. For security against chemicals, see FM 21-40 and **100-5**.

47. COUNTERRECONNAISSANCE. The troop is employed on reconnaissance when assigned to a larger force on a counterreconnaissance mission, and is used to locate and maintain contact with enemy patrols (pars. 27 to 29, incl.). Combat is avoided. The composition, location, and direction of movement of enemy patrols are reported promptly.

Section IV

Combat

48. OFFENSIVE COMBAT. **a.** The troop or platoon engages in combat with enemy forces which threaten the success of the mission. Elements support each other by employing fire and maneuver to effect the advance of the unit; or, a part of the unit contains the enemy while the remainder continues on the mission. The unit does not become involved so seriously that it cannot withdraw to

secure freedom of action for an advance in a new direction. In side-slipping hostile resistance, the detour is made beyond the effect of enemy weapons, so that the enemy must displace to offer further resistance.

b. A reconnaissance unit may encounter a defended obstacle which must be reduced in order to accomplish the mission. The unit attacks when reconnaissance indicates that the enemy position can be taken with the means available. Reinforcements are requested promptly when reconnaissance indicates enemy strength beyond the capabilities of the unit. Surprise, speed, and coordination are essential in the attack. The defenders must be located accurately, pinned by fire, and enveloped.

49. OBJECTIVES. When on reconnaissance, the troop or its elements attack limited objectives only. Vital observation points or other terrain features essential to the mission may be seized, and the defended obstacles or enemy forces which threaten the success of the reconnaissance mission may be attacked.

50. TACTICAL GROUPINGS. a. The reconnaissance troop engages in offensive action as a unit exceptionally. Platoons attack to accomplish assigned missions. The troop coordinates the action of platoons and directs the action of attached units. In an attack, three tactical groupings are formed: a base of fire, a maneuvering force, and a support.

b. The base of fire pins the enemy to the ground and neutralizes his weapons to assist the maneuvering force in reaching a position from which to assault. Weapons selected to form the base of fire are determined by the type of targets presented by the enemy and the availability of covered positions for armored cars and mortars. Elements of the base of fire displace to advanced positions when fire superiority is gained. Under favorable conditions, they may gain positions from which to participate in the assault.

c. (1) The maneuvering force moves by a covered route to a position from which to attack the enemy flank or rear. Movement is made in vehicles where practicable. Armored cars may be included where conditions favor the employment of their armament.

(2) The movement is protected by a covering force. Movement in vehicles terminates at the last available cover. The force continues dismounted in an approach march formation until compelled to fire in order to advance. Fire is opened on orders of the commander.

(3) Fire superiority is gained over the enemy by subjecting him to fire of such accuracy and intensity that hostile fire becomes inaccurate or decreased in volume. The base of fire assists in neutralizing enemy fire.

48. Dave Hackworth said it best: "If you find yourself in a fair fight, you didn't define your mission properly."

Cavalry recon units are not configured to get into a fight. Their equipment, organization, and armament comprise what is necessary to protect themselves from surprises and extract themselves from 'fair fights.' Even Reenactors sometimes understand this; but even if they do, shooting blanks is the top priority. In the example in **b.**, there is a stipulation that *offensive action is required or necessary only to the extent that is essential to accomplishing the mission.*

50. A divisional recon troop has to cover an entire division front. Even a recon troop from a squadron has to spread itself too thin to fight as a coherent formation. This places great pressure on (a) the troop commander's experience and judgment, (b) radio communication reliability, and possibly most important of all, (c) the unit tactical SOP. *The SOP is the playbook we go to when we're in doubt.*

b. *Fire and maneuver, fire and maneuver.* Wire your brains and reflexes to remember this. All the principles of war derive from this idea.

(4) Advances are made by infiltration and by successive rushes and maneuver of small groups. The movement of advancing elements is covered by the fire of those remaining in position. Groups push forward during each lull in enemy fire to occupy successive firing positions. The combination of fire and movement enables attacking elements to reach positions from which they can employ grenades and overcome the enemy in hand-to-hand combat.

d. A support is withheld initially. The support for the troop or platoon should not exceed a platoon or team, respectively. It is committed at the proper time and place to assure victory. After an attack is launched, the support is the principal means available to the commander to influence the action. Prior to being committed, it protects the flank and rear. It is held until the decisive moment and committed as a unit. Other uses are to cover reorganization on the objective, to initiate limited pursuit, or to cover a withdrawal. The support commander maintains contact with the unit commander.

51. EMPLOYMENT OF WEAPONS. a. General. The troop can deliver heavy fire with mortars, antitank guns, and automatic weapons. The variety of weapons with which the troop is equipped permits the assignment of proper weapons to engage particular targets.

b. Individual weapons. Each man is armed with a rifle, carbine, or submachine gun. He carries his weapon whenever he is dismounted from the vehicle. Grenades are carried in vehicles for issue to individuals when required.

c. 37-mm gun. The 37-mm gun has a high muzzle velocity and flat trajectory. It is effective against most tanks at ranges not exceeding 400 yards when armor-piercing ammunition is used. Armor-piercing ammunition is effective against lightly armored vehicles at ranges less than 1,000 yards. High explosive ammunition is used against machine guns and antitank weapons. Canister is effective against personnel at ranges less than 200 yards. The gun is employed from positions which afford hull defilade for the armored car (fig. 36). No ground mount is provided for the 37-mm gun. Fire from a moving vehicle is inaccurate.

d. Machine gun. The caliber .30 machine gun is a flat trajectory weapon capable of delivering a relatively high volume of fire. It is primarily an antipersonnel weapon. Caliber .30 armor-piercing ammunition is effective against lightly armored vehicles at close range. The gun may be fired from the vehicle or from the ground (fig. 37). Fire from a moving vehicle is inaccurate.

e. 60-mm mortar. The 60-mm mortar is a high-angle fire weapon for use against crews of enemy weapons, personnel grouped closely, and targets in defilade. Mortars of a platoon may be fired as a unit or individually. The mortar can be fired from the

c. The 37 is next to useless against most actual tanks as of 1942. On the other hand, if your platoon spots a company of Panthers approaching, it's probably safe to say "mission accomplished."

d. Most jeeps with pedestal mounted MGs are owned by individuals who have a vested interest in using the jeep as the primary system. However, the cal. 30 light machine gun is best employed tripod-mounted on the ground. On the jeep the weapon (and the gunner) are fatally exposed. It's almost always better to dismount the weapon.

¼-ton truck or from the ground (fig. 38). Mortar fire must be observed and adjusted. Crews select primary and alternate positions habitually. Limiting ranges of the mortar are approximately 100 and 2,000 yards.

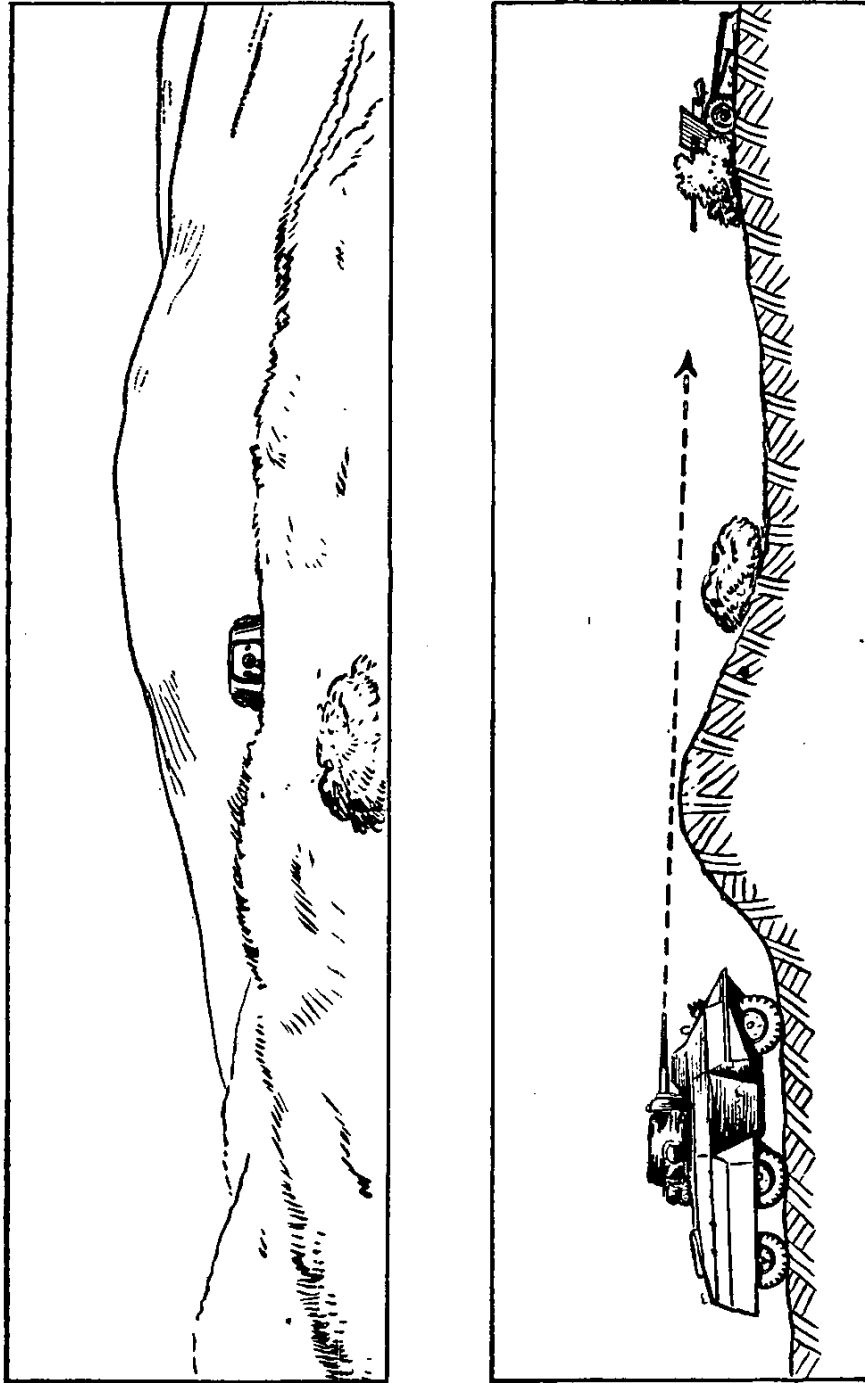


Figure 36. Armored cars seek positions offering hull defilade when firing.

e. The 60mm mortars can cause the enemy endless grief, and due to their lightness and flexibility they are well suited to armed recon operations.

