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HANDBOOK OF MILITARY KNOWLEDGE FOR COMMANDERS

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This book was written in accordance with most recent training programs and the requirements of commanders for information. It includes both ancient and modern Chinese and foreign military thinking, information about foreign military forces, information about service arms and branches of service, tactical principles for infantry detachments, military topography and military meteorology. It is a rather ideal handbook of military knowledge intended for commanders at all levels of the Army, Navy and Air Force, for military academy cadets, for armed forces cadres at all levels, for military training cadres at all universities, for reserve units, and for the militia rank and file. Important points in the handbook have been marked with an asterisk by the writers.

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MILITARY SERVICES AND BRANCHES OF SERVICE

Chapter I. Tactical and Technical Performance Capabilities of Equipment Used By All Branches of Service at the Division Level and Below in the Army

A. Artillery

1. Major Tactical and Technical Performance Capabilities of Ground Artillery*

	Mortars		Recoilless Guns			
	Type-67 82mm	Type-71 100mm	Type-65 82mm	Type-78 82mm	Type-69 105mm	Type-75 105mm
Diameter (mm)	82	100	82	82	105	105
Muzzle velocity (m/sec)	211	250	247	252	503	503
Firing rate rounds/min.	15-25	15-20	5-6	6-7	5-66	5-6
Maximum range(m)	3032	4751			7680	7417
Pointblank range(m)			293	500	570	565
Minimum range(m)	97	170				
Field of fire						
Elevation	+45-+85	+45-+80	-5-+30	-6-+28	-4-+3	-4-+7
Traverse (degrees)	6-60	8-300	360	360	360	360
March characteristics						
Weight (kg)	36	75.5	29	32.5	219	212
Length (m)			1.54	1.45		3.8
Width (m)						1.7
Projectile weight (kg)	3.1	8	3.45	3.6	16.2	15.6
Armor piercing depth (mm/degrees)			120/25	150/25	150/25	150/25
Basic number of rounds	120	100	30	30		40 (6-8 per vehicle)

	Howitzers		Rocket Artillery		Cannon
	Type-54 122mm	Type-83 122mm	Type-63 107mm	Type-63 130mm	Type-56 85mm
Diameter (mm)	121.92	121.92	107	130	85
Muzzle velocity(m/sec)	515	618	23.66	25	793
Firing rate (rounds/min)	5 - 6	7 - 8	12/7"-8"	19/9.5"-11.5"	15-20
Maximum range(m)	11,800	18,000+	8,480	10,020	15,650
Pointblank range(m)	600	762			950
Minimum range(m)	3,400	3,700	3,000	3,000	8,000
Field of fire					
Elevation	-3 - +63.5	-3 - +65	0 - +60	0 - +50	-7 - +35
Traverse	49	54	30	180	54
March characteristics					
Weight (kg)	2,500	2,668	380	5,570	1,725
Length (m)	5.9	7.862	2.51	5.7	8.34
Width (m)	1.975	2.157	1.4	2.09	1.73
Projectile weight(kg)	27.37	21.76	18.85	33	12.5
Armor piercing capability(mm/deg)					110/25
Basic number of rounds	80		60	95	120

2. Tactical and Technical Performance Capabilities of Anti-tank Missiles

a. Hongjian Type-73 Anti-tank Missile

Range	500 - 3000 m
Firing velocity	2 rounds/min
Flight speed (in continuous flight)	120 m/sec
Attack sector at 500m range	about 6 degrees left and right
Attack sector at a 1,500 - 3000 meter firing distance	about 22.5 degrees left and right
Time needed to switch from march mode to combat mode	1 min. 40 sec.
Time needed to switch from combat mode to march mode	2 mins.
Total weight of missile	11.3 kg
Projectile diameter	120 mm
Total length of missile	868 mm
Flight length of missile	834 mm
Length of deployed missile wings	393 mm
Useful life:	
Luggable case for launch stand	10 launches
Control box	2,000 launches
Static armor destruction (perpendicular angle of fire)	500 - 600 mm
Dynamic armor destruction (65 degree strike angle)	120 - 150 mm

2. Hongjian-8 Anti-tank Missile (1)

The HJ-8 anti-tank missile is a second generation PLA anti-tank missile in that is fired from a tube, is optically aimed, tracks using infrared, and is wire guided. Its range is 100-3,000 meters; flight speed is 200 m/sec.; and firing speed is 2 - 3 rounds per min. Hit accuracy is 70 percent at 100-500 m, and 90 percent at 500-3,000 meters. It has a smaller dead zone than the HJ-73 anti-tank missile, and its hit accuracy and flight speed have been increased.

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(1) Excerpted from General Staff 1984 new equipment video picture experimental data

3. Tactical and Technical Performance Capabilities of Anti-Aircraft Artillery (Machine Guns)

	Type-65 Twin Barrel 37mm AA gun	Type-56 14.5 mm four mount AA machinegun	Type-58 14.5 mm twin mount AA machinegun	Type-77 12.7 mm AA machinegun
Caliber (mm)	37	14.5	14.5	12.7
Muzzle velocity (m/sec)	866 (HE)	990	995	820
Rate of fire	80-90 (single barrel)	600	300	650 - 750 (theoretical)
Range (m):				
Maximum	8,500		12,000	7,000
Effective	3,500	2,000	2,000	1,600
Pointblank range	950m			
Firing ceiling				
Maximum	6,700			
Effective	3,000			
Field of fire				
Elevation	-10 - +85	-10 - +90	-15 - +90	-15 - +80
Traverse(deg)	360	360	360	360
Total weight	2,650kg	2,100	560	56.1
Total length	6.36m	4.54	3.9	2.15
Width (m)	1.8	1.86	1.66	1.40
Height (m)	2.44	2.3	1.5	
Projectile weight (kg)	1.6	0.2	0.2	0.123
Armor piercing depth (mm)	25 - 56	15 - 20 (Within 1,000 m)		15 - 20 (Within 100 m)

4. Hongying-5 Surface-to-Air Missile Tactical and Technical Performance Capabilities

Firing height	50 - 2,300 m
Maximum oblique distance (firing from behind) (1)	4,200 m
Maximum oblique distance (head-on attack) (2)	2,800 m
Minimum oblique distance	300 m
Target flight speed	
When firing from behind	<260 m/sec (960 km/hr)
In head-on attack	<150 m/sec (550 km/hr)
Length of firing barrel	1,500 mm
Weight of firing barrel	3 kgs
Structural weight of launcher	1.95 kg
Length of missile	1,440 mm
Weight of missile	9.8 kgs.
Missile diameter	72 mm
Total weight of missile in combat mode	15 kgs
Total weight of missile in march mode	16.5 kgs
Maximum launch angle of elevation	
Upright	60 degrees
Prone	40 degrees
Minimum launch angle of elevation	20 degrees

(1) Tail pursuit: Attack after target has cut sharply.
(2) Head-on attack: Head-on attack before target has entered turn.

5. Data Pertaining to Artillery Fire*

Artillery Firing Effectiveness

		Rifled Gun		Mortar		Rocket Artillery Battalion	
Mode of Fire	Per gun	12-gun battalion	18-gun battalion	6-gun company	9-gun company	107mm	130mm
Concentrated firing (hectares)	0.5	6	9	3	4.5	9	16
Interdictory fire							
Advancing tank column		company in single file					
Tank assault formation (m)	25	300	450			300	400
Infantry (m)	40	480	720	240	360	300	400

Corresponding Number of Projectiles for All Kinds of Guns Using the Single Gun Standard (simultaneous mass firing)

	Rifled Gun		Mortar		Rocket Artillery	
Caliber (mm)	85	122	82	100	130	107
					simultaneus volleys	
Number of shells	10	8	12	10	19	12

Shell Expenditure (Artillery Standard)

	Exposed Infantry		Artillery Company				Strongpoint, Massed tanks, Armored vehicles
	Suppress	Annihilate	Suppress	Annihilate	Temporarily suppress	General suppress	Key point suppress
Rifled guns and mortars, shell expenditure per hectare	2	6	9	27	6-9	18	36
Rocket Art'y	1 - 2 volleys						

Reference Standards for Number of Artillery Troops Required for Firing at Various Kinds of Targets

Firing Mission	Nature of Target	Target Size	Required Number of Artillery Troops	Remarks
Suppression	1 platoon strongpoint	6 hectares	12 guns	
Suppression	art'y company, radar station, command post	3 hectares	6 guns	Area figured in terms of 3 hectares
Annihilation	tactical nuclear weapons	3 hectares	2 - 3 bns.	
Destruction (wiped out)	defenses, fire points	1 target	1 gun	Direct fire
Destruction	Obstacles such as barbed wire	10-15 meters wide	4 guns	Pointblank aiming & firing
Covering or interdictory		per 25 m width	1 gun	

Time Required For Artillery Troops To Prepare Firing Data

Type	Accuracy Method	Results Method	Shell Survey Method	Simple Method	Target Survey Method
Mass	1 - 6 hrs				
Battalion			40 mins	30 mins	
Company			40 mins	30 mins	15 mins

Effectiveness of HE Anti-personnel Burst

	Mortar		Rifled Gun		Rocket Artillery	
Shell caliber (mm)	82	100	85	122	107	130
Casualty effect						
Exposed effectives						
Standing infantry						
along front (m)	30	44	28	40	33	40
In-depth (m)	16	22	10	20	18	20
Prone infantry						
Along front (m)	20	30	19	24	23	24
In-depth (m)	10	15	7	13	11	13
Sheltered effectives						
Area (sq. m.)	10	15	11	24	15	22
Blast effect						
Shell crater dimensions						
Depth (m)			0.7	1	1	1.5
Radius (m)			1	1.5	1.2	1.5
Length of destruction trench (m)				3	7.	17

