

SERIES, NO. 8

DECEMBER 20, 1942

# GERMAN TACTICAL DOCTRINE

TALPO.IT  
TALPO.IT  
TALPO.IT

[Stamp: RECORDED & INDEXED]  
 [Stamp: GENERAL]  
 [Stamp: READING COMMITTEE]  
 WD Cir 305 5 Oct 45  
 [Signature]

PREPARED BY  
MILITARY INTELLIGENCE SERVICE

WAD DEPARTMENT

RAK 49

5.22-43

U  
165  
U5  
copy 2

**MILITARY INTELLIGENCE SERVICE**  
*U.S. WAR DEPARTMENT, General Staff,*  
 WASHINGTON, December 20, 1942

**SPECIAL SERIES**  
 No. 8  
 MID 461

**NOTICE**

1. The publications of *Special Series* are for the purpose of providing officers with reasonably confirmed information from official and other reliable sources.
2. Nondivisional units are being supplied with copies on a basis similar to the approved distribution for divisional commands, as follows:

INF DIV	AV DIV	ARMY DIV
Div Hq..... 8	Div Hq..... 8	Div Hq..... 11
Ren Tr..... 2	Ord Co..... 2	Ren Bn..... 7
Sig Co..... 2	Sig Tr..... 2	Engr Bn..... 7
Engr Bn..... 7	Ren Sq..... 7	Med Bn..... 7
Med Bn..... 7	Engr Sq..... 7	Maint Bn..... 7
QM Co..... 7	Med Sq..... 7	Sup Bn..... 7
Hq Inf Regt, 6 each... 18	QM Sq..... 7	Div Tn Hq..... 8
Inf Bn, 7 each..... 63	Hq Cav Bn, 3 each... 6	Arm Regt, 25 each... 50
Hq Div Arty..... 8	Cav Regt, 20 each... 80	FA Bn, 7 each..... 21
FA Bn, 7 each..... 28	Hq Div Arty..... 21	Inf Regt..... 25
150	FA Bn, 7 each..... 21	150
	150	

Distribution to air units is being made by the 1-2 of Army Air Forces.

**3. Each command should circulate available copies among its officers.** Reproduction within the military service is permitted provided (1) the source is stated, (2) the classification is not changed, and (3) the information is safeguarded. Attention is invited to paragraph 10a, AR 380-5, which is quoted in part as follows: "A document \* \* \* will be classified and \* \* \* marked *restricted* when information contained therein is for official use only, or when its disclosure should be \* \* \* denied the general public."

**4. Suggestions for future bulletins are invited.** Any correspondence relating to *Special Series* may be addressed directly to the Dissemination Group, Military Intelligence Service, War Department, Washington, D. C.

**CLASSIFICATION CHANGED TO:**  
**CANCELLED**  
 BY MEMBERS OF THE **ADJUTANT GENERAL**  
*Paul J. ...*  
**UPGRADING COMMITTEE** ..... 7 Nov 46

TALPO.IT  
TALPO.IT  
TALPO.IT

## FOREWORD

0-1-1-1-1

FREDERICK THE GREAT, as the result of his experiences in the Seven Years' War, is credited with establishing the first General Staff in the history of military forces. This Staff was created to handle administrative details, thus releasing more time to the commanders for tactical considerations. It was not, however, until 1810 that Frederick's successors established a school to train officers for General Staff duty. Because successful military results were achieved, France, Great Britain, the United States, Japan, and other countries based the formation of their General Staffs upon the model set by Germany.

Beginning with Scharnhorst, such distinguished leaders and strategists as Moltke (the elder) and von Schlieffen were closely associated with the development of the General Staff School which operated continuously from 1810 until the outbreak of World War I. Subsequent to that war the Versailles Treaty forbade the continuance of the school, and it was not until 1933 that the *Kriegsakademie*, as the Germans call it, was officially reopened in the Berlin location that it was occupying at the outbreak of World War II.

During the years from 1935 to 1939, the United States was allowed to send four individual officers to take the course. From their illuminating reports it is possible to learn the trend of German methods and teachings up to Hitler's attack on Poland. Our observers unanimously agreed that the main body of doctrine taught at the

*Kriegsakademie*—the body of doctrine that underlies the German warfare of today—is set forth in *Truppenführung*, the German tactical bible so very similar in matter and precept to our own FM 100-5, *Field Service Regulations, Operations*.

The following partial résumé of doctrine<sup>1</sup> taught at the *Kriegsakademie* is actually a practical adaptation of relevant parts of *Truppenführung*. It will be noted that this résumé (ignoring the factor of translation) is written almost exactly as a German would instruct Germans. This faithfulness to the tone of the original lectures has been made possible because of the extremely adequate reports which were made by the U. S. officer-students.