However, they have to be dismantled to fire. The prescribed procedure is to halt the jeep in a covered and concealed position and lug the mortar and accessories forward to be set up and employed. For this reason, they aren't much good in a running fight.

Always set up a primary position and an alternate position. Even if you're in a covered and concealed position (as you damned well need to be), a sharp enemy will soon figure out where you are and start returning fire. At that point (or even before, just before that point) it's a good idea to skedaddle from the primary and resume from the alternate position.

Figure 36. Hull defilade is good; "turret defilade" is even better. That involves backing the vehicle down the reverse slope until there is just enough of the turret visible to allow a shot.



Figure 37. Automatic weapons are set up on the ground when good vehicle positions are not available.

f. Rocket launcher. Rocket launchers are provided for anti-tank protection. They are effective also against buildings, machine-gun emplacements, and embrasures: The launcher has a relatively low rate of fire and a distinctive flash on discharge. It is inaccurate at ranges over 300 yards. It is a powerful supporting weapon at short ranges.

g. Ammunition. Because of the small amount of ammunition carried in each vehicle, economy must be exercised in its use. Use the proper weapon and ammunition. For example, use the 37-mm gun on targets against which other available weapons are ineffective. Strip disabled vehicles of ammunition whenever practicable. Platoon leaders check ammunition frequently and redistribute when necessary.

52. COORDINATION AND CONTROL. a. The commander coordinates the efforts of all elements employed in the attack. The following control measures are included in the attack order:

- (1) Mission.
- (2) Initial dispositions.
- (3) Direction of attack for each element.
- (4) Time of attack.
- (5) Objectives for each element.
- (6) Signals for lifting supporting fire.
- (7) Instructions for maintaining contact and for flank protection.
- (8) Initial location of the commander.

b. Reliable communications are essential for coordination and control during an attack. Orders must be clear and concise. Messengers, radio, and visual signals are used for communication. The commander observes from a forward position or accompanies the maneuvering force.

c. Where practicable, complete orders are issued orally to assembled subordinate commanders at a point from which the objective can be seen (fig. 39). Orders are delivered by radio or by messenger to leaders who are absent. Fragmentary orders may be issued when necessary.

53. REORGANIZATION. The unit reorganizes promptly when the objective is reached. Preparations are made to repel counterattack and to continue the mission. Duties of leaders during reorganization area.

- a.** To provide all-around security.
- b.** To replace leaders who are casualties.
- c.** To reconnoiter to the front and flanks.
- d.** To care for the wounded.
- e.** To report the results of the action to the next higher commander.

g. The practice of most units is to stuff as much ammo as possible on the vehicle—even if you end up having to drink swamp water and eat your dead. If you run out of ammo, it's because you made bad decisions.

52 a. Every leader should master the basics of the five paragraph field order. If you don't, you will eventually screw up and forget something or present garbled information. In a year as a company commander in combat I issued an order *every single day we were in the field.*

b. The best advice about radio comms: think about what you are going to say, say it, then STFO. When you babble, you tie up the radio net.

See **FM 101-5** for details.

53. On one of those rare occasions when a reenactor unit actually has an objective and occupies it, the usual response is a happy circle jerk. Your first requirement as a leader is to consolidate on the objective: reorganize, redistribute ammo as needed, put out security, report back to higher. Brag later, if you still can.

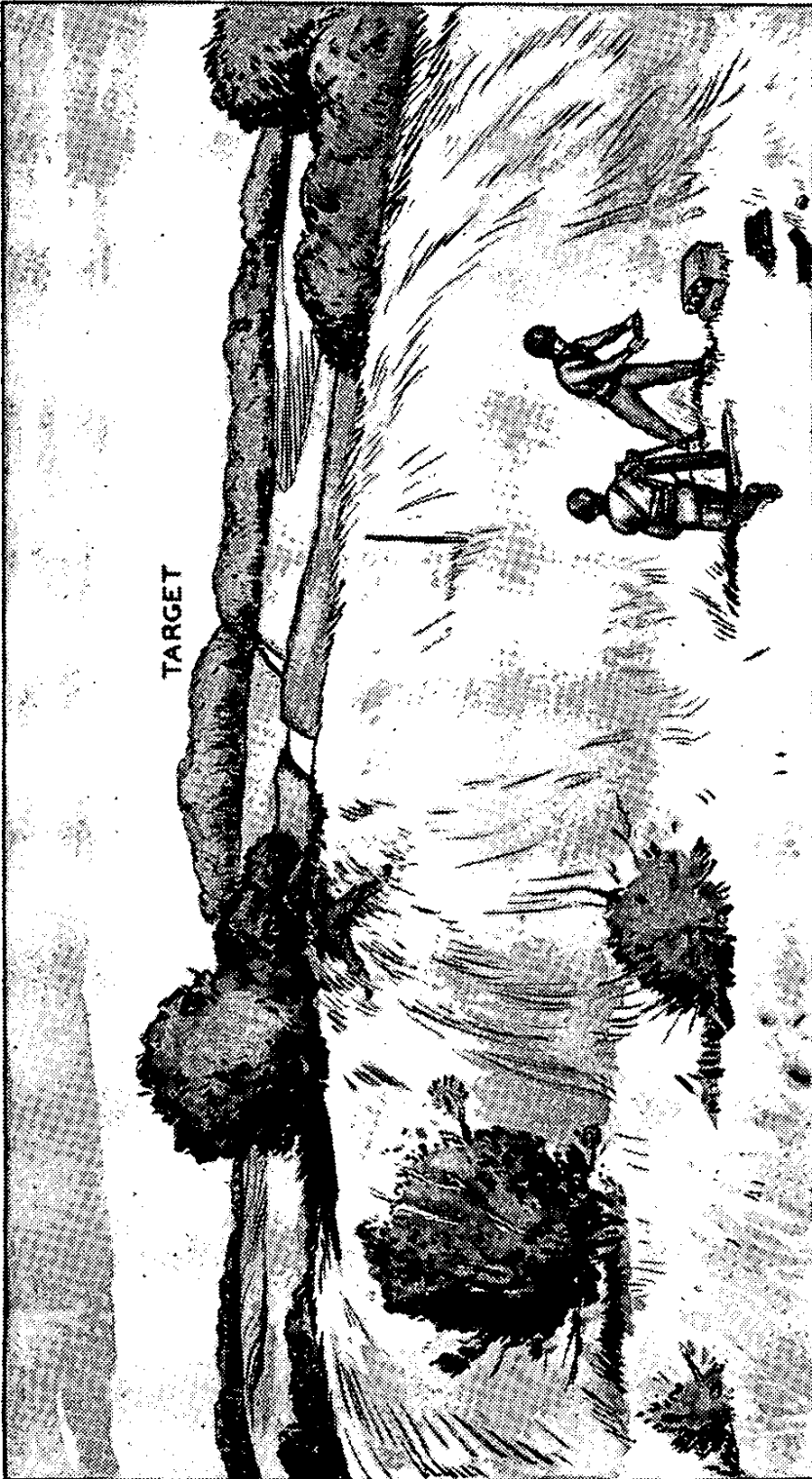


Figure 38. The mortar should be placed in a defiladed position near good observation.



Figure 39. Do not give orders from a map or by description alone, if a position can be reached from which enemy and terrain can be pointed out.

f. To redistribute ammunition.

g. To send prisoners and captured documents to the next higher headquarters.

h. To issue orders for future action.

54. DEFENSIVE ACTION. a. General. Elements of the reconnaissance troop may be required to defend observation posts,

bridges, or defiles, in order to accomplish reconnaissance missions. Enemy attack may necessitate defensive action in other instances. The decision to defend a position rather than to conduct a delaying action should be made after weighing the advantage to be gained against the risk involved. The fire which can be delivered with concealed vehicular weapons, emplaced automatic weapons, and mortars compensates partially for inadequate personnel. Mobility is employed to gain information of the attacking forces, to maneuver supports, or to effect withdrawal. Defense of an isolated position by a small force exposes the unit to danger of being cut off and destroyed.

b. Defense of a position. Defense of an isolated position requires patrolling on all routes of approach, local security measures, organization of ground for all-around defense, and mobile supports available to occupy previously prepared positions or to counterattack. The position is organized to the extent that time permits. Fox holes and weapon emplacements are dug and camouflaged. Weapons are sited to cover approaches. Alternate and supplementary positions for weapons are selected and prepared. Close-in defensive fires are planned. Natural obstacles are improved and supplemented where practicable. Part of the position is occupied. Separate plans are made for employing the support to reinforce the position, extend the position, and to counterattack. Routes of withdrawal are reconnoitered.

c. Delaying action in successive positions. (1) A delaying action in successive positions is conducted by offering limited resistance only on each position. The unit is deployed on the broadest front which will permit control and mutually supporting fires. When a flank is exposed, a stronger support is retained. A position near the topographical crest is better generally than one on the military crest. The former affords the unit defilade immediately upon initiation of withdrawal. Fires are opened at extreme ranges in order to force the enemy to deploy and to make time-consuming preparations for attack. A natural barrier to enemy approach is desirable. Mines are placed if time permits. Early reconnaissance of successive positions and routes of withdrawal by all leaders is necessary.

(2) Withdrawal to a rear position is made before hostile fire can pin the unit to the ground and before the enemy can reach assaulting distance. Withdrawal can be made by elements successively or simultaneously. When withdrawing successively, units support one another's movement. When they withdraw simultaneously, each unit supports its own withdrawal (par. 55). Patrols maintain contact with the enemy between delaying positions.

d. Delay on one position. Elements of the troop may be required to hold a position for a predetermined time. A unit defend-

b. The defense of a position by a light reconnaissance platoon is a last resort only, a move that can only delay or annoy an enemy. Sometimes that becomes the mission; so we take it seriously and dig in as if we're planning to stay there forever. As a practical matter, this will be a prepared position only if the platoon or troop has been cut off and cannot retire.

c. The discussion about defending from the topographic crest refers to the definition of the topographic and military crests. The military crest is below the topographic crest (that is, the top of the hill or ridge) so that defending forces are not silhouetted (see lesson on terrain analysis in the map reading course). Defending from the topo crest is no picnic, but if you're delaying the enemy it makes sense. As soon as you move to the rear you are in defilade.

ing a single position to effect delay organizes the position and plans its fires as Indicated in **b** above.