Smoke Round Effectiveness

Gun Type	Smoke Screen Dimensions		Sustained Time
	Frontal Width (m)	Height (m)	(seconds)
82mm mortar	14 - 36	7 - 13	18 - 30
100mm mortar	30	About 15	About 25
85mm cannon	12 - 15	18 - 22	20 - 25
122mm howitzer	25 - 30	37 - 42	40 - 50

Illumination Round Effectiveness

Gun Type	Effective illumination time (seconds)	Illumination diameter (meters)	Illumination height (meters)	Descent speed (meters/sec.)
82mm mortar	about 20	300	200	8 - 9
100mm mortar	about 40		500 - 700	
122mm howitzer	about 30	800-1000	350	8 - 9
130mm cannon	about 40	800-1000	600	8 - 9

Regulations for Artillery Rate of Fire

Duration (min)	85mm cannon		122mm howitzer		82mm mortar
	Full charge (rounds)	Reduced charge (rounds)	Full charge, No 1 charge (rounds)	No 4-6 charge (rounds)	No 3 charge (rounds)
1	10	10	6	6	25
3	25	25	16	16	45
5	40	40	25	25	60
10	50	60	40	40	75
15	60	75	55	55	85
20	70	90	65	70	120
30	90	110	75	90	150
40	110	130	85	110	
50	125	150	90	130	
60	140	170	100	150	180
120	230	290	150	260	
Every hour thereafter	80	100	50	80	100

Reference Data on Times Required from the Command To Fire to Shell Impact for Several Different Kinds of Guns

Gun Type	Shell Flight Time (seconds)	Shell Loading Time (seconds)	Command Communications Time (seconds)	Total Time Required (mins & secs)
122mm howitzer	21	60 - 90	45 - 50	2'6" - 2'41"
85mm cannon	21 HE 28 AP	60 - 90	30	1'51"- 2'21" 1'58"- 2'28"
100mm mortar	38 - 40	30	30	1'38"- 1'40"
82mm mortar	33 - 35	30	15	1'18"- 1'20"

Remarks:

1. Times given in the table are summary data under conditions of unencumbered communications when firepower is within plan.
2. Shell flight distances have been figured at two-thirds of maximum range for all gun types.
3. If parameters need to be recalculated, 1 - 1.5 minutes may be added.

Reference Data of Standard Time Allotted for Artillery Troops To Complete Combat Preparations and Shift into Combat Formation

	Combat Mission			Shift of Combat Formation					
	Those Involved			Time (Minutes)			Time (Minutes)		
	Commanders	Observation Posts	Artillery Positions	Bn.	Co.	Pl.	Bn.	Co.	Pl.
82mm recoilless gun 82mm mortar	Following assignment of mission, tasks handed down to those concerned and deployment of combat formations is organized	Selection of positions to be occupied and preparations to fire completed	Selection of positions to be occupied and rudimentary firing preparations made	11	8		5	3	
85mm cannon				60	45	40	25	20	15

Remarks: 1. Supposing wired electric circuits to be greater than 5 kilometers, for each additional kilometer, firing preparation time is increased by 1 minute.

2. Increase by 25 percent at night.

3. Movement times for a change in combat formations require additional calculations.

4. Times required for observation post dispersal or change is 15 minutes for companies and 30 minutes for battalions.

Attachments:

Types of Field Artillery Firing

Gun performance has been divided into direct and indirect fire.

Direct fire. This is fire in which the guns are aimed directly at the target. Preparations for this kind of fire are simple; command is convenient and the hit rate is high. However, the guns are not at great range from the enemy and gun positions are exposed. This method is used primarily to destroy specific sites and hardened targets.

Indirect fire. This is fire in which targets are not visible from the guns, when observation posts use aiming points (expressed in terms of coordinates) to provide the guns a direction of fire in accordance with the firing angle between the guns and the target. In using this method, positions are hidden and surprise can be used in bringing firepower to bear. This is the main fire used by artillerymen.

The firing mission is defined as suppression, annihilation, destruction, harassment, or special firing.

Suppressing fire inflicts a certain amount of casualties on the enemy (the degree of casualties is generally 20 to 30 percent), suppressing the enemy's fire and limiting his mobility. Ordinarily, artillerymen carry out the suppressing attack mission.

Annihilating fire causes sever casualties (a casualty rate of 50 to 60 percent) to the enemy's effectives and technical devices. It is firing that results in complete or major loss of combat strength.

Destructive fire destroys the enemy's armored targets, defensive fortifications, obstacles and structures.

Harassing fire throws enemy movements into confusion, weakens enemy combat strength or blockades his communications.

Special fire usually means the use of smoke shells to carry out a confusing attack, illumination bursts to illuminate an attack, propaganda shells to disperse propaganda materials, and the use of incendiary shells for an incendiary attack

Depending on the methods used, attacks may be categorized as mass attacks or interdiction attacks.

Mass firing uses the firepower of two or more artillery batteries, simultaneously firing against the same targets or sections of terrain. Frequently it is used to neutralize or annihilate the enemy's effectives.

In interdiction firing, an artillery battalion (or massed artillery) uses its firepower against selected interdiction points (or lines) to interdict enemy movements.

Depending on the target, the firing techniques employed and the degree of ferocity of firepower varies. It may be divided into raiding fire and surveillance fire.

Raiding fire is when artillerymen carry out sudden and ferocious firing against targets for a short period of time using a pre-set amount of ammunition. Usually it is rapid fire or else rapid fire and regular speed fire alternately for a set sustained period of time.

Surveillance fire is firing carried out following raiding fire or sporadic fire against targets requiring firepower surveillance.

Safety zone: During infantry gun and tank gun coordinated operations, infantry and troops are located a minimum distance from the fringes of the target against which the artillery is firing. The amount of shelter for infantry and tanks is set on the basis of firing accuracy, firing distance, shell dispersal, shell effect and whether or not air bursts and skip firing of shells is used. Ordinarily, the distance for mortars is 200 - 400 meters and for rocket artillery 600-800 meters.

B. Armored Forces

1. Tactical and Technical Performance Capabilities of Major Armored Forces Combat Vehicles*

	Type-69 Medium Tank	Type-59 Medium Tank	Type-62 Medium Tank	Type-63 Medium Tank	Type-63 Armored Personnel Carrier	Type-59 Improved Tank
Combat weight (tons)	36.5	36	21	18	12.8	36.5
Crew	4	4	4	4	2 + 13	4
Vehicle length (m) (exclusive of gun)	6.002	6.04	5.55	7.15	5.476	
Vehicle length (m) (gun forward)	9.13	9.0	7.9	8.437		9.220
Vehicle height (m)	2.4	2.4	2.25	2.522	2.11	2.400
Vehicle width (m)	3.27	3.27	2.864	3.2	2.978	3.270
Track center (m)	2.64	2.64	2.39	2.82	2.464	2.64
Length of track in contact with ground(m)	3.85	3.84	3.53	4.40	3.095	3.84
Ground clearance (m)	0.45	0.425	0.45	0.40	0.433	0.425
Maximum negotiable grade (deg)	32	30	35	38	32	30
Maximum side tilt (deg)	30	30	27	32	25	30
Spannable trench (m)	2.7	2.7	2.55	2.9	2.0	2.7
Fording depth (m)	1.4	1.4	1.3		1.5	1.4
Height of traversable vertical wall (m)	0.8	0.8	0.7	0.87	0.6	0.8
Ground pressure	0.82kg/cm2	0.8	0.7	0.56	0.59	
Average Speed (kph)						
Highways	32-35	30-33	30-35	30-36	35-40	30-33
Dirt roads	22-27	20-25	16-23	22-28	30	20-25
In water				7-8	6.46	
Speed in each gear (kph)						
First gear	6.78	6.78	8.1	7.12	8.2	6.78
Second gear	14.5	14.5		18.8	16.3	14.5
Third gear	20	20	23.1	27.5	23.3	20

Fourth gear	28.5	28.5	37	42.7	37.6	28.5
Fifth gear	45	45	59.7	64.2	56.1	45
Maximum range (km)						
Highways	420-440	420-440	480-510	370	500	
Dirt roads	290-320	270-290	290-420	340		
In water				120		
Maximum fuel load(1)	951	812	724	403	450	
Two-way radios						
Model	A-220	A-220	A-220	A-220	A-220	VRC-8000
Range (km)	16	16	16	16	16	35
AA machineguns						
Caliber	12.7	12.7	12.7	12.7	12.7	12.7
Number	1	1	1	1	1	1
Basic # of rounds	500	500	500	500	1,050	500

	Type-69 Medium Tank	Type-59 Medium Tank	Type-62 Light Tank	Type-63 Amphibious Tank	Type-59 Improved Tank
Guns					
Caliber (mm)	100 (smooth)	100	85	85	105
Basic # of rounds	44	34	47	47	34
Thickness of armor pierced at 500 m (mm)		150-200	90-110	90-110	
Thickness of armor pierced at 1,000 m (mm)		140-185	80-100	80-100	
Thickness of armor pierced at 1,500 m (mm)		130-170	75-90	75-90	
Maximum range using longitudinal level (m)	12,700	16,000	12,100	12,800	16,000
Maximum range using sight (m)	4800-5000	5000	5200	5200	
Maximum angle of elevation (degrees)	18+1	18+1 22	22	18+1	
Maximum angle of depression (degrees)	-5	-5	-4	-4	-5
Pointblank range (m)	1,650	1,070	950	950	1,850
Real rate of fire (rounds/minute)	7	7	8-12	8-12	
Machineguns					
Caliber (mm)	7.62	7.62	7.62	7.62	7.62
Number	2	2	2	2	2
Basic # of rounds	3,000	3,000	2,000	2,000	3,000

2. Major Technical Performance Capabilities of Tank Radios

	Location of Equipment	Operating Frequency (megacycles)	Output Power (watts)	Communication Range (km)	Weight (kg)
714 radio	Tank regiment	20-26 121 channels	1 - 1.28	w/1.5 meter whip antenna Voice: 6 Telegraph: 9	8.9
A-220 radio	Tank	20-22.375 96 channels	Voice: 16	4 section antenna	16
A-220A radio	Tank	20-27.175 288 channels	16	16	
RC-8000 radio	Tank	30-87.9 2,320 channels	50	35	
10-PT radio	Added to bn. & reg't command posts	3.75-6	Voice: 4	4 section antenna 20-25	36.5

Attachment 1. Types of Tank Fire

In-place firing. By this is meant the method of aiming and firing from the position in which the tank is deployed or the site at which it is stopped. This method is characterized by good accuracy and rapid firing.