Throughout, striking similarities will be observed between German tactical doctrine and that set down in pertinent manuals of the U. S. Army. U. S. officers, however, should not be misled by the similarities to overlook the differences that also exist. With regard to one of the basic similarities in doctrine, it has been pointed out by one of our *Kriegsakademie* graduates that "Owing to the phlegmatic nature of the German individual, initiative and aggressive action have to be forced on the lower leaders and staff, rank and file, whereas we possess these characteristics as a natural heritage."

<sup>1</sup> The Military Intelligence Service has published the following bulletins which describe various aspects of German military methods: "The German Armored Division," *Information Bulletin*, No. 18, June 15, 1942; "German Methods of Warfare in the Libyan Desert," *Information Bulletin*, No. 20, July 5, 1942; "The German Armored Army," *Special Series*, No. 4, October 17, 1942; "The Development of German Defensive Tactics in Cyrenaica—1941," *Special Series*, No. 5, October 19, 1942; "Artillery in the Desert," *Special Series*, No. 6, November 25, 1942. Information about specific organizations and weapons may be found in TM 30-450, *Handbook on German Military Forces*.

## TABLE OF CONTENTS

Section	Page
I. POST OF THE COMMANDER.....	1
II. DUTIES OF THE STAFF.....	2
III. ESTIMATE OF THE TERRAIN.....	3
1. ROADS AND ROUTES.....	3
2. RAILROADS.....	4
3. TERRAIN FOR THE ATTACK.....	4
4. TERRAIN FOR THE DEFENSIVE ACTION.....	5
a. <i>General</i> .....	5
b. <i>Questions To Be Considered</i> .....	5
5. TERRAIN FOR THE DELAYING ACTION.....	6
6. TERRAIN FOR THE BIVOUAC.....	6
IV. CONCEALMENT.....	7
7. PROTECTION AGAINST GROUND RECONNAISSANCE.....	7
a. <i>Hostile Observation</i> .....	7
b. <i>Offensive Concealment</i> .....	7
c. <i>Defensive Concealment</i> .....	8
d. <i>False Appearances</i> .....	8
8. PROTECTION AGAINST AIR RECONNAISSANCE.....	8
9. CONCEALMENT IN REST AREAS.....	8
10. CONCEALMENT OF TROOP MOVEMENTS.....	9
a. <i>Loading and Unloading</i> .....	9
b. <i>Road Movements</i> .....	9
11. CONCEALMENT IN BATTLE.....	10
V. COMBAT INTELLIGENCE.....	11
12. THE PREPARATION OF INTELLIGENCE REPORTS.....	11
13. WHAT TO REPORT.....	12
14. CONTACT AND COORDINATION BETWEEN FRIENDLY UNITS.....	12
15. TRANSMISSION OF ORDERS AND REPORTS.....	12
16. ADVANCE MESSAGE CENTERS.....	13
17. INFORMATION THROUGH SPECIAL MEANS.....	14
18. IMPORTANT PRINCIPLES OF RECONNAISSANCE.....	14
19. STRATEGIC RECONNAISSANCE.....	15
20. TACTICAL RECONNAISSANCE.....	15
21. RECONNAISSANCE BATTALIONS.....	16

## Section V. COMBAT INTELLIGENCE—Continued.

	Page
22. MOTORIZED RECONNAISSANCE BATTALIONS.....	16
23. RECONNAISSANCE BATTALION OF THE INFANTRY DIVISION.....	18
24. BATTLE RECONNAISSANCE.....	18
<b>VI. PRINCIPLES OF COMMUNICATION.....</b>	<b>20</b>
25. OPERATION OF SIGNAL COMMUNICATION TROOPS...	20
26. ORDER OF THE DIVISION COMMUNICATION OF- FICER.....	21
27. COMMUNICATION IN THE DEFENSE.....	22
28. VARIOUS MEANS OF COMMUNICATION.....	22
<b>VII. ESTIMATE OF THE SITUATION.....</b>	<b>26</b>
29. GUIDING PRINCIPLES.....	26
30. CHANGING THE MISSION.....	28
31. SEIZING THE INITIATIVE.....	28
<b>VIII. THE DECISION.....</b>	<b>29</b>
<b>IX. FIELD ORDERS.....</b>	<b>30</b>
32. GENERAL RULES.....	30
33. WARNING ORDERS (VORBEBEHLE).....	31
34. COMPLETE OPERATIONS ORDERS (GESAMTBE- FEHLE).....	32
35. SEPARATE ORDERS (EINZELBEFEHLE).....	33
36. SPECIAL INSTRUCTIONS (BESONDERE ANORDNUN- GEN).....	33
<b>X. MARCHES.....</b>	<b>34</b>
37. MARCHING IN MULTIPLE COLUMNS.....	34
38. MARCHING IN SINGLE COLUMN.....	35
39. PROTECTION AGAINST AIR ATTACKS.....	35
40. NIGHT MARCHES.....	37
41. DAY MARCHES.....	38
42. ORGANIZATION FOR MARCHING.....	39
43. CONNECTION AND COMMUNICATION.....	41
44. RATES OF MARCH.....	41
45. MARCH RESTS.....	42
46. MARCH OUTPOSTS.....	43