55. BREAKING OFF ACTION. A reconnaissance team or platoon breaks off action to side-slip enemy resistance, or to withdraw to secure freedom of movement. All elements do not withdraw simultaneously, since the enemy might have mobile forces with which to pursue. A small covering force, located in the rear or to a flank, covers the withdrawal. The remainder of the unit assembles in a position which is protected from direct fire, and assists the covering force to withdraw. Mines and demolitions are used to impede the enemy advance.



Figure 40. Hold key point by disposing vehicles to cover all directions. Send security detachments well out. Select alternate and supplementary positions for vehicles and weapons.



Figure 41. Remember:

1. Mines and wire are useless unless they are covered by fire.
2. Mines and wire are useless unless covered by fire.

And once more for emphasis:

3. Mines and wire are useless unless they are covered by fire.

Figure 41. Place vehicles to fire on hostile vehicles approaching ambush. Site machine guns and mortars to prevent hostile personnel from removing obstacle. Select alternate positions for all vehicles.

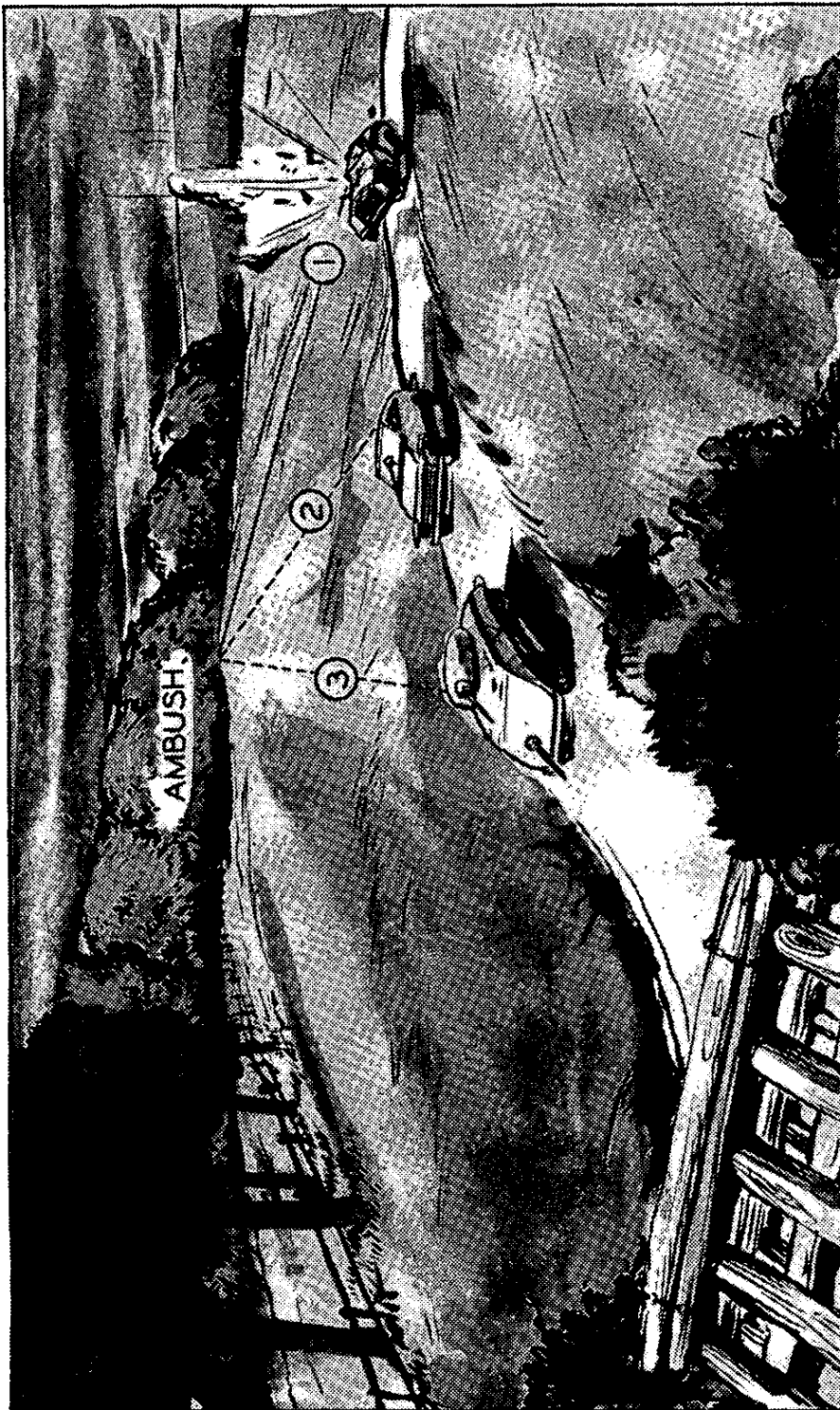


Figure 42. Antimechanized weapons of an ambush should fire on rear vehicles first.

CHAPTER 3
EMPLOYMENT OF CAVALRY
RECONNAISSANCE TROOP, MECHANIZED,
CAVALRY RECONNAISSANCE SQUADRON,
MECHANIZED

Section I

General

56. MISSION. The reconnaissance troop is the principal reconnaissance element of the cavalry reconnaissance squadron, mechanized. Its primary mission is to furnish the commander of the unit to which the squadron is assigned or attached with information upon which to base a decision for employment of that unit. It has relatively great fire power and mobility and is capable of additional missions of security for the squadron and of combat in the performance of reconnaissance.

57. METHOD OF OPERATION. a. The troop operates as does the cavalry reconnaissance troop, mechanized, infantry division, employing infiltration tactics, fire, and maneuver to accomplish reconnaissance missions (par. 17). For tactical operations, an assault-gun platoon from the cavalry assault-gun troop of the squadron habitually is attached.

b. The troop operates on reconnaissance as a unit only in the sense that its commander controls and coordinates the activities of platoons. The platoon is the basic tactical unit, and separate missions are assigned each platoon.

57. The provision of a light tank troop and assault gun troop significantly increases the fighting power of each recon troop. It is not enough to make picking fights with enemy tanks a good idea, but it does increase the offensive and defensive capacities.

b. Consider the length of front the squadron will have to cover with two troops forward. This assures that the troops must be operating more independently.

c. The squadron normally operates with two (three) reconnaissance troops initially assigned to active reconnaissance; one reconnaissance troop, together with the light tank company, initially may constitute the squadron reserve. The squadron reserve may be employed to create a gap in the enemy's screen in an area which favors subsequent reconnaissance operations. During the action, reconnaissance elements are prepared to pass through the gap without delay.

d. A reconnaissance troop of the squadron, armored division, with an assault-gun platoon attached, may be attached to a combat command.

e. The troop may be supported by the light tank company, the latter providing combat power to overcome minor opposition. The light tank company may be attached as a unit or by platoons to reconnaissance elements when the squadron front is so broad, or the terrain so difficult, that reserves cannot be moved readily to all parts of the squadron zone. Attachment also may be made when hostile resistance can be foreseen. The light tank company is employed most effectively in combat as a unit, supported by the fire of assault guns to neutralize antitank weapons. (**FM 17-30** and 17-32.)

f. The troop may be replaced by tank units for execution of reconnaissance when the volume of enemy fire necessitates greater armor protection for reconnaissance teams and when terrain is too difficult for operation of wheeled vehicles. Light tanks supported by assault guns are effective on reconnaissance in causing the enemy to disclose the location of antitank weapons.

58. COORDINATION. There must be complete cooperation and coordination of effort between troops of the reconnaissance squadron and between the squadron and other ground and air reconnaissance agencies operating in advance of the division or other higher unit. Direct communication between them by radio, liaison, or other practicable means, must be maintained. Coordination is effected by higher headquarters (par. i8).

Section II

Reconnaissance

59. GENERAL. The reconnaissance troop of the mechanized cavalry reconnaissance squadron executes reconnaissance missions for the same purpose and by the same methods as does the cavalry reconnaissance troop, mechanized, infantry division (pars. 19 to

c. This discussion actually describes a common operational situation in which one screening force engages the enemy's screening force. Finding out a lot of useful things about enemy dispositions and activities often means infiltrating or penetrating his screen, which is there to prevent you from doing so. Having the tank troop in the rear gives the squadron (screen) commander the flexibility to commit this force at just the right place and time.

d. An armored division's combat commands have a good deal more freedom of action once they are committed than do the regiments of an infantry division. It was a common practice to reinforce a combat command with its share of division assets (recon troop with assault gun support, for example, as well as part of the division artillery in direct support and AAA assets).

f. means, "shoot at them and hope they shoot back and disclose their positions."

38, incl.), except that the methods of the former involve employment of attached assault guns.

60. EMPLOYMENT OF ASSAULT GUNS. a. The troop employs attached assault guns to support reconnaissance platoons by placing smoke or HE concentrations on organized enemy positions, thereby permitting side-slipping and infiltration by reconnaissance elements. For employment in the conduct of offensive and defensive action, see section IV.

b. The assault-gun platoon, consisting of a platoon headquarters, two assault-gun sections (one assault gun each), and an ammunition section, operates under reconnaissance troop control. Usually, it is held, with one reconnaissance platoon, in troop reserve, and employed as a unit in support of reconnaissance elements as need for such support arises. Such use retains for the troop commander the initiative in the commitment of his reserve. Exceptionally, individual assault guns (sections) may be attached to and operate separately with reconnaissance platoons. In such cases, the platoon headquarters and ammunition section normally remain with the troop headquarters until engagement of one or both of the guns necessitates resupply of ammunition.

c. In the execution of fire and maneuver, the assault-gun platoon is employed in the base of fire to support the maneuvering element. Assault guns employ direct or indirect fire, depending upon availability of suitable defiladed positions. Primary targets are antitank guns, light and heavy machine guns, and tanks. (FM 17-25 and 17-69.)

d. The decision to open fire and the selection of targets are the prerogatives of the commander of the supported troop or platoon. He may, however, direct the assault-gun platoon or section leader to select and occupy a position, and open fire on favorable targets without further orders.

e. The use of voice radio to direct movement of assault-gun sections is habitual, supplemented where applicable by whistle or arm-and-hand signals.

b. This paragraph outlines some unusual command and control rules for splitting up the assault gun troop. I'm not sure what the reasons were, but I can guess. Recon platoon leaders don't know a lot about the capabilities and best employment of assault guns, so there is a benefit to keeping them under AG troop control.