In-place firing is usually done from a position on favorable terrain (after finding ground cover, preparing earth ridges or taking shelter), or from previously prepared revetments. The most favorable firing position when using a sighting device is a covered position (or shelter), the top of which is slighting lower than the sighting line. Selection of a firing position requires that tanks have sufficient field of observation while simultaneously being able to conceal and camouflage themselves well. In order to insure replenishment of ammunition, a site must be selected that is along a road over which ammunition can be transported, and resupply of ammunition during combat must be provided for. In addition to the primary firing positions, reserve firing positions must also be selected. When the combat mission cannot be completed from the primary firing positions, a shift can be made to reserve firing positions when higher authority issues the order.

Firing during brief halts is aiming and firing during brief, temporary halts when tanks are on the move. This is a major method of firing when tanks are on the offensive. Its strengths are that it can gain the fine results obtainable from in-place firing without reducing the speed of tank movement. In addition, it is also able to reduce the threat from enemy firepower.

All preparations for firing during brief halts must be completed while on the move, and brief halts made on the verbal command of the chief gunner. When

possible, every effort should be made to have the tanks stop in a sheltered area or behind shelter. In order to reduce the time of the brief halt, the chief gunner should get the target within his field of view while on the move. When the tank begins to brake, he should immediately take aim, and as soon as the tank has come to a complete halt, he should take accurate aim at once and fire rapidly. After firing, the tank should pick up speed and advance (when machine guns are being fired, the advance should be on orders from the chief gunner). Each brief halt should be for no longer than 8 seconds, and usually the distance covered between each firing is 50 to 100 meters.

Firing while on the move means aiming and firing while the tank is advancing. This is a method of firing used when tanks are engaged in offensive combat. Its features are the ability to make full use of a combination of the tank's rapid movement and its fierce firepower.

In order to increase the effectiveness of fire, tanks equipped with a stabilizer can fire while underway at individual targets at less than 1,500 meters range and at groups of targets beyond 1,500 meters. Tanks that are not equipped with stabilizers can usually fire at targets only at pointblank range.

Attachment 2.

Zones and Areas Occupied by Tank Units (and Detachments)

Designation	Definition	Selection Requirements	Work Done	Land Area Reg't	Bn.	Co.	Distance from Enemy Front
Assembly area	Area occupied for the assembly of tanks and to prepare for combat. Usually occupied mostly by tank units.	Sheltered terrain; good for mobility; good for air defense, defense against nuclear & chemical attack; easy to get into and out of; ample sources of water; suited to organization of all forms of support. Must be located beyond effective range of enemy divisions' missiles & long range rockets.	Dispersal, concealment. Strict camouflage; concealment of vehicles & personnel. Organization of observation and posting guards. Readying of vehicles; replenishing POL, ammo & equipment. Action within prescribed area during day and night. Nighttime blackout.	50-60 sq. km.	4-5 sq. km.	About 1 sq. km.	30-50 km.
Waiting Area	Area occupied by tank units to organize & prepare offensives. Often occupied by infantry attached to tank units	Same conditions as next above. Must be located outside range of enemy's artillery and be suited for tanks to spread out and advance					10-15 km.
Dispersal Area	Area in which tank units change from march formation to dispersed formation	Selection of area must be in a place that provides good mobility and cover and that avoids crosswise tank movement.	Rapid, orderly and uninterrupted dispersal upon entry into area			Battalions begin to disperse at 2 - 3 kms from dispersal area. Companies begin dispersal at 1 km from dispersal area.	

Deployment Area	Tank units deploy in combat formation in this area and launch an assault on the enemy	Good for cover and the launching of a forward assault. Favorable terrain must be selected that is outside the direct fire range of the enemy's direct fire guns	Tank unit commanders further spell out mission from tanks	Tank companies deploy forward 500 - 800 meters. A distance of 50-100 meters between each platoon and each tank	1-3 km.

C. Engineers

1. Performance of Major Land Mines and Anti-Tank Grenades*

Description	Weight (kg)	Detonator Used	Detonation Pressure (or Pulling Pressure) (kg)	Power
Type-59 anti-tank mine (metal)	8.5	Type-59 anti-tank land mine detonator	200-700	Snap tracks; damage weight bearing wheels
Type-69 anti-tank mine (plastic)	6.35	Type-69 multiple pressure detonator	180-350	
Type-72 anti-tank mine (metal)	7.5	Type-72 blast-proof detonator	180-400	
Type-72 anti-tank mine (plastic)	6.35	Type-72 blast-proof or Type-69 multiple pressure detonator	400-700	
Type-72 anti-tank grenade (plastic)	2	pull action detonator		blasts through armor at top rear causing damage to engine
Type-72 anti-tank grenade Type II (plastic)	1.65	pull action detonator		
Type-58 anti-personnel land mine (plastic)	0.6		Pressure 7-30	
Type-59 anti-personnel land mine (metal)	2	Type-59 pull action detonator	Pull pressure: 1 - 2.5	mass casualty radius: 7.5 m. effective casualty radius: 15-20 m.
Type-66 anti-personnel directional mine (plastic)	1.6	electric ignition or delayed detonator		mass casualty distance: 50-55 m; effective casualty distance: 80 m
Type-69 anti-personnel bounding mine (plastic)	1.5	pressure and pull action detonators	7-20 (1.5-4)	Mass casualty radius: 11 m.
Type-72 anti-infantry bounding mine (plastic)	1	pressure and pull action detonators	7-20 (1.5-3.5)	Mass casualty radius: 14 m.
Type-72 anti-infantry mine (plastic)	0.125		Pressure of 7 - 15.	

Remarks: The model 72 anti-tank grenade type II is filled with 1 kg of a combination of TNT and black metal. Magnetic steel is circular, with the overall attraction power of one side being greater than 25-30 kgs; detonator is a twin pull ignitor with a delayed action time of 6 - 9.5 seconds.

2. Major Tactical and Technical Performance Capabilities of Rocket Demolition Devices*

		Type-73 Rocket Demolition Device	Type-74 Rocket Demolition Device	Application
Performance:				To clear a way through enemy anti-personnel obstacles. May also be used to attack enemy airfields, wharves, POL depots, technical weapons & combined arms targets
Range		420 m.	310 - 380 m	
Depth to which a way is cleared		95 - 105 m	90 - 100 m	
Temperature range at which used		-40 C - 55 C	- 20 C - 55 C	
Total weight		440 kg	331 kg	
Component parts:				
Rocket projectile:	weight	34 kg	31 kg	
	length	1.136 m	1.1 m	
Launcher:	weight	6.5 kg	7.5 kg	
	adjustment angle	35 - 60 degrees	48 - 60 degrees	
Charge:	weight	360 kg	240 kg	
	length	106-109 m	100 m	
Control cable:	weight	28 kg	26.8 kg	
	length	300 m	320 m	
Steel wire towing cable:	length	3 m	3 m	
	diameter	12.5 mm	12.5 mm	
Nylon towing cable:	length	3 m	3 m	
	diameter	30 mm	30 mm	
Number of personnel needed for operation:		24	15	

3. Tactical and Technical Performance Capabilities of Bangalore Torpedoes*

Particulars	Major Performance Capabilities: Weight (kg)	Length (m)	Outside Diameter (cms)	Weight of Charge (kg)	Power
Type-59 bangalore torpedo:					1. A single section bangalore torpedo can cause casualties for the enemy in most fortifications, destroy their weapons, and snap railroad track abatises and fallen timber abatises up to 33 cms in diameter
regular grade	6.1	1.12	5.3	3	
secondary grade	6.3	1.16	5.3	3	
Type-59-2 bangalore torpedo:					2. When connected in a line, they open a path of the following widths: in concertinas: 10 m. in long picket wire: 4.5 - 6 m. in anti-personnel mine fields: 7 - 8 m.
regular grade	3.6	0.6	5.3	1.5	
secondary grade	3.8	0.64	5.3	1.5	

Major Technical Performance Capabilities of Bangalore Torpedo Detonators

Particulars	Type-68-1 Detonator	Type-68-2 Detonator	Type-70 Ignitor Detonator	Remarks
Length (cms)	8	13.5	17	The Type-70 ignitor detonator contains a 165 gram charge. Within 1 - 2.3 seconds after ignition flames shoot out to a length of more than 60 centimeters. Ignition time is 6 seconds or more.
Maximum diameter (cms)	4.45	4.45	7	
Booster charge weight (grams)	17.5	28.5	39	
Delayed action time (seconds)	6 - 8.5	6 - 8	5 - 7	