Section		Page
<b>XI. VARIOUS TYPES OF BATTLE</b> .....		44
<b>XII. THE ATTACK</b> .....		45
47. FORMS OF ATTACK.....		45
48. CONSIDERATIONS FOR AN ATTACK.....		46
49. MECHANICS OF ATTACK.....		47
50. ATTACKING A POSITION.....		49
51. ARTILLERY EMPLOYMENT.....		50
52. INFANTRY POSITION OF READINESS (BEREITSTELLUNG).....		51
53. INFANTRY ACTION UP TO THE FIRST ASSAULT.....		52
54. ARTILLERY SUPPORT OF THE INFANTRY ADVANCE.....		53
55. INTERMITTENT ADVANCE OF THE RESERVES.....		53
56. BREAKTHROUGH.....		54
a. <i>Penetration of the Hostile Position</i> .....		54
b. <i>Time of Attack</i> .....		54
c. <i>Enemy Withdrawal</i> .....		54
57. ACTIONS RECOMMENDED FOR CERTAIN SPECIAL CASES.....		55
58. MEETING ENGAGEMENT.....		56
a. <i>Speed and Surprise</i> .....		56
b. <i>Time and Space</i> .....		57
c. <i>Coordination</i> .....		57
d. <i>Methods</i> .....		58
59. PERSISTENT.....		58
<b>XIII. THE DEFENSE</b> .....		61
60. FAVORABLE TERRAIN FOR DEFENSE.....		61
61. OTHER CONSIDERATIONS.....		62
a. <i>Defense or Delaying Action?</i> .....		62
b. <i>Preparation of Defense Area</i> .....		62
c. <i>Maneuvers</i> .....		62
62. GENERAL PRINCIPLES OF DEFENSE.....		63
63. ORGANIZATION OF DEFENSE AREAS.....		63
a. <i>Defense in Depth</i> .....		63
b. <i>Cover and Obstacles</i> .....		64
64. RESERVES, RELIEFS, AND REAR POSITIONS.....		64
65. ACTUAL OPERATION OF THE DEFENSE.....		65
a. <i>Main Line of Resistance</i> .....		65
b. <i>Advance Position</i> .....		66
c. <i>Outpost Position</i> .....		66



## Section XIII. THE DEFENSE—Continued.

	Page
66. ARTILLERY IN THE DEFENSE.....	67
a. <i>Control by Artillery Commander</i> .....	67
b. <i>Tactics</i> .....	67
c. <i>Barrage</i> .....	67
67. INFANTRY IN THE DEFENSE.....	68
68. HOSTILE PENETRATIONS.....	68
69. THE COUNTERATTACK.....	68
70. WITHDRAWAL TO A REARWARD POSITION.....	69
<b>XIV. THE DELAYING ACTION</b> .....	<b>70</b>
<b>XV. RETREAT-RETIREMENT</b> .....	<b>72</b>
<b>XVI. THE EMPLOYMENT OF FIELD ARTILLERY</b> .....	<b>73</b>
71. ORGANIZATION.....	73
72. LOCATION IN THE ATTACK.....	75
73. LOCATION IN THE DEFENSE.....	75
74. COOPERATION WITH INFANTRY.....	75
<b>APPENDIX. SAMPLE GERMAN ORDERS</b> .....	<b>77</b>
<b>ILLUSTRATION</b>	
Figure 1. Artillery in a division attack.....	74

## Section I. POST OF THE COMMANDER

---

The personal influence of the commander upon his troops is of the greatest significance. He must be located where he can most effectively lead. On the march he should be as far forward as security permits, and his location should be definitely known by the members of his staff so that all reports may reach him promptly. In the attack his command post should be located as far forward as possible, yet protected from hostile fire so as to insure undisturbed operation; for tactical reasons, the post is placed near the main effort, facilitating control at the most important point of the battlefield. The movement of the command post is influenced by the location of existing wire lines, and the divisional signal officer is kept constantly informed so that communication requirements may be better anticipated. In a delaying action, the commander remains in the forward position until he is convinced that his order for withdrawal is being successfully carried out; then, with his artillery commander he goes back to the new position. In very difficult or dangerous situations, often present while withdrawals are being executed, the commander will remain with his troops.