Section III

Security

61. GENERAL. a. The reconnaissance troop of the cavalry reconnaissance squadron, mechanized, is responsible for its own local security and for contributing to the security of the unit to which the squadron is assigned or attached, as is the reconnaissance

troop, infantry division (par. 39). In addition, elements of the troop may be called upon to provide security for the troop, or the troop may be designated as an advance, flank, or rear guard, or outpost, for the squadron.

b. Local security measures prescribed for elements of the reconnaissance troop, infantry division (pars. 39 to 47, incl.), likewise apply to the assault guns attached to the reconnaissance troop of the squadron. Elements, when advancing, remove gun covers and set guns for the probable direction of fire. At the halt, air and ground sentinels are kept alert; crews are kept near vehicles. In firing position, the ammunition section is placed where its vehicular armament may be employed to protect the flank and rear of the position from ground attack; it should not be too close to the gun(s). The driver of the ammunition vehicle may be detailed as air and ground sentinel to watch to the flanks and rear. In bivouac areas, assault-gun vehicles should maintain distances prescribed for other vehicles and be placed in positions from which they can go into action without delay.

62. ADVANCE GUARDS. **a.** When acting alone, the troop or platoon employs an advance guard, as do similar elements of the reconnaissance troop, infantry division (par. 41). If an assault-gun section is attached to a reconnaissance platoon acting as advance guard for a troop or larger unit, it takes position in column immediately behind the platoon leader's reconnaissance team, in the center of the advance party.

b. An entire reconnaissance troop may be detailed as the advance guard for a reconnaissance squadron which is the reserve of a group or, for other reasons, is marching as a unit. The attached assault-gun platoon in such cases is placed well forward in the support element.

c. When acting as an advance guard, the troop pushes forward boldly, reconnoiters the route of march, and observes or reconnoiters to the flanks. The advance guard of a reconnaissance platoon operating alone, or the reconnaissance element acting as point of a larger advance guard, normally is held responsible only for visual reconnaissance or the examination of possible enemy positions within effective small-arms range to the flanks. If an advance party is included in the advance guard, its responsibility for flank reconnaissance extends to a distance of about 800 yards; for a support, about 1 mile.

63. COVERING DETACHMENTS. **a.** Due to the nature of the operations of mechanized reconnaissance units, there are few occasions for the employment of covering detachments for units larger

than a platoon. Each platoon provides its own covering detachment, composed of two or three ¼-ton trucks.

b. Exceptionally, the platoon or even the entire troop may form a covering detachment for a larger unit. When a platoon is covering the advance of the troop on a mission such as seizing and holding a key terrain feature, or of the tank company moving to an attack position, all six of its ¼-ton trucks may be necessary to cover the front.

c. When employed as covering detachments, reconnaissance elements are deployed on a broad front with intervals of 150 to 300 yards between vehicles, the determining factors being the maintenance of control by a single individual and the frontage which must be covered. Control of a covering detachment is by the commander of the protected force. If initial contact is expected to be with organized positions, including emplaced antitank or automatic weapons, or with mechanized forces, assault guns may be attached to a covering detachment.

c. These distances are obviously far wider than practical for reenactments. Just allow for the widest possible separation depending on terrain, mission, and reliability of radio comms.

64. FLANK GUARDS. a. Reconnaissance elements may be employed as flank guards for the squadron of which they are a part.

b. The strength of a flank guard for a reconnaissance troop moving as a unit will vary from a three-vehicle reconnaissance team to a reconnaissance platoon reinforced with an assault-gun section. A reinforced reconnaissance platoon, or an entire reconnaissance troop with an attached assault-gun platoon, may be employed as flank guard for a squadron.

c. A reconnaissance element employed as a flank guard is interposed between the main body and the located or anticipated hostile threat. The distance of operation to the flank will vary, depending upon the enemy composition, terrain, and the size of the main force. The disposition of vehicles within a flank guard, the subdivision of the flank guard into elements, and the distances between elements conform to those of an advance guard (par. 41). Movement is based on the progress of the main body or the time limit set by the main body commander for reaching successive phase lines or objectives.

c. Here is the problem with flank guards: the main force will generally enjoy use of the best avenue of movement. Out on the flanks there might or might not be a good road net. Combined with the idea that the flank guard is going to be checking things out as they go, the main force will have to slow down or get used to the flank guards being to the rear and not on the flanks.

d. A reconnaissance platoon or troop acting as a flank guard is conducted with especial reference to routes or localities which favor attack against the flanks of the main body. It reconnoiters to locate promptly all enemy forces, and takes advantage of its mobility to concentrate in order to defeat or delay the enemy for the necessary period. Contact with the main body is maintained by the use of radio or of vehicular messengers. Sufficient contact must be maintained with advance and rear guards to prevent enemy forces from filtering in between the security elements. A flank guard may be ordered to march parallel to the main body when continuous

flank protection is required; when the locality from which an attack may be expected is well defined, the flank guard may be directed to occupy a key position covering the route of approach until the command has passed. In the latter case, dispositions are made upon arrival at the locality to permit holding the position as long as may be necessary. When the enemy is encountered, a flank guard may act offensively, delay in successive positions, or defend a position, as the situation may require.

65. REAR GUARDS. a. A reconnaissance troop or platoon may be called upon to furnish a rear guard for the larger reconnaissance unit of which it is a part.

b. The strength and composition of a rear guard provided by mechanized reconnaissance units usually will be identical with those indicated for an advanced guard (par. 62). Formations are similar to those of advance guards reversed.

c. When composed of a reconnaissance platoon, the rear guard is subdivided into a rear party and a rear point. When composed of a troop, a rear support is formed. If reinforced by assault guns, they will be placed in column in the rear party or rear support in positions corresponding to those prescribed for their disposition in advance guards. Distances between the main body and the rear guard, and between the elements of the rear guard, are governed by the size of the detachment and by the strength, composition, mobility, and proximity of the enemy. The minimum distance is determined by the consideration that the rear guard must delay the enemy until the main body can pass beyond the range of hostile fire or can prepare for action. The maximum distance is that which can be taken without danger of being cut off.

d. A reconnaissance element acting as a rear guard moves, by bounds, based on the progress of the main body. When in contact with the enemy, the rear guard normally operates by delay from successive positions, utilizing long-range fire. Withdrawal from one position to the next is by elements, the movement of the rear-most being covered by the fire of the preceding element; each element avoids masking the fire of the unit covering its withdrawal. The rear party and rear point each reconnoiters and observes to its own rear and flanks and keeps the main body commander informed of the enemy situation.

66. OUTPOSTS. a. Reconnaissance platoons or troops provide for their own local security at halts by establishing march or bivouac outposts, as do similar elements of the reconnaissance troop, infantry division (par. 42). The entire reconnaissance troop may be directed to furnish the outpost for the reconnaissance squadron or group of which it is a part.

b. Attached assault guns are employed in the outpost to cover likely avenues of approach for enemy mechanized forces and in the defense of obstacles. Individual guns are placed in hull defilade positions from which they can, employ direct fire to repel a hostile attack. Dug-in emplacements will be used in very flat terrain where no concealment or defilade is available. Local security for gun sections is provided as prescribed in paragraph 61. If positions are to be occupied for any length of time, prone shelters must be dug for the protection of personnel.

Section IV

Combat

67. GENERAL. The reconnaissance troop of the squadron, normally reinforced with assault guns, and with light tanks when their use is anticipated, is prepared to fight for information if necessary to the accomplishment of reconnaissance missions. It also may be used to harass or delay a hostile column, to secure critical routes or areas pending the arrival of other forces, or for counter-reconnaissance. Both offensive and defensive action are conducted in accordance with the principles prescribed for similar action by the reconnaissance troop, infantry division (pars. 48 to 55, incl.).

67. The critical phrase here is "prepared to fight for information if necessary."

68. ATTACHMENTS. a. Assault guns are used to supplement other available weapons in the base of fire. Their fire is coordinated with that of mortars, 37-mm guns, and automatic weapons, to avoid duplication of targets. Both HE and smoke ammunition are available. The former is employed to destroy antitank gun and machine-gun crews and tanks, and to pin other enemy personnel to the ground, providing freedom of maneuver for other elements. Smoke is employed to mask the action of maneuvering elements and to prevent observation by enemy gunners.

68. I have never seen a half track mounted 75mm gun in private hands, though there may be one or two. Simulating assault guns as described here requires some imagination. The later alternative would be a light assault gun (75mm on an M5 chassis), but I haven't seen any of those either.

b. Light tanks are employed in the attack to overrun automatic weapons and personnel, and to penetrate hostile counter-reconnaissance screens to permit infiltration of reconnaissance elements. In the defense, they are used to repel enemy attacks and to counterattack.

CHAPTER 4

RIVER CROSSINGS

69. GENERAL. Unfordable streams with varying widths, depths, and currents may be encountered in any theater. To accomplish reconnaissance, the reconnaissance troop must cross them. If bridges or ferries exist, they should be seized and utilized. If they do not, the troop must—

a. Ask for and be prepared to operate ¼-ton and 2½-ton amphibian trucks.

b. Cross personnel by swimming, by small boats or rafts found or built at the site of the crossing, or by rubber reconnaissance boats.

c. Cross ¼-ton trucks by rafts, by overhead cable, or by wrapping in canvas and floating. (FM's 5-10 and 25-10; TF 7-20.)

d. Cross armored cars and other heavier vehicles by large rafts or by towing submerged. (FM 25-10.)

e. Provide messenger service across the stream by personnel operating small wooden boats, reconnaissance boats, or rafts. Unless rafts capable of transporting the lighter vehicles are provided, it also will be necessary to provide messengers, with vehicles, on both sides of the crossing.

f. Protect the crossing from observation or interference by the enemy.