4. Performance Capabilities of Various Rubber Boats and the Type-73 Assault Boat

Particulars	Type-69 Squad Rubber Boat	Type-69 Pontoon Rubber Boat	Small Rubber Boat	Medium Rubber Boat	Large Rubber Boat	Type-73 Squad Assault Boat
Maximum Load (kg)	800	1,200	700	1,500	2,500	1,320
Boat Weight (kg)	35	32	50	80	150	185
Outside Dimensions (m) l x w x h height	4.1x1.5x0.4	5.13x1.8x0.5	3.3x1.2x0.4	5x1.7x0.5	6x2.2x0.55	5x1.5x0.65
Principal Uses	Infantry detachment use in landings and crossing streams. May also be used for water supply operations					To enable infantry to fight its way across rivers
Passengers	9	12	5	15	25-29	12
Propulsion	10 H.P. motor	Type-67 boat motor	oars	oars	oars	40 H.P. motor
Fully loaded speed in calm water (m/min.)	About 150	About 250	30-50	50-60	50-60	200-220

5. Performance Capabilities of the Type-74 Rocket Mine Laying Vehicle

Components	Major Elements of Launch Vehicle	Performance of Rocket Mine Laying Projectile
Firing Vehicle:		
The Liberation CA-30 cross-country vehicle is the carrier for firing the rocket minelaying projectile	Launching rack, 5 rails 4 meters long Primary firing position: Ahead of the vehicle Directional firing angle: 90 degrees right or left Firing angle of elevation: 6-48 degrees	Range: 1,200-1,500 meters Number of mines carried: 10 Type-69 or Type-72 plastic anti-tank mines Projectile weight: 126.6 kg. Projectile diameter: 284 mm. Projectile length: 2,470 mm.
10 rounds of rocket mine laying projectiles:		
Rocket mine laying projectiles deliver and lay land mines. The total projectile is made up of the warhead, a rocket engine, a kick out device and a stabilizer.	Firing interval: 1-1.5 seconds per round Projectile loading time for 10 rounds: Not more than 10 minutes Total combat weight (carrying 10 projectiles and 8 operators): 8,865 kgs. External dimensions in march mode: 6.44 m long, 3 m high and 2.27 m wide	Single projectile mine laying area: 15 m x 10 m Mine laying areas when four vehicles form a team: 400 m x 400 m.

Uses: The Type-74 rocket mine laying vehicle is a mobile and flexible quick minelaying device that can rapidly lay an anti-tank minefield over a large area. It is used to impede, delay or destroy massed enemy tanks and armored vehicles and to create favorable combat opportunities to bring to bear the firepower of other anti-tank weapons.

6. Performance Capabilities of the Type-73 Rocket Mine Laying Vehicle

Components	Major Characteristics	Uses and Features
Towing vehicle: Refitted Liberation CA-30 cross-country vehicle	Mine layer: Weight 1,300 kgs Dimensions: 5.6 m long; 2 m wide; 2.7 m high	The Type-73 mine layer is a semi-mechanized mine-laying vehicle. 1) It is able to lay the 4 kinds of anti-tanks mines with which the PLA is equipped. 2) Mine laying is fast and operation is simple for a saving in manpower. It can either place mines or dig a ditch and bury mines in soil of grade 3 and below or in sod. It is useful for the laying of anti-tank minefields over wide areas. 3) Frequently four vehicles form a team, 1,000 land mines being carried at the same time when thus operating, all of them being laid in the same 14 - 25 minute period and covering a mile long anti-tank minefield of four rows.
Mine rack: Attached to vehicle; stores 250 land mines.	Mines: Number of rows: lays a single row in each pass between 3 and 4 meters apart at a rate of 250 mines in between 14 and 25 minutes	
Mine layer: The most important part of the minelayer can automatically control distance between mines, mine placement or the digging of a ditch in which to lay mines	Operators: 1 squad leader and 1 vehicle driver plus 4 operators Driving speed: 30 - 40 km/hr.	

7. Performance Capabilities of the Type-79 Rocket Mine Laying Vehicle

Components	Major Firing Elements	Characteristics of Rocket Mine Laying Projectile
Firing Vehicle: This is the means of delivery for firing the rocket minelaying projectile	Direction finders: 8 cage type, 3.5 m long Primary firing direction: Ahead of the vehicle Angle of firing direction: left, 95 degrees; right 45 degrees Angle of elevation: 0-50 degrees Rate of fire: 8 rounds/14 seconds	Range: 2,136 - 2,628 meters Mines: 10 (Type-69 anti-tank land mines Projectile weight: 156 kg.
The rocket mine laying projectiles are the means of delivery and of laying the mines. The projectile is made up of a warhead, a rocket engine, a kick out device and a stabilizer	Total combat weight (when carrying 8 projectiles and crew of 5): 8,730 kgs. External dimensions when in march mode: 6.68 m long, 2.2 m wide, 3 m high	Projectile diameter: 305mm Projectile length: 2,927mm

Uses: As in the case of the Type-74 minelayer, this vehicle can lay floating water mines against landings.

8. Major Tactical and Technical Performance Capabilities of Mine Detectors

Specifications	Type-65 Mine Detector	Type-66 Mine Detector	Uses
Detection depth (sensitivity)			The Type-65 detector is an inductance type semi-conductor mine detector. The Type-66 mine detector is an electron tube magnetic induction type mine detector. The Type-65 and 66 mine detectors are used mostly to detect metal case land mines and non-metallic case land mines that have metal parts that are buried in soil (or snow).
Against metal case anti-tank mines (cms)	35	40	
Against metal case anti-personnel mines (cms)	30	30	
Against non-metallic mine with a metal detonator (cms)	4	4	
Detection width			
Standing operation (m)	2 - 2.5	2 - 2.5	
Prone operation (m)	1.5 - 2	1.5 - 2	
Total weight (kg)	3	4	
Total length (m)	1.4	1.4	
Continuous working life of a new set of batteries (3 x No 2 batteries)	100 hrs.		
Range of operating temperature	-10 C - +45 C	-10 C - +45 C	

Remarks:
1. When detecting mines that are near large metallic objects and in areas containing shrapnel, mine detectors are prone to metallic jamming. It is necessary to fine tune detection and discrimination.
2. When used at a temperature lower than -10 C, batteries must be kept warm.
3. The battery case in the Type-66 mine detector has three No. 1 batteries and a Type-BS-145 laminated battery, plus 3 No 1 batteries.

9. Performance Capabilities of Camouflage Devices*

Particulars	Type-65 Camouflage Net	Type-72 Camouflage Net	Plastic Decoys
Anti-infrared	Targets not readily detected by infrared night sighting devices at >150m.	Targets not readily detected by infrared night sighting devices at >300m.	
Visibility under visible light	Targets not readily visible at >500m.	Targets not readily visible at >500m.	Appear lifelike at 100m.
Color and designs	The two sides of the net are of different hues and designs and blend with both the background of vast areas of China and with the spring, summer and autumn seasons. The various colors used on the nets do not easily fade.	The two sides of the net are of different hues and designs that blend with the background of vast areas of China and changes in the four seasons. The various colors used on the nets do not easily fade.	The various colors on the human decoys do not fade easily.
Strength (tensile strength)			
Control ropes:	100 kg	Greater than 100 kg	
Net erection ropes:	23 kg	Greater than 25 kg	
Sizes:	3x3 m, 3x6 m, 6x6 m, 10x10 m, 12x12 m	3x6 m, 6x6 m, 12x12 m	Styles are: loose, semi-loose and integral
Weight	0.4-0.45 kg./sq.cm.	0.4 kg./sq.cm.	1.5 kg/set (total weight per decoy)

D. Signal Troops

1. Technical Performance of Wire Telegraphy

Machine Type-	Function	Power Source	Weight (kg)
Type-65 magnetic telephone	Uses medium insulated wire for conversations 20 - 25 km distant. When light or extra light insulated wire is used, communicating distance is 15 - 18 km.	Hand crank generator Two No 1 3 volt batteries	2.3
Type-65-1 magnetic telephone	Used intermediate insulated wire for conversations up to 30 km away. When light or extra light insulated wire is used, communicating distance is 24 km.		2.5
Type-65-3 magnetic telephone	Uses light or extra-light insulated wire. Has a 25 km communicating distance		2.5
Type-0743 magnetic telephone	Uses intermediate insulated wire for conversations up to 30 km distant. When light or extra light insulated wire is used, communication distance is up to 17 km.	1.5 volt square A cell	5
Type-10 JCX-1 magnetic telephone exchange	10 ports, can connect 5 pairs of users simultaneously and also connect telephone conferencing. Two units may be connected in a 20 port exchange, and it may also be used with a Type-20 JCX-1 for a 30 port exchange		8
Type-20 JCX-1 magnetic telephone exchange	20 ports; can connect 6 pairs of users simultaneously and can handle telephone conferences at will. Two units may be used together to form a 40 port switchboard	Hand crank generator 4 No 1 batteries	13

Single circuit carriers:

B-845C	Transmission frequency band 3.4-7.6 kilohertz. Use of light insulated wire permits communication 8-11 km; Use of extra light insulated wire permits communication 7.2-10 km.	1. 12 V direct current. Uses 8 No 1 batteries or a single unit battery. 5
B-846C	Transmission frequency band 8.9-13.1 kilohertz. Use of light or extra light insulated wire permits conversation from 6 to 8 kilometers.	2. 220 V alternating current.
B-847C	Transmission frequency band 14.4-18.6 kilohertz. Use of light or extra light insulated wire permits conversation from 5 to 7 km.	