## Section II. DUTIES OF THE STAFF

---

The commander should not be troubled with details. To insure frictionless performances, there are definite assignments to staff positions and duties. Each staff maintains its prescribed strength. The tactical staff remains with the command echelon, whereas the supply and administration staff remains well to the rear, in the vicinity of the trains.

## Section III. ESTIMATE OF THE TERRAIN

---

Proper utilization of modern implements of war (artillery, airplanes, gas, tanks, etc.) can only be accomplished through their careful adaptation to the terrain. The commander himself can obtain only a general picture of the terrain; he has, however, many supplementary means by which he can learn the true condition of the area in which his command is employed: for example, reconnaissance, air photographs, maps, sketches, and questioning of inhabitants. In judging terrain for specific purposes, you<sup>1</sup> must bear in mind the plan of the commander and the immediate task—to determine how that plan will be influenced (aided or hindered) by the terrain.

### 1. ROADS AND ROUTES

Use the best roads available as routes for supply trains; gain protection against air observation, but avoid defiles and narrow valleys. For combat trains, remember that cover from ground observation is also required. How are the roads constructed, and how will bad weather influence them? What are the bad or impossible stretches, and what is the possibility of avoiding or repairing them?

---

<sup>1</sup> The form of the material, here and at many other points, is governed by the fact that it was presented as lectures at the *Kriegsakademie*.

What are the widths? <sup>2</sup> defiles and excavated passages? bridges? <sup>3</sup> fords? <sup>4</sup> ferries? <sup>5</sup> steep grades? <sup>6</sup>

## 2. RAILROADS

Differentiate between standard gage (1.435 meters, or 4 feet 8½ inches) and narrow gage (1.20 meters, or 3 feet 11¼ inches, to 0.6 meter, or 1 foot 11½ inches). Differentiate also between field line, cable line, electric, and steam. How many rails are there, and does room for addition exist alongside the rails? After a small amount of work on the bridges, trucks can usually be adapted for use as marching routes for foot and mounted troops, as well as for motor vehicles.

## 3. TERRAIN FOR THE ATTACK

(a) Where will the enemy resist the attack? Where are his advance outposts, main position, switch positions? (b) How has he disposed his forces—infantry, artillery, reserve? (c) Where is a position of readiness (*Bereitstellung*), and how can the terrain be best utilized for advance to it? Is there concealment from air observation? Until what point will the attacking force be concealed from hostile ground observation? (a) Where are covered approaches for infantry toward the hostile position? Are attack objectives so conspicuous and so located that concentrated artillery fire may be directed upon them?

<sup>2</sup> For motor vehicles at least 2.5 meters, or 8 feet 4½ inches, and for passing at least 5 meters, or 16 feet 9 inches.

<sup>3</sup> Construction material, capacity, destruction and repair possibilities.

<sup>4</sup> Current speeds, beds, depths (for infantry up to 1 meter, or 3 feet 3.4 inches, for machine guns and heavy infantry weapons up to 0.6 meter, or 1 foot 11.6 inches, and for armored cars up to 0.9 meter or 2 feet 11.4 inches).

<sup>5</sup> Capacity and time required for crossing.

<sup>6</sup> Usually negotiable by motor vehicles if the ratio is not higher than 1 to 7.

Where are the best positions for artillery and observation posts? Where is the terrain most favorable for tanks? Where does the terrain favor the enemy's counterattack? (e) And, lastly, what kind of attack is most favored by the terrain—penetration, envelopment, or frontal attack?

#### 4. TERRAIN FOR THE DEFENSIVE ACTION

##### a. General

A defensive position is frequently selected through examination of maps. Immediately thereafter, officers are sent on terrain reconnaissance. General Staff, artillery, and engineer officers reconnoiter for their respective purposes or weapons, later, a coordinated defense plan is built up from their information.

##### b. Questions To Be Considered

Such questions as the following arise:

(a) What should be the locations of the main line of resistance, the flank support, the outpost line, and the advance positions? (b) Where can artillery and heavy infantry weapons, as well as their required observation posts, be located to bring the enemy under fire at long ranges? (c) How can the enemy be subjected to frontal and flanking fire immediately in front of the main line of resistance, and where can a counterblow be effectively delivered? (d) What obstacles must be constructed to canalize the attack of the enemy, including his tanks, and to cause him to advance where heavily concentrated fire can be delivered? (e) Where will the reserves be located to obtain cover and also to facilitate counterattacks? (f) Should it be necessary to limit the enemy's penetra-

tion, and how can the defensive be established in a position to the rear?