70. AMPHIBIAN VEHICLES. Amphibian vehicles, due to the increased weight and the susceptibility of their hulls to damage, do not have the cross-country mobility and ability to traverse rough terrain, found in land vehicles of the same cargo capacity. They require firm footing, free of stumps or large stones, to approach and leave the stream; a firm, gradually sloping bank to enter or leave the stream; and a stream bed free of submerged objects or

69. The idea of a reenactor armored unit executing a river crossing is food for nightmares (or happy dreams for tort attorneys). I include it if only to console the reader that he is not likely to have to try it.

shoals. Because of these conditions, their employment requires specially trained drivers.

71. CROSSING OF PERSONNEL. The first concern of a commander must be to cross personnel with their individual weapons and equipment. Only the stronger swimmers within the unit should cross by swimming. The amount of equipment which they can take depends upon the width of the stream and the strength of the current. Weapons and equipment of two individuals may be made into light rafts by the use of shelter halves. A search should be made for small boats or rafts in the vicinity of the crossing. The rubber boats in the equipment of the troop can be used. If amphibian vehicles are available, and the crossing is unopposed or is defended by personnel already crossed, they may be used to ferry personnel across the stream.

72. CROSSING OF ¼-TON TRUCKS. If amphibian vehicles are not available ¼-ton trucks should be the first vehicles to cross. This may be accomplished by raft, by cable, or by floating. Suitable rafts can be constructed from timber found near the site, from driftwood, or from a combination of timber and rubber reconnaissance boats. Two reconnaissance boats provide sufficient buoyancy to carry a ¼-ton truck (fig. 43). Other means of providing buoyancy include empty 5-gallon cans or sealed, wooden or steel barrels. These may be lashed together and reinforced with timbers to provide a platform. To cross vehicles by means of a cable, it is necessary to run the cable from a winch over a support on the near bank, over a support on the far bank, and anchor it securely on the far bank (fig. 44). Sufficient slack then is given to the cable to permit the attachment of a sling around the vehicle to pulleys on the cable. The cable then is tightened sufficiently by means of the winch to lift the vehicle clear of the ground. By means of ropes fastened to the vehicle, it is pulled across the stream, the cable again slackened by the use of the winch, and the vehicle brought to rest on the far bank. If trees or other strong objects of sufficient height are not available, the necessary support for the cable upon each bank may be provided by an "A" frame. Quarter-ton trucks may be wrapped in canvas of sufficient size and strength and floated across the stream (fig. 45). Canvas paulins, 12 by 17 feet, or large wall tent flies may be used for this purpose. Due to the limited number of these canvas articles within the troop, if several ¼-ton trucks must be crossed by this method, arrangements must be made for the return of the paulin or tent fly to the near bank after each vehicle is crossed.

73. CROSSING OF ARMORED CARS. Armored cars and the other heavier vehicles cannot be floated by the means organic within the troop. If suitable materials can be found in the vicinity of the crossing, rafts of sufficient strength may be constructed. In case of emergency, these vehicles may be waterproofed and towed submerged through the stream. (FM 25-10; TF 6-105.) This is a time-consuming operation and, in the usual case, it will be found quicker to await the bridging of the stream or the arrival of equipment suitable for providing rafts for their transport.

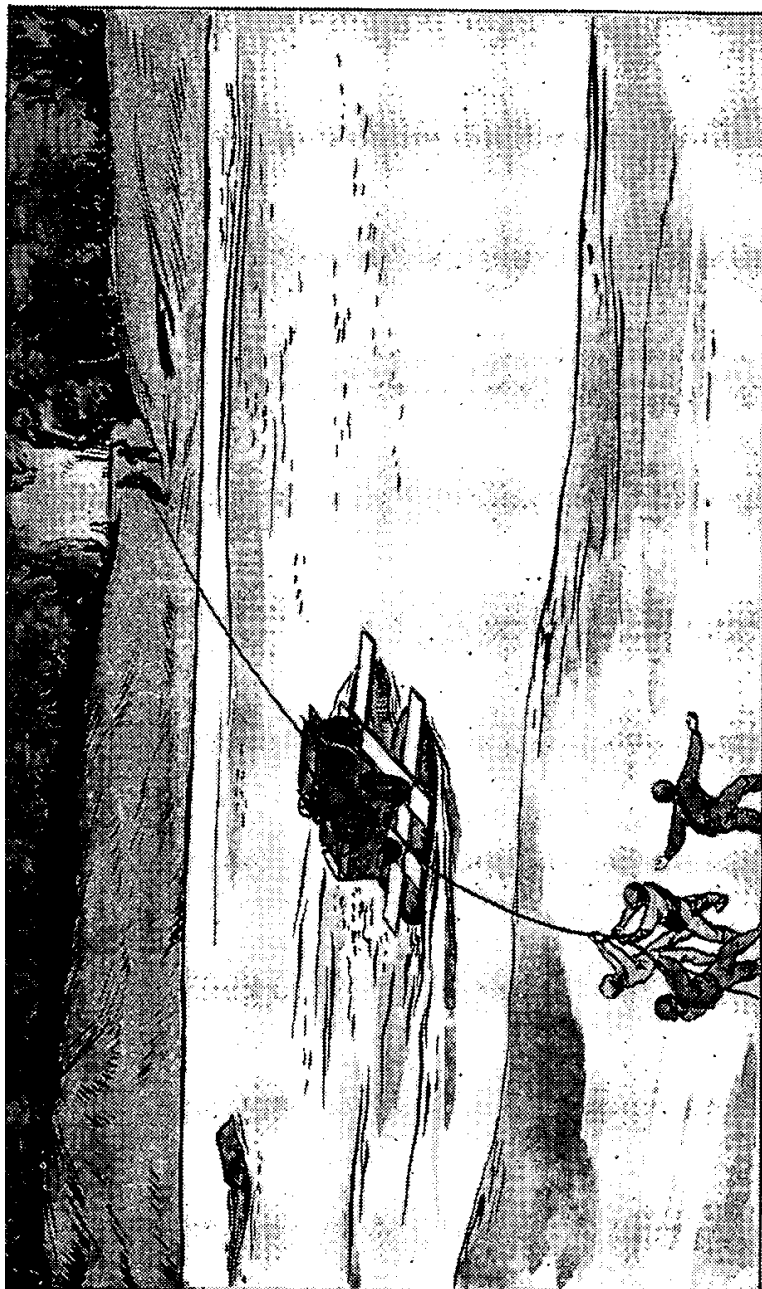


Figure 43. Rubber reconnaissance boats may be rafted together with planking to transport 1/4-ton trucks across streams where banks are not too steep, where there is little floating debris, no shoals, and floating depth of water next to shore lines.



Figure 44. Truck suspended from cable. Note use of snatch block and tow chains. After the blocks are placed over cable, the winch only takes up slack sufficiently to lift the vehicle off the ground; the more slack left, the better. It avoids excessive strain on the cable.



Figure 45. 1/4-ton trucks wrapped in paulins may be floated across a stream.

74. COMMUNICATIONS. Early provision for messenger service to and from subordinate units on the far bank of the stream is provided. While radio communication is available early through the crossing of the ¼-ton trucks carrying such facilities, there still remains the necessity for providing means of transmitting messages, maps, reports, and documents which cannot be handled by radio. This messenger service initially is provided by rubber reconnaissance boats or other small boats.

75. SECURITY. A crossing site initially free from enemy observation and interference is selected. It may be expected that the crossing will be discovered early. The first and succeeding elements which cross furnish protection for the remainder of the troop during its crossing. It may be advisable to cross the first elements at one site and the remainder at another site. In such case, part or all of the leading elements may be directed to the other site, in order to provide security on the far bank of the stream. The troop is not organized or equipped to cross expeditiously and continue a reconnaissance mission in the face of enemy opposition. If this is ordered, the troop must be suitably reinforced with engineer troops and materiel.

76. COMBAT. The basic principles of combat operations at river lines are covered in **FM 100-5**.

CHAPTER 5

SIGNAL COMMUNICATION

Section I

General

77. MISSION. The primary mission of signal communication personnel in the cavalry reconnaissance troop, mechanized, is to provide rapid, secure, and uninterrupted communication from reconnaissance elements to higher headquarters. They operate and maintain signal communication within the unit, with attached units, and with adjacent units when required.

78. RESPONSIBILITY FOR SIGNAL COMMUNICATION.

a. The troop commander is responsible for signal communication within the troop and with higher headquarters.

b. The troop liaison and communications officer conducts the technical training of communication personnel and supervises maintenance of signal communication equipment.

c. During operations, the troop executive officer supervises operation and maintenance of the signal communication system.

79. MEANS OF SIGNAL COMMUNICATION. The means of signal communication organic in the troop are discussed in section II. Radiotelegraph, radiotelephone, and messengers are the principal means.

80. COORDINATION OF SIGNAL COMMUNICATION. **a.** Effective signal communication requires coordination in all echelons. Paragraph 5 of the field order of the unit to which the troop is assigned or attached prescribes a coordinated plan and designates current signal operation instructions (SOI) and other pertinent ref-

erences. SOI contain radio call signs, operating frequencies, code references, cipher keys, authenticator systems, schedules for radio and messenger service, pyrotechnic and panel codes, and other current technical information.

b. Coordination within the troop is obtained by using standing operating procedure (SOP). This may consist of brevity codes, special sound and visual signaling instructions, a maintenance system, personnel assignments and reliefs, and solutions to other problems. Signal communication personnel should be drilled so that it will be unnecessary to carry written copies of SOP into combat.

81. SIGNAL COMMUNICATION PERSONNEL. Effective signal communication requires highly trained personnel. Carelessness, inaccuracy, or failure to maintain equipment may result in disaster. Careful selection of individuals for training as signal communication specialists is most important. Selected individuals should have completed individual training with above average records.

82. SIGNAL COMMUNICATION TRAINING. a. General. All members of the troop should receive basic signal communication training (TM 11-450). Subjects of greatest importance are message writing, message center procedure, the use of codes and ciphers, and radiotelephone procedure.

b. Specialist training. Section III covers training of communication specialists.