2. Technical Performance of Communication Wires

Technical Performance of Insulated Wires

Performance	Extra Light Insulated Wire	Light Insulated Wire	Medium Insulated Wire
Conversation distance (km)	15-20	20-25	25-30
Weight (kg per km)	7	14	28
Tensile strength (kg)	35	50	80
Current resistance (ohms per km)	280	250	116
Insulation resistance (megaohms per km)	500	5	50
Specific impedance (ohms)	1,300	850	750
Attenuation (nepers per km)	0.18	0.175	0.15
Insulation material	Black, low pressure polyethylene	Black polyethylene	Wax coated interwoven rubber and cotton yarn

Performance of Fully Molded Underground Electric Cables

	Audio Frequency 1 pair	Audio Frequency 2 pair	Audio Frequency 5 pair	Carrier Current 1 pair	Carrier Current 2 pair
Sizes	2 x 7/0.3	4 x 7/0.25	5 x 2/0.6	2 x 1.5	4 x 1.2
Exterior diameter of electric cable (mm)	7.0	10.0	11.7	12	14.2
Weight of electric cable (kg per km)	57	103	129		136
Direct current resistance (ohms/km)	125	125	132	22	33
Work capacitance (millimicrofarads per km)	55	45		30	32
Insulation resistance (megaohms/500 m)	1,000	1,000	500	10,000	10,000
Compression strength (kv)	2	2	4	2	2
Impedance (ohms)	676	770	150		180
Communications range (km)	15----------	----------	----------20	Direct: 50	

3. Technical Performance of Radios

Type	User	Frequencies (megahertz)	Output Power (watts)	Antenna used & Commo Distance (km)	Power Source	Weight (kg)
Silicon 2 watt radio transmitter	Regiments Battalions	1.7 - 6.0 in two wave bands: 1) 1.7 - 3.2	Key >2 Voice >1	Gently rolling terrain using 1.5 m whip antenna. Voice Night: 5 Day: 10 15 m oblique antenna Voice: 20	Two single unit batteries and 1 x No 1 battery. Rated voltage of 24 V. Can work continuously for 30 hours	8.5
Type-81 small (B) radio transmitter	Divisions Regiments	1.5 -12.0 in 3 wave bands: 1) 1.5-3.0 2) 3.0-6.0 3) 6.0-12.0	Telegram 15 Voice 4.5	1.5 m whip antenna: Voice: 10 44m dipole antenna: Key: 300	Storage battery; hand crank motor; rectifier.	Radio: 11 Motor: 12
Type-139 radio receiver	Regiment and above	1.5-18.0 in 3 wave bands: 1) 2.5-3.6 2) 3.6-8.5 3) 8.5-18.0		2m and 10m soft antennas	7 x No 1 batteries	3.5
714 frequency modulation radio transmitter	For infantry and tank coordination. Tank unit logistics	20-26, 121 channel, 50 khz interval	1-1.28	Gently rolling terrain, 1.5 m whip antenna: key: 9, voice: 6; 2.7 m whip antenna: key:12 voice: 8. 40 m traveling wave antenna: Voice: 15-25	Two single unit batteries. When receiving and transmission times are 3:1, batteries will work continuously for 30 hours. Twenty No 1 batteries may also be used.	8.9
2 watt twin wave band transmitter (semi-conductor)	For coordination among infantry, artillery & tanks	Short wave 1.92 and 6.8 wave bands: 1) 1.92-3.6 2) 3.6-6.8. Ultra short wave on 20 and 48 wave bands: 1) 20-31 2) 31-48	Short wave: Key: 2 Voice: 1 Ultra short wave: >1 for both key & voice.		Two single unit batteries or 1 nickel-cadmium storage batteries: 24 V	11

3. Performance of Chemical Detectors

Type-	Type-71 alarm for the presence of phosphorus chemical agents	Chemical Agent Detectors	
		Type-75	Type-65
Uses	Used to sound the alarm on the presence of phosphorus chemical agents	Used to verify the type of chemical agent and to determine the general density of contamination; collects contamination specimens and indicates major contamination targets and areas.	
Weight	2 kilograms	2.6 kilograms	2.8 kilograms
Performance:	Detects Sarin at a density of 1 - 1.5 micrograms per liter sounding a warning within 5 seconds. Detects VX at a density of 2-4 micrograms per liter and sounds a warning within 5 seconds. Jamming resistant: Sounds no alarm in the presence of gunpowder smoke, grass or wood smoke, existing kinds of smokescreens or engine exhaust gases. Works normally at temperatures of from -20 C to +40 C.	Detects VX, Sarin, Soman, Tabun, mustard, lewisite, hydrofluoric acid, cyanogen chloride, phosgene, chloracetophenone [tear gas], adamsite, BZ, CS, and carbon monoxide gases	
Power Source	Six No 1 batteries for 4 hours of continuous operation	Six No 2 batteries for 2 hours of continuous operation	

4. Performance of Radiation Detectors

	Type-70 Radiometer	Type-62 Radiometer	Type-75 Radiometer
Use	To measure gamma ray radiation rate and extent of radiation contamination	Direct measurement of accumulated dose of gamma radiation sustained by personnel in contaminated areas	Use to detect and provide a general measurement of gamma ray radiation rate
Weight	1.2 kg	1.6 kgs for complete kit; 35 grams for each dosage pencil	1 kg
Performance	Measures 0.02 - 200 roentgens per hour of gamma ray radiation without using probe; measures 0.4 - 40 milliroentgens per hour of beta ray radiation: 0.1 -1,000 kilo decay per minute per square meter.	Measurement range: 0 - 50 roentgens. Dosage pencil functions normally at between -25 C and +40 C, and it may be worn under water	Measurement range: 0.25 - 200 roentgens per hour
Error	Temperature: 20 C +-5 C; when relative humidity is 65 % +-15, no more than +-45%.	No more than +-10% at normal atmospheric temperature of 20 C, +-5 C.	No more than +-25% at 20 C; when temperature is -40 C +-50 C and relative humidity is between 60 and 98%, no more than +-50%.
Power source	Will function continuously on 1 x No 1 battery for 24 hours	Will function continuously for 24 hours on 2 x No 1 batteries	Will function continuously for more than 10 hours on 1 x No 1 battery

Chapter III. Basic Pertinent Information About Air Force Airmen

A. Principal Mission of Airmen

1. Fighter Airmen

a. To counterattack enemy air raids and protect the safety of the country's principal targets.

b. To wage combat to win air superiority.

c. To provide cover for major army and navy deployments and combat movements of major bodies; to blockade encircled enemy troops, denying them aerial mobility and preventing them from receiving logistical support by air.

d. To support other air troop units and the combat movements of paratroops.

e. To wipe out enemy airborne troops.

f. To conduct aerial reconnaissance and to prevent the enemy from conducting aerial reconnaissance.

g. To carry out attacks when necessary.

2. Bomber Airmen

a. To destroy enemy missiles and nuclear weapons. To crush and destroy enemy missile bases (or launching positions), missile and nuclear weapons warehouses and industrial bases.

b. To attack major enemy force deployments. To wipe out and suppress enemy massed tanks, artillery and effectives; to crush and destroy enemy command organizations, defenses and major ordnance warehouses.

c. To engage in the winning of air superiority. To crush and destroy enemy airfields and aircraft, and to wipe out their personnel.

d. To crush and destroy enemy combat ships, transport ships, landing craft and naval bases (or ports).

e. To interrupt and paralyze enemy transportation and communications; to crush and destroy enemy railroad hubs, highways, bridges, ferries, wharves, petroleum pipelines and transportation vehicles.

f. To crush and destroy important targets in the enemy's rear area.

g. To support the combat activities of China's airborne troops and to annihilate enemy airborne troops.

h. To carry out aerial mine laying and to engage in anti-submarine warfare.

i. To conduct aerial reconnaissance and electronic jamming.

3. Attack Airmen

a. To render direct support to ground forces engaged in combat. To wipe out and suppress enemy nuclear weapons, massed tanks, and artillery positions within the tactical and theater in-depth areas, and to expose effectives; to destroy enemy command organizations and rudimentary defense works; to destroy and blockade enemy transportation; and to delay the movement of enemy forces.

b. To provide support to landing units in landing operations on coastal islets; to act in coordination with ground forces to wipe out enemy landing units; and to act in coordination with naval formations to hit enemy ships and landing craft.

c. To support combat by airborne troops, and to act in coordination with ground forces to wipe out enemy airborne troops.

d. To participate in combat to seize air superiority. To blockade and destroy enemy forward airfields; to smash enemy radar stations; and to carry out aerial reconnaissance.

4. Reconnaissance Airmen

a. To support Chinese forces against air raids and in battle to win air superiority. To determine enemy airborne troop deployments, missile and nuclear weapons deployments, and the locations of air and navy bases and of aircraft carriers.

b. To support army and navy combat operations; to ascertain enemy troop deployments, positions and installations, the massing and movement of reserves, movements of enemy ships, and information about the terrain in the combat zone.

c. Reconnaissance of the enemy's leading organizations, important military installations, industries, communications, and other such important targets.

d. To conduct electronic reconnaissance to ascertain the capabilities and locations of enemy electronic facilities.

e. To check on the camouflage of China's forces and on the results of raids against the enemy.