## 5. TERRAIN FOR THE DELAYING ACTION

Where is an effective first line of defense? Where are lines of defense to the rear? Where is favorable ground for an outpost line? Where are covered avenues of withdrawal? Where is observation for supporting weapons? Where are natural obstacles and terrain features which can be converted into effective obstacles? Where is terrain which permits long range observation and firing?

## 6. TERRAIN FOR THE BIVOUCAC

Before the troops arrive, reconnoiter bivouac areas and routes leading thereto. Avoid large assemblages of personnel. The smaller the groups, the easier to conceal in villages, wooded areas, or other suitable locations. Maintain the tactical integrity of units in bivouac. If it is necessary to bivouac by day in open terrain, increase the distance and intervals to minimize the effect of hostile bombing. For tactical purposes, bivouac requirements include: Adequate room; security and screening forces which occupy commanding terrain and are sufficiently strong to permit time and space for the main force to maneuver according to the situation; and routes connecting the various groups and leading to potential defensive areas. Bivouac requirements for troops demand dry ground and land (preferably uncultivated) which is lightly wooded, protected against wind, and convenient to a supply of water, straw, and wood. The proximity of villages is desirable.

## Section IV. CONCEALMENT

---

Troops must use every opportunity and means to deny information to the enemy. Otherwise the essential element in the attack, *surprise*, is lost. Concealment is most effective when the enemy *requires a long time* to discover that he has been deceived.

### 7. PROTECTION AGAINST GROUND RECONNAISSANCE

#### a. Hostile Observation

Hostile observers and staffs can see great distances from high points (observation posts) with field glasses and telescopes; therefore, (a) when troop movements are contemplated, study the map carefully to insure cover against possible hostile observation; (b) conceal movements, positions, and installations by a screen of security forces to the front and flanks.

#### b. Offensive Concealment

Security in all directions must be considered. Concealment may be either offensive or defensive. If offensive, cavalry and other highly mobile combat units are launched against the hostile reconnaissance forces to drive them back. This method is effective, but occasionally hostile patrols are able to infiltrate or go around the attacking force.



### c. Defensive Concealment

Defensive concealment is particularly effective when the terrain contributes natural obstacles such as a river, a chain of lakes, a swamp, or some similar area. The stronger the natural obstacles, the weaker the force employed to protect the avenues of approach, and also the stronger the force that can be held as mobile reserve. Reconnaissance units are sent far forward, operating energetically and according to opportunity against the hostile reconnaissance force.

### d. False Appearances

In situations where it is desired to deceive the enemy and impart the impression of great strength, circulate false rumors, execute false marches, and send troops against hostile reconnaissance forces with instructions to fire a great deal of ammunition rapidly, to tie up the hostile communications net, to disturb radio transmission, and to organize deceptive transmission on radio or wire.

## 8. PROTECTION AGAINST AIR RECONNAISSANCE

Strong activity on the part of the hostile air force requires careful consideration for the concealment of troops and installations, particularly when antiaircraft means are lacking or very limited. The fact that photographs reveal every detail must not be overlooked. Artificial means of concealment, such as camouflage, smoke, or nets, are effective; but it is more important to survey carefully the surrounding area. Avoid constructions and artificial works, sharp color contrasts, and lights. Realize, on the other hand, that measures for concealment

hinder the troops, render more difficult, freedom of movement and distribution of orders, and through night marches and detours cause loss of time and decrease the capacity to fight.

## 9. CONCEALMENT IN REST AREAS

Select rest areas in wooded locations or in several villages. Place horses, tanks, vehicles, etc., under trees or in stalls or courts, but avoid regular parking or parade-ground distribution. Regulate traffic in the area, keeping the main roads and intersections free.

## 10. CONCEALMENT OF TROOP MOVEMENTS

### a. Loading and Unloading

In rail movements it is practically impossible to conceal loading and unloading areas from hostile air reconnaissance. When possible, march the troops by night to a village near the loading station, permit them to rest, and then move them on in smaller groups to the village where the loading station is located. Load rapidly and vacate the vicinity promptly.

### b. Road Movements

In road movements, the concealment given by darkness is most effective. Arrange the departure of troops from bivouac at the beginning of darkness, with arrival in the new area before daybreak. When marching by day, select routes leading through woods, villages, or other partially covered areas. The shadows of trees along the roads offer excellent means for concealing columns, including vehicles. Bridge construction cannot be concealed, but equipment can be so disposed prior to the

actual construction that there is little or no tell-tale indication of the preparations.