83. SIGNAL COMMUNICATION SECURITY. Carelessness or ignorance of necessary precautions in the employment of signal communication means may disclose vital information to the enemy or compromise the security of the troop. All personnel must be trained to preserve signal communication security. Commanders should monitor the nets of subordinate units to detect violations of security regulations (par. 89).

Section II

Means of Signal Communication

84. GENERAL. a. Signal communication within the troop is effected by radio, messengers, visual means, and sound. Signal communication between the reconnaissance troop and other headquarters is accomplished by radio or other appropriate means.

b. An agency to coordinate the use of the various means of signal communication is required in troop headquarters. Records of all messages are maintained in troop and platoon headquarters. Selected individuals must be trained as message center specialists in addition to their training in assigned specialties.

85. UTILIZATION OF ASSIGNED MEANS OF SIGNAL COMMUNICATION.

a. Radio. Radio is the principal means of signal communication in the reconnaissance troop. The proper utilization of radio equipment is a major responsibility of the troop commander. He should know the capabilities and limitations of each type of equipment, including the transmission characteristics of CW, tone, and voice in the bands of frequencies available. He should understand the application of ionospheric data to the operation of his assigned radio equipment.

(TM 11-499.)

b. Messengers. (1) Vehicular and dismounted messengers are used to deliver maps, overlays, sketches, detailed orders, and lengthy reports. Messengers are faster than radio communication under some conditions.

(2) Dismounted messengers are used when distances are short, and when movement in vehicles is impracticable.

(3) Motor messengers may use organic, captured, or impressed vehicles. Command and communication vehicles should not be used for transporting messengers except in an emergency.

(4) Officers may carry important messages, particularly when an explanation of the situation is required.

c. Arm and hand signals. See FM 2-7 (when published) and FM 22-5.

d. Pyrotechnics. Pyrotechnics are illuminated signals which are discharged into the air.

(1) **ADVANTAGES.** (a) Transmission of the message is prompt.

(b) The equipment is comparatively light and compact.

(2) **DISADVANTAGES.** (a) Messages of fixed meanings only can be transmitted.

(b) Pyrotechnic signals may be misunderstood.

(c) Messages may not be observed unless discharged from a predetermined locality at a prearranged time.

(d) Range of observation is limited, especially in the daytime.

(e) Pyrotechnics have little signal security unless codes are changed frequently.

(f) Errors in transmission cannot be corrected readily.

(3) Pyrotechnic codes are published in signal operation instructions. Special signals must not conflict with prescribed codes.

e. Smoke. Colored smoke is used to identify friendly troops in daylight. It may be used also to transmit short messages in accordance with a prearranged code.

f. Flags. Flags are used to identify vehicles, to send messages in semaphore or wigwag code, or to transmit prearranged messages.

g. Panels. Fluorescent panels are used to identify friendly troops to supporting air forces. Signaling panels are used to identify ground units to air forces and to transmit brief messages in the current panel code.

h. Sound signals. See FM 2-7 (when published) for whistle and bugle signals. They are used for close-in communication by small units.

86. WIRE COMMUNICATION. Wire is not an organic means of signal communication. It is desirable that signal communication specialists have sufficient knowledge of the use of wire communication to use and repair field wire circuits, to read military line route maps and circuit diagrams, and to use or interrupt commercial wire circuits. This instruction should be initiated after specialists have become proficient in the use of organic equipment.

Section III

Training

87. GENERAL. a. Training objective. The objective is to train all members of the troop in the use of organic signal equipment.

b. Personnel to be trained. (1) All personnel must be able to use the Division Field Code, the Converter M-209, pyrotechnic codes, panel codes, combat codes, brevity codes, and map coordinate codes.

(2) All personnel must be trained in the use of radiotelephone procedure.

(3) All personnel should be trained in the duties of messengers.

(4) All personnel should be trained in writing clear, concise, and correct messages.

(5) At least three individuals of troop headquarters should be trained as message center specialists.

(6) At least one radio operator per station which operates in nets of higher units should be capable of transmitting messages in Interna-

tional Morse Code at speeds up to 30 words per minute, with a minimum of 15 words per minute under normal conditions.

(7) All radio operators and radio repairmen must be trained in operator's (first echelon) and unit mechanic's (second echelon) radio maintenance. (Signal Corps Circular II-I.) These men should receive training in wire communication when time permits (par. 86).

c. Training, how conducted. Training will be conducted in accordance with War Department training publications. (FM 21-6.)

d. Schools. Instruction of specialists should be centralized. The troop commander organizes instruction. within the troop, unless schools of a higher echelon are available. He verifies the proficiency of specialists regardless of where they are trained. For proficiency standards, progress reports, and tests, see TM 11-450 and AR 615-26.

88. COMMON SUBJECTS. All members of the troop should be trained in subjects contained in the following publications:

TM 11-460, Division Field Code.

TM 11-461, Air-Ground Liaison Code.

TM 11-380, Converter M-209.

FM 24-9, Combined United States-British Radiotelephone (R/T) Procedure.

FM 21-45, Protective Measures, Individuals and Small Units.

CCBP 8, Combined Panel System (Combined Communications Board Publication).

For training of message center specialists and of specialists in wire communication, see FM 24-5.

89. SIGNAL SECURITY. a. General. Common violations of signal security are:

(1) Discussion of plans for troop dispositions by radiotelephone.

(2) Transmission of tactical radio messages in clear text.

(3) Transmission of lengthy radio messages. Long messages enable enemy to copy traffic and locate the sending station.

(4) Failure to employ brevity codes or map coordinate codes.

(5) Reference in the clear to information transmitted previously in code.

(6) Failure to destroy SOI, maps, messages, orders, and other papers when in danger of capture.

(7) Transmission of messages in the clear which refer to organizations, individuals, or equipment.

(8) Any variation in volume of radio traffic which might disclose reinforcement, or impending action.

b. Training of signal communication personnel. Signal security is discussed in the following publications:

FM 11-35, Signal Corps Intelligence.
FM 24-I8, Radio Communication.
FM 24-5, Signal Communication.
TM 11-454, The Radio Operator.
Combat Code No. I, Use of Combat Codes.

90. RADIO OPERATORS. a. For training of radio operators, use of code practice equipment, radio procedure, and other operational information, refer to—

TM 11-459, Instructions for Learning International Morse Characters.
TM II-432, Code Practice Equipment.
TM II-454, The Radio Operator.
TM II-499, Radio Propagation Handbook.
FM 24-6, Radio Operators Manual, Army Ground Forces.
FM 24-11, Combined Operating Signals.
FM 24-10, Combined Radiotelegraph (W/T) Procedure.
FM 24-9, Combined United States-British Radiotelephone (R/T) Procedure.
FM 24-18, Radio Communication.
FM 24-5, Signal Communication.

b. Radio operators should receive training in maintenance of equipment concurrently with other instruction (par. 91).

91. MAINTENANCE. a. General. Signal communication personnel must be skilled in maintenance to insure proper functioning of radio equipment. A system which includes preventive maintenance must be established, tested, and applied habitually within the troop. Careful training and diligent supervision are necessary.

b. Responsibility. The Signal Corps performs maintenance which the operator and unit mechanic are not equipped to perform.

c. Testing radio equipment. Tests which can be applied by unit mechanics with available equipment are:

(1) Visual checking. The set is examined for broken elements or burned insulation.

(2) Point-to-point measurements. Voltages and resistances are measured by meters at specified points within circuits and compared with correct readings.

d. Repairs. A list of repairs which may be performed by operators and mechanics should be prescribed within each troop. The repairs which unit personnel may perform are determined by—

(1) Skill of operators and mechanics.

(2) Instruments, tools, and spare parts available.

e. Progressive training. Texts, arranged in order of simplicity, to be used as a guide for maintenance training, include—

TM 1-455, Electrical Fundamentals.

TM 11-455, Radio Fundamentals.
TM 11-453, Shop Work.
TM 11-300, Frequency Meter Sets SCR-2II-A, SCR- 2II-B,
and SCR-2I-C.
TM 11-321, Test Set 1- 56-E.
TM 11-702, Interphone Equipment RC- 9 9.
TM 11-273, Radio Sets SCR-I9 3 -A, B, C, D, and E.
TM 11-630, Radio Set SCR-5 06-A.
TM 11-615, Radio Sets SCR 609-() and 6io-().
TM 11-600, Radio Sets SCR-508-(*), SCR- 528-(*), and SCR-
538--(*) .

92. WIRE COMMUNICATION. Troop signal communication specialists are trained to operate wire communications, TM 11-450 includes an outline of course in basic signal communication and prescribes the qualifications of field lineman. These may be used as guides in training.

93. STANDING OPERATING PROCEDURE. a. General. Standing operating procedure should be developed concurrently with training. It should embrace eventually all features of signal communication which can be standardized without loss of effectiveness.

b. Suggestions for SOP. (1) Prescribe various radio net organizations. They must conform to channels allocated by higher headquarters. Two types of radio nets are shown in figures 46 and 47.

(2) Indicate when messenger communication will be used.

(3) Designate elements charged with operating visual communication.

(4) Prescribe relief operators for radio stations, which may be required to operate continuously.

(5) Prescribe short codes to reduce radio transmissions. These should be coordinated with higher headquarters.

(6) Prescribe the sequence in which radio frequencies are to be used in avoiding enemy interference. Each armored car contains two radio sets, one of which is so designed that two of twenty channels may be guarded continuously. Transmissions are available instantly on any one of ten channels. The other set can guard only one channel at a time, but can transmit instantly on any one of five preset channels. The versatility of this equipment permits great variation of the sequence in which channels can be used. The plan should be coordinated with higher headquarters.

(7) List permissible repairs to various types of equipment, and prescribe method of carrying spare parts and spare operating equipment.

Section IV

Miscellaneous

94. AIR-GROUND COMMUNICATION. The principal means of air-ground communication is the very high frequency radiotelephone used by air support parties and air liaison parties attached to ground units for that purpose. Signaling panels, pyrotechnics, lights, smoke, prearranged signals, and drop and pick-up messages are supplementary means of air ground communication. Only slow-speed planes are used to pick up messages.