5. Transportation Airmen

a. To support the mobility of ground troops in the air and to help other air arm units.

b. To transport airborne troops carrying out airborne operations.

c. Air transportation of personnel, air transportation of freight, air dropping of weapons and materiel.

d. Responsible for air rescue, communications, reconnaissance and political propaganda.

e. Support for units operating behind enemy lines, guerrillas and militia.

f. Responsible for important air transportation and air drops on behalf of the party and government; helping the masses fight natural disasters.

B. Tactical and Technical Performance Capabilities of Principal Air Arm Aircraft and Their Identifying Features

F-6 Fighter Aircraft

Crew: 1

Maximum speed: 1,454 kilometers per hour

Practical ceiling: 17,500 meters

Maximum range: 1,690 kilometers

Combat radius (at 5,000 meters): 254 kilometers

Armament: 3 x 30mm cannons
2 rocket launchers

Identifying features: Sectional view of front of fuselage is oval shaped, and rear gradually becomes oblate. Wings are arrow shaped with a 55 degree backward sweep. Horizontal stabilizer is low; the pitot tube is mounted beneath the front of the fuselage.

F-7 Fighter Aircraft

Crew: 1

Maximum speed: 2,180 kilometers per hour

Practical ceiling: 19,000 meters

Maximum range: 1,530 kilometers

Combat radius (at 5,000 meters): 310 kilometers

Armament: 2 x 30mm cannons
2 missiles

Identifying features: Long, thin fuselage with a regulator cone mounted amidships. Delta wings with a 57 degree back sweep. Pitot tube is mounted beneath the front of the fuselage. Horizontal stabilizer mounted low. Auxiliary fuel tank is suspended below the belly of the fuselage.

F-8 Fighter Aircraft

Crew: 1

Maximum speed: 2,336 kilometers per hour

Practical ceiling: 20,000 meters

Maximum range: 2,250 kilometers

Combat radius: 600 kilometers

Armament: 2 x 30mm cannons
2 rocket launchers

Identifying features: Delta midwing monoplane; long thin fuselage; air intake cone on nose. External configuration resembles F-7 but overall fuselage size is somewhat larger with two nozzles at the tail.

B-5 Bomber

Crew: 3

Maximum speed: 902 kilometers per hour

Practical ceiling: 12,500 meters

Maximum range: 2,080 kilometers

Combat radius (at 5,000 meters): 493 kilometers

Bomb load: 1,000-3,000 kilograms

Armament: 7 x 23mm cannons

Identifying features: Transparent canopy in the nose; high wing monoplane, the wing attached at the middle of the fuselage and having a flat leading edge; single rudder, the swept back horizontal stabilizer having a longitudinal dihedral angle. Engines on left and right wings protruding forward and backward.

B-6 Bomber

Crew: 6

Maximum speed: 1,014 kilometers per hours

Practical ceiling: 13,100 meters

Maximum range: 5,760 kilometers

Combat radius (at 5,000 meters): 1,333 kilometers

Bomb load: 3,000-9,000 kilograms

Armament: 7 x 23mm cannons

Identifying features: Transparent canopy in nose; midwing monoplane; single rudder. Both the wing and the horizontal stabilizer are swept backward. Engines along both sides of the fuselage at the wing roots. Main landing gear module protrudes from rear edge of wing.

A-5 Attack Plane

Crew: 1

Maximum speed: 1,240 kilometers per hour

Practical ceiling: 16,500 meters

Maximum range: 1,630 kilometers

Combat radius: (at 1,000 meters): 211 kilometers

Armament: 2 x 23mm cannons
2 rocket launchers

Identifying features: Tapered nose; pitot tube located in front of taper. Engine intakes close to both sides of fuselage. Wings are arrow shaped with a 52.7 degree back sweep. Horizontal stabilizer mounted low.

Zhi-6 Helicopter

Crew: 3

Maximum speed: 190 kilometers

Practical ceiling: 5,500 meters

Maximum range: 651 kilometers

Load: 12 parachutists

Identifying features: Square nose; boxy fuselage; long thin tail. Two round air intakes located in the upper part of the nose. Main rotor has four blades.

Chapter IV. Basic Pertinent Information About the Navy

1. Composition and Mission of the Navy

a. Composition of the Navy

The Navy is made up of submarines, surface ships, an air arm, coastal defense forces, and a marine corps.

The Navy is divided into fleets, and the fleets have naval bases, the air arm, marine garrison districts, naval ship units, coastal defense forces and various specialized units. Naval bases have marine garrison districts and naval vessel divisions (and detachments), coast artillery regiments (or battalions), anti-aircraft artillery regiments (or battalions) and various specialized units (or detachments) under their jurisdiction. The air arm has air divisions (or regiments), anti-aircraft artillery regiments and various specialized detachments under its jurisdiction. Marine garrison districts have naval vessel divisions, and coastal artillery battalions under their jurisdiction. Naval detachments are made up of ships and craft of the same types.

b. Principal Combat Missions of the Navy

To act in coordination with the Army and the Air Force to counter surprise attacks, to protect naval bases, harbors and important coastal targets, to wipe out enemy combat vessels and transport craft, to destroy enemy marine transportation and communications; to raid enemy bases, harbors and important coastal targets, and to weaken enemy potential for waging war. To act in coordination with the Army and Air Force to carry out landings and to fight off landings; to operate in coordination with the Army in the resolute defense of islets and fortifications; to assist movement of the Army on ocean flanks; to conduct naval blockades and counter blockades; to protect China's naval communications and transportation, and to provide security for fishing industry production, the exploitation of resources, scientific experimentation and marine investigation.

2. Submarines

Submarines are the main service arm in the Navy for carrying out underwater combat actions. Submarines are usually divided up in terms of their power plants and weapons into conventional or nuclear powered torpedo submarines and missile submarines. They are divided in terms of mission into attack submarines, anti-submarine submarines, reconnaissance and patrol submarines and transport submarines.

Their main missions are: to wipe out enemy transports and large and medium size combat ships; to smash and destroy enemy bases, ports and major coastal targets, and to conduct reconnaissance, anti-submarine activity, minelaying, patrols, and the transportation of personnel and materiel.

Principal Technical and Tactical Performance Characteristics of Submarines

Type	Displacement (Tons)		Speed (Knots)				Combat Radius	Submerged Time	Depth Limit	Armament Torpedo Tubes		Stores		Authorized Crew
	Surface	Submerged	Surface Maximum	Surface Economic	Submerged Max	Submerged Min	(NM)	(Hrs)	(M)	Bow	Stern	Torpedoes	Mines	
03	1050	1342	18	9	13	2	800	600	200	4	2	12	22	53
33	1474	1712	15	9	13	2	2000	600	300	6	2	14	28	53
35	1748	2407	16	10	18	2	--	600	300	6	2	16	28	53

3. Surface Vessels

There are more types of surface vessels in the Navy than other vessels, and they are able to carry out more varied missions. Surface vessels are divided into two classes: combat ships and auxiliary vessels. Combat ships include cruisers, destroyers, escort ships (or craft) and landing ships (or craft). In addition, there are aircraft carriers armed with all sorts of aircraft, Auxiliary vessels include various kinds of logistical ships that carry out all sorts of support functions.

a. Destroyers and Escort Ships

The main mission of these craft is: to work alone or in cooperation with other forces to wipe out enemy surface ships, to so anti-submarine work, to destroy or suppress short range targets and firepower, and to carry out mine laying, convoying, protection of fishing, and patrol.

Technical and Tactical Performance Characteristics of Destroyers and Frigates

	Destroyers		Frigates		
	Type-051	Type-07	Type-01	Type-65	Type-053H
Displacement	3536	2451	1389	1249	1661.5
Speed (kts);					
Maximum;	36	34.6	28	21	26
Economical;	18	18	14.5	16	18
Draft (m)	6.04	4.27	3.12	3.1	3.19
Wind Resistance (Force)	9	10	9	8	8
Self Power (24hr)	10	10	5	10	15
Combat Radius (nm)	1400	800	--	--	--
Authorized Crew	325	280	190	165	190
Armament					
Missile Launchers	2 x 3 (HY-1)	2 x 2 (SY-1)	1 x 2 (SY-1)	-- --	2 x 2 (SY-1)
Artillery	2x twin 130mm 4x twin 37mm 4x twin 25mm	4x 130mm 4x twin37mm	3x 100mm 2x tw37mm	3x 100mm 4x tw37mm 2x tw14.5mm	2x 100mm 6x tw37mm
Mines (Units)	28 x Anchored Type-1 or; 10 x Bottom Type-1000	48 x T-1 or 32 x T-1000	26x T-1 or 18 x T-1000	10 x T-1 or 8 x T-1000	28 x T-1 or 20 x T-1000

b. Missile Boats

To operate independently or to work together with other forces close in shore to wipe out large and medium size enemy surface vessels.

Principal Technical and Tactical Performance Characteristics of Missile Boats

	Type-21	Type-24
Displacement (tons)	205	79
Speed (knots)		
Maximum	39	38
Economical	30	26
Draft (m)	2.99	1.8
Combat Radius (nm)	350	150
Wind Resistance (Force)	5	4
Self-provided Power (24hr)	5	5
Authorized Crew	30	19
Armament		
Missile Launchers	1 x 4 (SY-1)	1 x 2 (SY-1)
Artillery	2 x twin 30mm	1 x twin 25mm

c. Torpedo Boats

To cooperate with other forces or to work independently near shore to wipe out large and medium size enemy surface vessels; may also perform missions in mine laying and attacking submarines.