## 11. CONCEALMENT IN BATTLE

Carry out development and deployment, or either, under the concealment of darkness. If the situation requires execution by daylight, seek covered areas. Utilize camouflage to conceal the positions of guns, of headquarters, and of observation posts.

TALPO.IT  
TALPO.IT  
TALPO.IT

## Section V. COMBAT INTELLIGENCE

---

The commander must continually, day and night, conduct reconnaissance and utilize intelligence means to seek information clarifying the enemy situation. As soon as possible, he will forward information and important reports to the next higher commander. Once contact with the enemy is gained, steps should be taken not to lose contact. In higher commands, and sometimes with the lower units, a special officer (intelligence officer) will be detailed to handle all intelligence matters. Such an officer works in coordination with all the commanders of attached intelligence units and information services, and keeps them constantly informed of the situation.

### 12. THE PREPARATION OF INTELLIGENCE REPORTS

Keep in mind the following rules governing the preparation of reports: (a) Determine beforehand what reports must be sent in code and also what means of signal communications are to be used. (b) Differentiate between what one has *personally* seen and what another has remarked or reported. (c) Avoid euphemistic phrases and exaggerations. (d) State strength, time, and place exactly. (e) Include information on the condition of the terrain. (f) Send in pertinent information yourself, never assuming that another unit has already sent it in. (g) In *very urgent cases*, send a report not only to the next higher commander but also direct to the commander-

in-chief. (h) From time to time, submit a complete assembly of reports; frequently a sketch will suffice.

### 13. WHAT TO REPORT

In battle, utilize pauses to send in reports on enemy movements, your own situation, the ammunition supply, the condition of the terrain, and your own impressions. Make suggestions for the seizing of favorable opportunities. Reports giving such information as exists just before darkness sets in are especially valuable. After a battle, report immediately what enemy troops oppose your force, what the enemy is doing, what the condition of your own troops is, where your troops are located, and what the status of the ammunition supply is.

### 14. CONTACT AND COORDINATION BETWEEN FRIENDLY UNITS

Liaison between neighboring units, and between higher and next lower units, is accomplished through a mutual exchange of reports and a prompt communication of friendly intentions. Large units utilize liaison officers for this purpose, each unit sending one of its officers to the other and holding him responsible for the exchange of information. Such officers keep their commanders informed of the situation with reference to the enemy, all developments of the situation, and the intentions of the other commander. The duties of a liaison officer demand tactical knowledge, intelligence, and tact.

### 15. TRANSMISSION OF ORDERS AND REPORTS

Several communication means should always be available to a commander. Where technical communication

means are uncertain or cannot be maintained, then courier service<sup>7</sup> is established. Very important orders or reports are generally sent by officer messengers in motorcycles or cars. If delivery is uncertain, several means of transmission are used, as well as different routes, to insure the prompt arrival of the information at its destination.

Every commander is required to know the routes of communication and the messenger route. All units assist in the uninterrupted transmission of reports and messages. Higher commanders and commanders of reconnaissance and security units are authorized to examine the messages which they contact en route, noting on the message what they have done so, the hour, and the date.

## 16. ADVANCE MESSAGE CENTERS

To expedite the receipt of information, advance message centers are established, particularly in the area or sector where communications will be numerous. Such message centers should be easily located, protected from hostile fire, and definitely connected with the rearward message center. Under certain circumstances (for example, on the front of a cavalry corps), advance message centers and message assembly points may be established at considerable distances from the main headquarters, in order to simplify and expedite the transmission of information between the reconnaissance units and the main headquarters.

<sup>7</sup> Runners, mounted men, bicyclists, or motorcycleists.

## 17. INFORMATION THROUGH SPECIAL MEANS

The air intelligence service observes hostile air activity and provides information relative to the air situation, and from this one can obtain a fairly accurate conception of the enemy's intentions. The signal communication intelligence service observes all hostile communications (radio, telephone, telegraph, etc.) through goniometric intercept, listening posts, wire tapping, observers, and other means. The routine interrogation of prisoners of war yields miscellaneous information. Captured documents may include orders, maps, messages, notebooks, newspapers, photographs, and films. Scrutiny of the hostile press and publications is maintained.

## 18. IMPORTANT PRINCIPLES OF RECONNAISSANCE

Do not dissipate reconnaissance strength. Superiority of means is very important for successful reconnaissance; but superiority in mobility and clever employment tend to offset numerical inferiority. It will frequently be necessary to fight for information. Advanced hostile security and reconnaissance forces must be penetrated or thrown back to make contact possible with the hostile main force. In this connection, it is often advisable to occupy important points quickly with motorized forces. When there is great inferiority to the enemy, fighting should be avoided, and an endeavor should be made to penetrate the enemy screen or go around it.