95. ENEMY INTERFERENCE. Enemy interference with radio communication is discussed in FM 24-18 and TM 11-454.

96. DESTRUCTION OF EQUIPMENT. Methods of destroying signal equipment are prescribed in FM 24-18 and in Technical Manuals for the various types of radio sets.

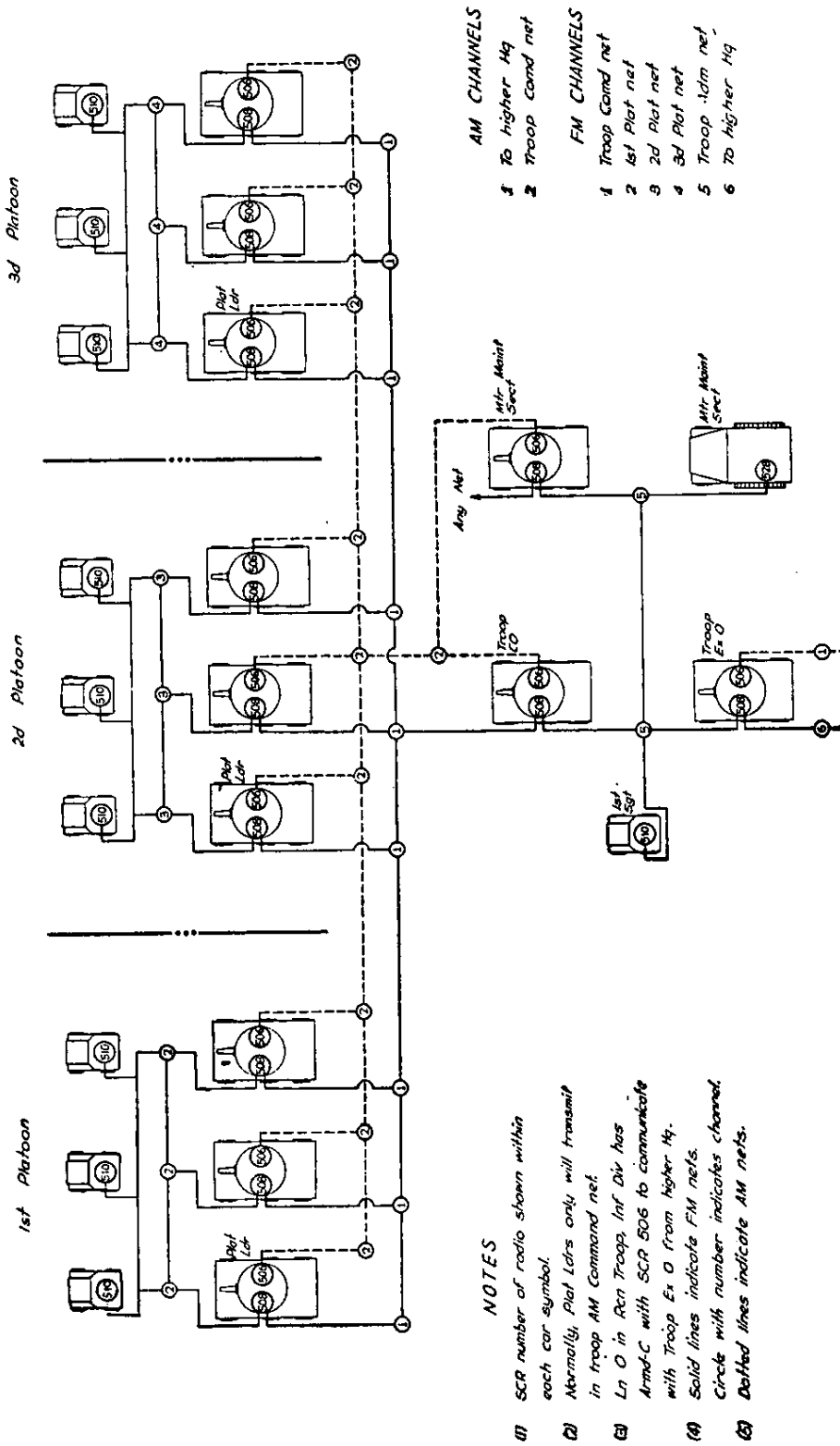


Figure 46. Radio sets, cavalry reconnaissance troop, mechanized.
 Figure 47 [Not included.]

CHAPTER 6

LOGISTICS

Section I

Supply

97. REFERENCES. For the reconnaissance troop organic in the cavalry reconnaissance squadron, mechanized, see FM 2-30. For the reconnaissance troop organic in the infantry division, see **FM 100-10**. For reconnaissance troops of the cavalry reconnaissance squadron of the armored division, see FM 2-30, 17-50, and **100-10**. While the S-4 of the armored combat command will assist in facilitating supply for reconnaissance troops attached to the command, the channel to accomplish it may be through the reconnaissance squadron or direct from division, depending upon its location with respect to the former, so that either FM 2-30 or FM 17-50 may apply. In the exceptional case, the troop may be attached for supply to a battalion of the armored combat command. In this instance, see FM 17-50.

98. RESPONSIBILITY FOR SUPPLY. Since supply is a function of command which cannot be delegated, the troop commander is responsible for the supply of his organization. This responsibility includes the anticipation of supply needs, the timely submission of requests and data upon which amounts of supply are based, and the distribution of supplies made available. This responsibility embraces not only the supply of the troop, but also of attached units.

99. MEANS. For the means available to the troop, see current Tables of Organization and Equipment. Personnel and equipment are grouped in an administrative, supply, and mess section. The

transportation within this section must be pooled for all classes of supply, to insure its most economical use in drawing from supply points and in distributing to platoons and sections. This section must maintain close liaison with the maintenance section in order to know at all times the needs for replacement of weapons, combat vehicles, and radios, together with the status of the spare parts and tools for maintenance of these items.

100. CLASS I SUPPLY. a. This class of supply includes those items which are consumed at a relatively uniform daily rate, such as rations, water, and kitchen fuel. A ration is the allowance of food for one person for I day. In time of war or national emergency, the field ration is used. It is issued in kind and may be any one of several types. The amount of each type to be carried in troop transportation will be fixed by the division, corps, or army commander. At least 1 day's supply of emergency rations should be carried in each vehicle at all times.

b. Troops should receive three meals a day. If the tactical situation permits, at least two of these meals are hot. However, due to the dispersion of the platoons in active operations, a major portion of troop personnel frequently must subsist on type C, D, or K rations. To heat these will require individual or crew effort. Whenever practicable, the B ration should be served. Hot meals can be prepared in the troop kitchen, transported to detached elements, and reheated on the one burner gasoline cooking outfit provided for each vehicle; or the components of the ration may be sent to the detached elements and cooked. The unconsumed portion of a B ration can be issued to individuals for lunches.

c. Rations are replaced daily. The basis of replacement is the strength of the troop to be fed, as estimated 1, 2, or 3 days in advance. The troop commander is responsible that this estimate is forwarded daily to the headquarters of the next superior unit. To draw the rations, a vehicle of the administrative, supply, and mess section reports to the squadron train bivouac and, in company with similar vehicles of other troops, proceeds to a ration supply point. The vehicle of the reconnaissance troop of an infantry division may go alone to the supply point. Since reconnaissance troops ordinarily will be operating well to the front, the trip to the supply point serving the bulk of the division or corps troops will be unduly long. The troop commander should not hesitate to request that an advance supply point be established to supply his organization in the forward area.

d. Water may be issued with the rations, but in most cases the troop will procure it locally from an advance water point operated by the division or corps engineers. The troop commander is responsible that the water is sterilized or boiled, except that water

from approved sources need only be tested by the orthotolodine test. It is supplied to personnel from canvas water sterilizing bags in the vicinity of the kitchen, or is sent to platoons in 5-gallon water containers. When these methods of supply prove inadequate, each platoon may prepare a canteen full of sterilizing solution and with it, immediately after preparation, sterilize the contents of all canteens in the platoon. A canteen cup full of the solution is sufficient for each canteen of water. The water should not be used until 30 minutes after being treated with the solution.

101. CLASS II SUPPLY. a. This class of supply comprises articles for which allowances are affixed by Tables of Equipment. Typical items are individual clothing and equipment, arms, vehicles, tools, and radios. Prior to movement into a combat zone, the troop commander must insure that amounts authorized are on hand. Thereafter, he should see that clothing and equipment not essential to fighting are replaced during periods when the troop is not engaged in combat. Other items should be replaced as soon as they are lost, damaged beyond organizational repair, or destroyed.

b. To accomplish initial issue or replacement, the troop commander submits a requisition to the next higher commander. The troop commander is responsible that sufficient transportation is dispatched to haul the supplies. He also is responsible for providing drivers to bring replacement vehicles from the supply point.

102. CLASS III SUPPLY. a. This class of supply includes gasoline and lubricants necessary for the operation of the vehicles of the troop. The amount of gasoline needed to move all the vehicles of the troop 1 mile is called the "unit mile." This amount is used for the computation of quantities necessary for marches. The amounts of grease and oil needed are computed by multiplying the unit mile by factors determined by the troop motor officer from experience in similar operations, or as prescribed by a higher commander. For a movement, all tanks and all containers carried on vehicles are filled before starting. Additional supplies of this type may be carried on the maintenance vehicles or may be furnished en route by the squadron or division. Supplies necessary to refill all tanks and containers at the end of the march will be hauled from Class III supply points by vehicles of the troop.

b. During combat, the needs for this class of supply will be highly variable. This makes it essential that the troop and subordinate commanders maintain the full supply by requiring refilling of tanks and containers at every opportunity. The squadron or division will establish supply points to which troop supply vehicles will haul empty containers. The vehicle and all containers will be

102. A war story.

Back in A. D. 1970 I commanded a tank company in the far northern reaches of the Republic of Viet Nam. Seventeen tanks and a few personnel carriers. We used a lot of diesel.

Shortly after a new battalion S-4 (supply officer) arrived I started getting hassled about fuel consumption rates. I was using too much diesel.