Principal Technical and Tactical Performance Characteristics of Torpedo Boats

(Hydrofoils)	Type-25	Type-26
Displacement (tons)	39.6	43
Speed (Knots)		
Maximum	54	50
Economical	42	--
Draft (m)	1.83	1.11
Combat Radius (nm)	150	150
Wind Resistance (Force)	5	4
Authorized Strength	16	16
Armament		
Torpedoes	2 x Type-53 or 66	
Machine Guns	2 x twin 14.5mm	
Depth Charges and Mines	6 x small depth charges or 2 x C-500	

d. Escort Craft

Cooperate with other forces or work independently near shore to wipe out enemy surface vessels; carry out patrols, conveying and protecting of fishing craft, and may also carry out missions in attacking enemy submarines and in mine laying.

Principal Technical and Tactical Performance Characteristics of Escort Craft

	Type-62
Displacement (tons)	134
Speed (Knots)	
Maximum	28
Economical	16
Draft (m)	1.86
Combat Radius (nm)	200
Wind Resistance (Force)	6
Self-provided Power (24hr)	7
Authorized Strength	38
Armament	
Artillery	2 x twin 37mm & 2 x twin 25mm
Large Depth Charges	8
Mines	8 x Anchored Type-1

e. Submarine Hunters

Operate independently or in conjunction with other naval forces in base ocean areas to seek and destroy enemy submarines. May also carry out attacks on enemy surface vessels, convoy, protect fishing craft, patrol and lay mines.

Technical and Tactical Performance Characteristics of Submarine Hunters

(Hydrofoil)

	Type-037	Type-04
Displacement (tons)	392	320
Speed (Knots)		
Maximum	30.5	18
Economical	18	12
Draft (m)	2.35	2.34
Combat Radius (nm)	840	--
Wind Resistance (Force)	8	8
Authorized Strength	78	75
Armament		
Artillery	2 x twin 57mm	1 x 85mm
	2 x twin 25mm	2 x 37mm
		3 x twin 12.7mm
Large Depth Charges	20	30
Mines	12 x Anchored Type-1 or 12 small depth charges.	

f. Mine Sweepers

Operate independently or in cooperation with other forces near shore to carry out dredging and checking of navigation channels, clearing mines, clearing mines for navigation and clearing water mine obstacles. May also attack submarines, lay mines and patrol.

Principal Technical and Tactical Performance Characteristics of Mine Sweepers

	Type-10 Ship	Type-312 Boat
Displacement (tons)	600	41
Speed (knots)		
Maximum	15	12
Economical	10	9
Draft(m)	2.5	1.2
Cruising Radius (nm)	3800	12hr continuous
Wind Resistance (Force)	10	4
Authorized Strength	95	--
Armament		
Minesweeping Gear	Cut and Destroy Type; Acoustic Type-2; Magnetic Type-2	acoustic and magnetic equipment combined in one unit
Artillery	2 x twin 37mm 2 x twin 25mm 2 x 14.5mm MG	--

g. Landing Ships (or Craft)

Transport landing troops for landings, and carry out missions including minelaying (for craft having minelaying equipment) and war preparation transportation.

Technical and Tactical Performance Characteristics of Landing Ships (Craft)

	Shan	He	Type-079	Type-068	Type-55
Speed (Knots)					
Maximum	11	14	12.5	11.5	10
Economical	9	11	10	8	8
Draft (m)	4.17	1.58	2.6	1.24	1.35
Wind Resistance (Force)	8	6-7	5/6	5	4-5
Artillery	2x76.2mm 4xtw37 2x37mm	3xtw37 2xtw25	4xtw25	MGs 2xtw14.5	MGs 2xtw14.5
Loading Capacity (Tank Hold)					
Personnel					
Long Distance (berths)	800-1000	300-350	--	--	--
Short Distance (seats)	1100-1300	400-500	--	60-70	60-70
Cargo (Tons)	1600	165	200	20	20
Tanks	17	5	5	1	1
Vehicles	32	12	8	1	1

D. Naval Air Arm

The naval air arm is the branch of the Navy that carries out its mission in the air over the sea. It includes bombers, pursuit planes, attack planes, anti-submarine airplanes, reconnaissance aircraft, transport aircraft, various kinds of specialized aircraft and air defense unit seaplanes, plus anti-

aircraft gun and radar units. It also has other specialized units (or detachments). Its organization and equipment is basically the same as for the Air Force aviation arm.

The main task of the naval air arm is as follows: to wipe out enemy ships, destroy enemy bases, ports and shore targets; to protect and to assist surface ship and submarine combat actions; to participate in the air defense of strategic coastal points; to insure the security of naval bases and to conduct reconnaissance, patrols, anti-submarine missions, minelaying, communications, guiding, rescue, and transportation of personnel and materiel.

5. Navy Coastal Defense Troops

Navy coastal defense troops are the service arm in the Navy that is responsible for the naval defense of important stretches along the seacoast. It includes coastal missile units and coastal artillery units.

The main mission of navy coastal defense troops is: the protection of navy bases, ports and important coastal areas; to wipe out enemy vessels; to protect in shore communications lines and to block shipping channels; to assist ship movements in ocean areas adjacent to land; and to help units defend islets and fortifications.

6. Marine Corps

The Marine Corps is the service arm of the Navy that is principally responsible for landing operations. Usually it is organized into marine divisions, regiments and battalions attached to naval ships or bases. Its main mission is as follows: independently or in cooperation with army units, to make landings, to seize landing points and landing grounds, and to support the landing of follow-up echelons; to help defend islets, fortifications and naval bases as well as to resist landing operations; to carry out such other special missions as higher headquarters may assign.

7. Movements During Coordinated Army and Air Force Landing Operations

1. Raids Against Enemies Ready To Board Ships and Underway

Raids against enemy landing troops ready to board ships should be organized as needed and as possible. The attacking force at sea consists mostly of the air arm and submarines.

Attacks against an enemy who is underway should be carried out using submarines and bombers as the main attacking force. When fairly close to China's shores, destroyers, escort vessels, missile boats and torpedo boats may be used. The main targets for attack are enemy landing and transport ships.

When submarines are employed, submarines should be deployed in advance in accordance with preconceived plans to sea lanes that enemy landing and transport ships are likely to travel over so that the submarines can carry out attacks either alone or in coordination with the air arm.

2. Active Attacks Against Enemy Deployment and Debarkation

When enemy landing or transport units are conducting tactical deployments or debarkation, naval forces (shore to ship missiles, missile ships, torpedo boats, bombers and air assault troops) should carry out sudden and ferocious attacks against them in coordination with the Air Force.

3. Strong Attacks Against the Enemy Approaching the Shore Past Mine and Gun Positions

When enemy landing and transport ships enter the area of our minefields and gun positions, naval forces should act according to a coordinated plan to carry out concentrated attacks using naval guns and shore batteries against enemy minesweepers and landing craft going through the minefield area. They should use torpedo boats and missile boats to attack large and medium size enemy landing ships and use attack aircraft to carry out attacks against enemy landing ships and landing craft.

Simultaneous with or in advance of the main attack, naval force commanders should act in accordance with decisions of the combined forces commander to use some troops to carry out auxiliary attacks against enemy firepower support ships that are blocking our main attack and against aircraft carriers that are directly supporting landings in order to support smooth execution of the attack.

When enemy landing ships and landing craft go through minefields to approach the shore, the naval air arm should attack in coordination with the Air Force air arm, and coastal artillery should coordinate with army artillery to bring them under point-blank and interdictory fire.

4. Coordination with the Army and Air Force To Wipe Out Enemies That Have Landed

When enemy landing forces land, coastal artillery and surface ships should act under centralized command of the combined forces commander to coordinate with the Army and the Air Force in a fire attack against enemy firepower support ships to cut off contact between the enemy that has already landed and the follow-up forces and to closely cooperate with coastal (and islet) defense forces to wipe out the enemy that has landed.

When enemy landing forces occupy landing sites, the main mission of the navy is to coordinate with the air force in attacks against enemy follow-up forces and to smash the enemy's sea transport in order to set the stage for coastal (and islet) defense units to wipe out the enemy.

By way of providing support to the army in carrying out counterattacks against enemy troops that have landed, naval forces should act in accordance with decisions of the combined forces commander to cover the army's sea flank and islet defense forces and to render firepower support as well.

When the enemy makes airborne landings, navy attack plane units and anti-aircraft artillery should act in coordination with the army and air force in attacks against massed enemy airborne landing aircraft, striving to wipe out enemy airborne troops in the air.

5. Coordinated Army and Air Force Pursuit and Attack of a Retreating Enemy

When enemy landing forces retreat to their ships, naval units should act in coordination with the Army and Air Force to concentrate forces to annihilate enemy landing ships and landing craft along shore and approaching shore, attack enemy covering forces at sea and prevent the enemy from boarding ships.

Navy shore defense forces should carry out firepower pursuit and attack within the effective range of their weapons against fleeing enemy landing and transport vessels. The naval air arm should coordinate with the Air Force's airborne troops and use speedboats both in pursuit and attack and to guide submarines at sea to intercept and wipe out the retreating enemy. Note: All the data given in the tables has been excerpted from "Navy Staff Officer's Handbook" (1979 issue). The combat radius is generally figured as one-third the cruising radius.