The commander who specifies what information is to be obtained should coordinate all his subordinate reconnaissance means. Efficient reconnaissance is not obtained through employment of large numbers of recon-

noitering units, but by the careful direction and instruction of these units as to what the commander wishes to know. Definite missions and their relative urgency must be indicated, and the means of sending information to the rear, including definitely regulated radio traffic, must be insured.

## 19. STRATEGIC RECONNAISSANCE

Strategic, or operative, reconnaissance endeavors to build up a general picture of the overall situation, thus aiding the commander in chief in making the decisions which have important influence on the *entire campaign*.

Missions may include observation of hostile mobilizations, assemblies, initial march directions, railroad movements, boat movements, supply echelons, construction of fortifications, air activities, locations, strengths, movements of motorized and mechanized forces, and, particularly, open flanks. Such missions are performed by air reconnaissance units, motorized reconnaissance battalions, and army cavalry units. The three must supplement each other and be carefully coordinated to that end.

## 20. TACTICAL RECONNAISSANCE

Tactical reconnaissance is concerned with the movements of the enemy in closer proximity: his movements, bivouac areas, organization, breadth and depth of disposition, supply service, construction of defensive works, air activity, and location of airfields and antiaircraft. Especially important is timely report of the location of motorized or mechanized forces.

For air reconnaissance, the commander utilizes the airplane squadron which is placed at his disposal for such



purpose by the air force. For ground reconnaissance, he utilizes independent motorized reconnaissance battalions, motorized reconnaissance battalions of the cavalry, mounted reconnaissance battalions of the cavalry, and reconnaissance battalions of the infantry divisions.

## 21. RECONNAISSANCE BATTALIONS

Definite sectors are generally assigned to reconnaissance battalions. Within the corps boundaries between divisions are designated, and on open flanks the boundary is designated between the flank reconnaissance area of the division and that of the corps. Reconnaissance units avoid fighting unless it is absolutely required by the situation in the accomplishment of their missions. If a reconnaissance unit be given a security mission, the unit should be reinforced by other units, for example, by machine gun, light artillery, antitank and engineer troops.

If a reconnaissance battalion is directly in front of the division and in contact with the enemy, it should be ordered either: (a) to move off to a side and continue reconnaissance in that area, or (b) to await relief from troops coming up from the rear, or (c) to fall back upon the troops in the rear. In the absence of any orders, under the aforesaid circumstances the reconnaissance battalion should fall back upon the troops in the rear. On an open flank, reconnaissance battalions are echeloned forward.

## 22. MOTORIZED RECONNAISSANCE BATTALIONS

*The important advantage is speed.* Motorized reconnaissance battalions can reconnoiter by day and march on by night, and are restricted only by limitations of the

motor vehicles, terrain, weather, roads, fuel supply, and signal communication. They maintain connection with mounted reconnaissance units by radio. Advancing forward by bounds—the nearer the enemy, the shorter the bounds—they remain as long as possible on roads. In hostile territory, different routes for the return are selected, and important points along the road, or important places, are secured. Rest during the night is obtained by avoiding main roads and villages, and by halting under available cover in isolated areas. Contact with the enemy, however, must be maintained.

The width of a sector should not be over 50 kilometers (31 miles). The depth is limited by fuel supply. Motor vehicles in modern reconnaissance units have a radius of action of between 200 to 250 kilometers (125 to 155 miles) without replenishment.

Scouting groups will generally be organized and dispatched by the commander of a battalion. Such groups include armored scout cars, motorcycles, and radio equipment. Along the more important roads and those leading to the decisive areas or points, patrols should be stronger, but too large a patrol increases the difficulty of concealment from the enemy. Armored car patrols within scouting groups will be given written orders pertaining to route, destination, and information desired; they advance by bounds, with distance and speed sometimes prescribed; generally, however, they precede the division at about 1 hour (approximately 40 kilometers, or 25 miles). Motorcycles are used to fill in gaps and intervals, thereby thickening the reconnaissance net. The remainder of the motorized reconnaissance battalion serves as a reserve and as a receiving and assembly point for reports.

## 23. RECONNAISSANCE BATTALION OF THE INFANTRY DIVISION

The reconnaissance battalion of the infantry division is employed as a unit, even if the division is advancing over a broad front in several columns. The advance is made by bounds somewhat shorter than those of the motorized reconnaissance battalion. Scout groups are sent out under the direction of the battalion commander. The battalion can reconnoiter an area approximately 10 kilometers (6 miles) in width and seldom is sent more than 30 or 40 kilometers (20 to 30 miles) forward. The strength of the scout groups (sometimes up to that of a platoon with light machine guns) is, however, determined by the situation and the mission. Patrols sent out from the scout groups remain on the roads as long as possible, advancing by bounds from observation point to observation point.