I pointed out that I was running my missions based on the operation order, and the fuel consumed was essentially the fuel consumed. He (the S-4) argued that this exceeded the estimated consumption rate in the manual. I responded with something like "tough shit." An arm-wave ensued. The Battalion CO sided with me.

filled and other items issued drawn in new containers. Gasoline and lubricants may be distributed to platoons by the vehicles used by messengers, or by those taking rations forward. In the latter case, precautions to avoid contamination of food by gasoline must be taken. A supply of gasoline and oil should be available in the vicinity of the troop command post at all times. It should be SOP that the driver of any vehicle will refill upon each visit thereto.

103. CLASS IV SUPPLY. a. This class includes those articles which are not covered in Tables of Equipment and demands for which are related directly to operations contemplated or in progress (except for articles in Classes III and V). For the reconnaissance troop, this class will include amphibious ¼-ton and 2½-ton trucks and additional pioneering and communication equipment. Issue may be accomplished prior to or during combat. The authorized amounts should be maintained by replacement during combat.

b. The troop commander submits a requisition for the quantities authorized or needed. The requisition will be processed and the items drawn and distributed as described for Class II supplies. If the issue has not been authorized previously, the troop commander should include with his requisition a statement of the situation or conditions which cause the need for the articles.

104. CLASS V SUPPLIES. a. This class of supplies includes ammunition, pyrotechnics, antitank and antipersonnel mines, grenades, and chemicals. During combat, the troop commander must make every effort to insure that all combat vehicles are fully supplied at all times. This may require practically continuous operation of the bulk of his supply vehicles.

b. For the resupply of ammunition for a troop of a squadron, the supply sergeant or an ammunition agent will—

- (1) Obtain from the troop commander a written request for the ammunition needed.
- (2) Obtain the vehicle or vehicles necessary to transport the ammunition.
- (3) Proceed to the rear echelon of squadron headquarters and have the request approved by the squadron S-4.
- (4) Be directed by S-4 either to proceed immediately to the corps troops ammunition office or, if part of an armored division, to the division ammunition office; or to wait for a squadron train to go to that point.
- (5) Have the ammunition request countersigned by the division or corps troops ammunition officer or his representative.
- (6) Proceed to the ammunition supply point, obtain the ammunition, surrender the countersigned ammunition request, and return to his troop area.

↑102. The lesson: estimates are only estimates, and reality has no obligation to meet them.

104. Having lost the battle of the excess diesel consumption, the S-4 then complained that I was using too much cal. .50 ammunition and burning out too many barrels. I was instructed to reduce my rate of Class V expenditure. Since we were in almost daily combat, this was a spectacularly stupid order. Luckily, the CO intervened again and reminded the S-4 that as a staff officer he could not issue orders to subordinate commanders except above his signature.

I have now expended my entire fund of war stories with happy endings.

(7) Send the ammunition forward to the platoons by one of the ammunition-carrying vehicles or, if the amount needed for a complete refill is small, by a messenger vehicle.

c. For ammunition resupply of the reconnaissance troop of an infantry division, the procedure is the same as given in b above, except that the supply sergeant or ammunition agent proceeds directly from the troop area to the division ammunition office.

d. For the reconnaissance troop detached from a squadron to operate with an armored combat command, the procedure may be the same as given in b above, or the request may be approved by the combat command S-4 instead of the squadron S-4.

105. LOCAL PROCUREMENT OF SUPPLIES. a. When engagement at a considerable distance from supply points can be foreseen, plans for the utilization of local resources should be made and authorization therefor obtained. The extent of such local resources will be variable in different theaters and areas within theaters. The only supplies which will be found in most localities will be rations and water. Occasionally, fuel and lubricants may be obtained. Any such local procurement will be of great assistance, since it will release more vehicles for the transportation of other supplies.

b. For methods of local procurement, see FM 10-5 and pertinent instructions issued by the theater commander.

106. USE OF CAPTURED SUPPLIES. a. The reconnaissance troop may, at times, capture enemy supplies and matériel. If needed, they are utilized. Prior to use, captured matériel should be examined carefully for booby traps and missing safety features. Food, motor fuel, and lubricants should be checked for contamination. The latter should be used only in enemy vehicles except in emergency.

b. In order that captured weapons and vehicles may be placed in action expeditiously, all members of the troop should be trained in their operation before entering combat.

Section II

Vehicular Maintenance and Evacuation

107. REFERENCES. For all reconnaissance troops: AR 850-15; FM 25-10 and 100-10; TM 9-2810, 10-460, and 21-300, and TM 21-301 (when published).

108. RESPONSIBILITY FOR MAINTENANCE. a. Proper maintenance is a command function of all echelons which must receive continuous personal attention of all commanders. The responsibility for proper maintenance cannot be delegated by the troop commander.

b. Repairs to motor vehicles will be performed in the lowest echelon of maintenance consistent with the availability of suitable tools and spare parts, capabilities of mechanics, time available, and the tactical situation. Subject to these limitations, troop maintenance personnel will make every effort to keep needed vehicles in service without regard for the echelon of repairs made. Repairs may include, when necessary, "cannibalizing" or combining of usable parts and assemblies of disabled vehicles to create usable vehicles. Vehicles which are damaged beyond repair facilities of the troop are evacuated to higher echelons of maintenance.

109. FIRST ECHELON MAINTENANCE. a. The vehicle driver (or crew) is the most important single factor in preventive maintenance. Only through him can the mechanic know what trouble a piece of equipment is giving.

b. Each driver is expected to perform certain daily maintenance services as a matter of regular routine; this is called first echelon maintenance.

c. Preventive first echelon maintenance by the driver includes—

(1) Inspection and servicing the vehicle in accordance with those operations listed on War Department Form No. 48 (see TM 9-2810).

(2) Repair of defects which the driver is capable of repairing, equipped to repair, and authorized to repair.

(3) Report of defects the repair of which is not a function of the driver.

(4) Prevention of vehicle abuse.

110. SECOND ECHELON MAINTENANCE. a. Second echelon maintenance is performed by the troop maintenance section.

The duties of this echelon include preventive maintenance, adjustments, minor repairs, and minor unit replacement within the limits of its personnel, tools and equipment, parts, time, and the tactical situation.

(1) Personnel authorized are shown in current Tables of Organization.

(2) Tools and equipment are authorized by current Tables of Equipment.

(3) Parts are authorized in Ordnance Standard Nomenclature Lists.

b. For the reconnaissance troop of the cavalry squadron, mechanized, further second echelon maintenance is provided in the squadron maintenance platoon, which has more equipment, personnel, and tools, and more time to work on vehicles.

111. TROOP MAINTENANCE PROCEDURE. When a vehicle in a platoon becomes disabled, the driver checks the vehicle. If it cannot be repaired by the driver, the platoon leader notifies the troop commander of the location of the vehicle and the nature of the damage, when practicable. The troop commander notifies the motor officer who dispatches the maintenance section, or part of it, which usually is in the vicinity of the troop command post, to the location of the vehicle. The maintenance section performs the repairs necessary on the vehicle, evacuates it to the troop service area for further repairs, places the vehicle on the axis of communication, or leaves it in place and notifies the next higher echelon maintenance unit as to its location.

Section III

Medical Service for the Troop

112. MEDICAL PERSONNEL. **a.** The reconnaissance troop has no organic medical personnel. Two medical aid men from the squadron medical detachment should be assigned to each actively operating troop of the cavalry reconnaissance squadron, mechanized.

b. For the reconnaissance troop of the infantry division, medical aid men may be obtained from the medical battalion, in some situations.

c. Due to the limited number of medical aid men available to mechanized cavalry troops, the troop commander should insure that all men are trained in administering first aid.

d. Responsibilities of medical aid men include—

- (1) Administering first aid.
- (2) Filling in and attaching to casualties emergency medical tags.
- (3) Accompanying serious casualties being evacuated.

113. DISPOSITION OF CASUALTIES. a. After minor casualties have been treated, they continue with their units. Serious casualties, after initial treatment, should be evacuated as soon as the tactical situation permits.

b. Methods of evacuation of casualties will vary. When feasible, arrangements are made with medical units to evacuate by ambulance. In many situations, and especially in the case of the reconnaissance troops of infantry divisions, troops and platoons will operate in areas through which other friendly troops will not necessarily pass. In such situations, troops and platoons must evacuate their casualties in administrative or tactical transportation to the nearest aid station as soon as the tactical situation permits. In the case of the reconnaissance troop of the cavalry reconnaissance squadron, mechanized, the squadron aid station usually will be located in the vicinity of the squadron command post. Ambulances may be attached to troops on reconnaissance. In the case of the reconnaissance troop of an infantry division, casualties should be evacuated to the nearest medical installation. In moving situations, when it is known that friendly forces will cover the same ground, casualties may be left on the axis of movement of the higher units.

Section IV

Prisoners of War

114. GENERAL. a. Prisoners should be disarmed immediately after capture. Normally they will be permitted to retain their clothing, identification tags, decorations, insignia of rank, and valuables. Officers, noncommissioned officers, and enlisted men must be divided into separate groups.

b. Documents found on prisoners will be removed from them, identified with the prisoner on whom found, and sent to the rear with the prisoner from whom taken.

c. New identifications must be reported immediately to the unit S-2, giving time and place of capture.

d. In order to obtain maximum information from prisoners, they must be interrogated before the shock of capture or injury wears off. Therefore, it is important that prisoners reach higher echelon interrogation sections as soon as possible. For this reason,

maximum use must be made of returning motor transportation and captured motor vehicles for the evacuation of prisoners.

e. Wounded prisoners are evacuated in the same manner as friendly wounded.

f. When large numbers of prisoners are taken, or when the situation makes evacuation by the troop impractical, prisoners should be segregated and left under guard. Their identity and location should be reported. When no guard is available, prisoners should be immobilized. (**FM 100-10**.)

Section V

Burials

115. GENERAL. Burial normally is by Army, but in emergencies may be by organization. The organization responsible for burials will be specified in the administrative order of higher headquarters or designated in separate instructions. If burial is by organization, reports will be made through channels as to location of graves and such data as may be required for grave registration. Information to be recorded includes decedent's name, serial number, grade, and organization; place, cause, and date of death; date of burial, and location of grave. (**FM 100-10**; TM 10-630.)

115. A detail: "unit" generally refers to company, troop, or battery, the lowest levels that have their own administrative capability. "Organization" refers to battalion and higher.