Reconnaissance battalions of interior divisions are usually withdrawn to the rear after the battle actually begins. If, however, the division is operating over a broad front or in difficult terrain, the battalion may be reinforced and utilized to fill in a gap or to seize an important terrain feature. Communications must be carefully provided. Extra signal equipment and personnel may be attached in exceptional cases.

## 24. BATTLE RECONNAISSANCE

The purpose of battle reconnaissance is to reconnoiter the enemy's front, flanks, and rear to establish definitely the location of his flanks, artillery, heavy infantry weapons, and reserves. Such reconnaissance locates our

own front line and often provides close-in security and terrain reconnaissance.<sup>8</sup> Security is necessary at all times, but reconnaissance must not be neglected to accomplish security. Battle reconnaissance is established usually at the opening phases of the development or deployment. The advance of the infantry in the attack reveals very quickly the location of hostile infantry and artillery; also, fire from our artillery upon hostile infantry will generally result in the hostile artillery delivering counterfire and thus revealing its location.

There are both air and ground means available for performing battle reconnaissance. Some of the specific means of battle reconnaissance are: (a) *Infantry patrols*, sometimes reinforced with light machine guns, heavy machine guns, light mortars, or antitank guns. (b) *Engineer patrols*, particularly valuable in approaching a fortified area, a defile, or a river. (c) *Artillery patrols*, consisting usually of an officer and a few mounted men assigned to reconnoiter routes of approach, observation posts, and fire positions. (d) *Observation battalion (artillery)*, skilled in locating targets by sound and flash, and in evaluating aerial photographs. (e) *Captive balloons*, supplementing the preceding means and permitting a general view over the hostile front.

<sup>8</sup> Our observation posts and other friendly personnel, who are reconnoitering for our own artillery, heavy infantry weapon, and antitank positions, can gain much helpful information from units of the reconnaissance battalion. Sometimes they actually accompany the battalion to get early information about the terrain, potential targets, and gun positions.

<sup>9</sup> It assists our own artillery in firing on concealed targets by transmitting weather data. By accurate surveying principles, it establishes the location net for the batteries. The net is not restricted to the division sector, but sometimes extends 6 to 10 kilometers (as much as 6 miles).

## Section VI. PRINCIPLES OF COMMUNICATION

---

The higher unit is responsible for the establishment and maintenance of communication with the next lower unit. Wire connection with neighboring units is always established to the unit on the right. This rule does not release the commanders of responsibility, however, to maintain contact with units to their left.

Of special importance is the connection between artillery and infantry. If an artillery unit is attached to an infantry unit, then the *infantry* is responsible for the connection; if the artillery is supporting an infantry unit, but not attached to it, then the *artillery* is responsible for the connection. If, however, the artillery, through some special circumstances, is unable to establish the connection, then the infantry must undertake the responsibility. Connection with heavy infantry weapons is the responsibility of the infantry commander concerned.

### 25. OPERATION OF SIGNAL COMMUNICATION TROOPS

The commander issues orders for the employment of his communication units ordinarily after receiving the recommendations of the communication officer. It is most essential that the commander punctually give the communication officer a complete picture of the situation, including the commander's intentions. The communication means of a command post are assembled in a message

center. The proper functioning of communication is dependent upon its useful employment on the part of the commander and upon the technical training of personnel.

## 26. ORDER OF THE DIVISION COMMUNICATION OFFICER

The order of the division communication officer should contain: (a) The enemy situation, our own troops, the plan of the commander; (b) the mission of the signal battalion; (c) specific orders for the signal communication companies and supply train; (d) when applicable, instructions relative to secrecy, replacement, utilization of commercial nets, and system maintenance.

In the advance march, the division communication battalion builds and maintains an axis of signal communication (wire lines) along the route upon which the division commander and his headquarters are advancing. In friendly territory, the existing commercial net is utilized to a maximum; in enemy territory, heavy field cable is generally installed overhead. When contact with the enemy has been established by the division, wire communication must be maintained at all costs with the corps and must also be supplemented by radio and other means. Establishment of lateral connections within the division and between divisions is also very important in coordinating the tactical effort.

Within the division, all command posts and observation posts should be connected according to their relative importance. The division signal battalion will establish lines to the infantry regiments, artillery commander, and the artillery units operating under the artillery commander, as well as lateral connection to adjoining di-