Section on Protection from Nuclear, Chemical and Biological Weapons

Chapter I. Nuclear Weapons

A. Summary Statement on Nuclear Weapons

1. Basic Principles of Nuclear Weapons*

Nuclear Weapons	All weapons that employ the huge quantities of energy emitted in a split second by atomic nuclei to kill, wound and destroy are termed nuclear weapons. Atomic bombs, hydrogen bombs and neutron bombs are collectively termed nuclear weapons.
Atomic Bombs	Atomic bombs are weapons that use the tremendous amounts of energy emitted by the fissioning of the nucleus of heavy atoms to kill, wound and destroy. They are made up primarily of a nuclear charge (U-235 or Pu-238), explosives, detonating equipment and a bomb casing.
Hydrogen Bombs	Hydrogen bombs are weapons that use the tremendous amounts of energy emitted by the nuclear fusion of light atoms to kill, wound and destroy. Inasmuch as light atomic nuclei require extremely high temperatures to be able to produce a nuclear reaction, hydrogen bombs are also termed thermonuclear weapons. They are made up primarily of a thermonuclear charge (plutonium deuteride, detonating equipment and a bomb casing).
Neutron Bombs	Neutron bombs are also called intensified radiation bombs. They are tactical nuclear weapons that use nuclear fusion reactions to produce large quantities of neutrons that kill and wound personnel. They have developed out of hydrogen bombs and are third generation nuclear weapons (the first generation being atomic bombs and the second generation being hydrogen bombs)

2. Power of Nuclear Weapons and Their Classification

a. Power of Nuclear Weapons. The power of nuclear weapons is usually expressed as the "TNT equivalent" (or equivalent, for short). By equivalent is meant the energy released when a nuclear bomb explodes that is equivalent to the energy released when a certain amount of TNT explodes. For example, an atom bomb with a 20,000 ton equivalent means the amount of energy released by an atom bomb equivalent to the amount of energy released when 20,000 tons of TNT explodes, and not the weight of the bomb itself. The casualty and destruction radius of nuclear weapons increases as the equivalent increases; however, it does not correspondingly increase in proportion to the number of times the increase in equivalent. Usually, for every eightfold increase in nuclear equivalency, the casualty and destruction radius of the shock wave doubles. Even if the nuclear weapon equivalent increases 100 fold, its casualty and destruction radius increases by only several fold.

2. Nuclear Weapons Power Classification

Country	China	USSR	U.S.A
Type	Small: <20kt	Small: <15kt	Ultra-low equivalent type: <1kt
	Medium: 20-100kt	Medium: 15-100kt	Low equivalent type: 1-10kt
	Large: 100-500kt	Large: 100-500kt	Medium equivalent type: 10-50kt
	Extra large: >500kt	Extra large: >500kt	High equivalent type: 50-500kt
			Ultra high equivalent type: >500kt

3. Nuclear Weapon Detonation Methods and Their Killing, Wounding, and Destruction of Targets

Atmospheric Explosion (Usually means that the fire ball does not touch the ground)	Low Atmosphere	Used mainly to destroy fairly solid ground targets or targets not far below the surface of the ground. (Field warfare fortifications, massed tanks, hangars, transportation hubs and civil air defense works) and to kill or wound personnel inside field warfare defense works. The ground contamination that they cause impairs troop movements somewhat.
	Medium, High Atmosphere	Used mostly to kill and injure personnel exposed on the ground and to destroy not very solid targets (weapons, airfield facilities, and urban buildings above ground). Produces very light ground surface contamination that does not effect troop movements.
	Ultra-high Atmosphere	Used mostly to destroy missiles and rockets in flight; no casualty or destruction role against ground personnel or things
Ground Explosion	Means an explosion from which the fire ball touches the ground	Used mostly to destroy solid targets on top up or slightly under the ground (underground command posts, missile silos, permanent fortifications, underground railroads), and can cause serious ground contamination. May also produce bomb crater that impairs troop combat movements. Everything else being equal, extent of casualties and destruction caused personnel and weapons is usually not as great as from explosion in the atmosphere
Underground Explosion	Explosion at a certain depth	Used mostly to destroy important underground facilities (tunnels, permanent underground defenses, underground missile firing bases), or to block passes or narrow roads. May cause fairly large craters and create serious ground contamination that prevents troop movements.

Killing, Wounding, and Destructive Effects of Nuclear Weapons*

Killing, Wounding and Destroying Elements	Characteristics	Effects
Light Radiation	Travels rapidly	Light radiation, like ordinary light, travels in a straight line at the speed of light (300,000 kms/sec). It can be absorbed, reflected, and kept out by things (substances), and it can penetrate transparent substances.
	Strong heat effect	Light radiation contains a very great amount of energy. After absorption by a substance, it is mostly converted into heat energy, with the result that the substance's temperature rises. If the nuclear blast is equivalent to 1 million tons, at a projection point 3 kilometers distant from the center of the blast, steel and the surface of the earth can melt and wood products can carbonize.
	Short reaction time	The reaction time for light radiation is less than from a few tenths of a second to several tens of seconds. Though the time is short, a process is involved. If one can take cover immediately upon seeing the flash, injury can be reduced.
	Substantially affected by atmosphere or topography	As light radiation travels through the atmosphere, fog, clouds and rain, its energy is weakened. When a nuclear blast takes place above a layer of clouds or in a cloud layer, the amount of light radiation reaching the earth is reduced as a result of its absorption and dispersal by the cloud layer. When the blast takes place below the cloud layer, the amount of light radiation energy is increased as a result of the reflection of the cloud layer. Water, ice, snow on the ground or sand can all reflect light radiation and increase the function of light radiation. One can be partly or completely protected from the rays of light radiation by trenches, narrow valleys or the back sides of high land or mountains that lie perpendicular to the direction of the center of the blast.
Shock Wave	Travels fast	The shock wave travels at supersonic speed (the speed of sound is approximately 340 m/sec.) in all directions from the center of the blast. As the distance increases, the speed of travel

slows gradually until it disappears. If a nuclear bomb blast in the atmosphere is equivalent to 10,000 tons, the shock wave requires about 2 seconds to travel 1 kilometer, 4.7 seconds to travel 2 kilometers and 7.5 seconds to travel 3 kilometers.

Overpressure

When the shock wave arrives, both people and objects may simultaneously receive an overpressure compression effect and a dynamic pressure shock wave effect. That portion of the shock wave that exceeds the pressure strength of normal atmospheric pressure is called overpressure; The strong shock pressure of air currents moving at high speed is called dynamic pressure.

Effect of terrain substantial

When the shock wave encounters various kinds of topographic objects (such as highlands, hills or buildings), it is resisted and reflected by the side facing the blast. This increases the overpressure. The shock wave goes around both sides and over the top to produce a diminished pressure zone to the rear. After converging, the over pressure increases again to form an increased pressure zone. The sides of valleys, lowlying land, ditches and such terrain whose back is toward the center of the blast experience a weakening of pressure, while the sides that face the blast center experience an increase in pressure. Consequently, when using terrain features, the reduced pressure (sheltered) side with its back toward the center of the blast should be used for protection insofar as possible.

Short duration

Nuclear radiation lasts for only several to less than 20 seconds, and the intensity of gamma radiation drops quickly within several seconds. Neutron flow ends after 1 second. As the smoke cloud rises, early stage nuclear radiation is increasingly weakened by the atmosphere bringing about an ever smaller amount of radiation on the surface. Therefore, protective action taken rapidly can reduce exposure to radiation.

Rapid speed

The gamma rays travel at the speed of light during early stage radiation, and the neutron flow travels outward from the center of the blast at a speed of from several thousand to tens of thousands of kilometers per second, and they have fairly strong penetrating force. In the process of going through materials, they

		are steadily absorbed by the materials. The thicker the material and the greater its density, the greater the weakening effect. The strength of gamma rays may be expressed as radiation dosage for which the unit of measurement is "roentgens." The dosage for people and things affected by gamma rays is usually expressed as absorbed dosage for which the unit of measurement is "rads."
	Induced Radiation	Neutron energy can render radioactive metals such as sodium, potassium, aluminum, manganese and iron that were not radioactive originally. Since soil contains these elements, the soil in the blast area may become radioactive under the effect of neutrons. The place in the soil in which induced radiation is greatest is usually from between 3 and 10 centimeters below the surface. Duration of induced radioactivity is short and it weakens gradually with time.
	Influenced by terrain	All ground features that screen such as mountains, hills, buildings and ditches play a protective role in varying degrees during early stage radiation.
Radiation Pollution	Numerous sources	There are three sources of radiation pollution: nuclear fission debris, induced radiation material, and unfissioned nuclear charge. Blast area pollution created by a ground explosion consists mostly of nuclear fission debris, followed by induced radioactive material. Blast area pollution created by an explosion in the atmosphere consists primarily of induced radioactive materials. Pollution in the vestigal cloud area consists primarily of nuclear fission debris.
	Numerous kinds of rays	Emits alpha, beta and gamma rays.
	Short duration	Duration of ground radiation pollution from a ground blast long. Duration of ground radiation pollution from an explosion in the atmosphere is comparatively short.
	Affected by weather and topography	Wind direction and wind speed have a definite effect on the spread of ground pollution. The speed of winds high in the atmosphere have a comparatively great effect on the spread of pollution in the vestigal cloud area. Radioactive ash may fall rapidly with rain or snow adding to ground pollution. Running water on the ground may carry radioactive ash into

defense works and the water supply increasing pollution. Valleys, low-lying areas and ground containing plant life may trap radioactive ash, thereby increasing pollution.

Nuclear Electro magnetic Pulse

This is an electromagnetic wave produced at the time of nuclear explosion. It resembles the thunder and lightning that is frequently encountered in the natural world. It is characterized by: a powerful electromagnetic field that is many times stronger than the electromagnetic signals produced by thunder and lightning and that would jam or destroy virtually all modern electronic equipment to a distance of from several hundred to several thousand kilometers; a short period of duration of only several seconds that is able to jam the normal operation of electronic and electrical equipment rendering them ineffective. The increased ionization field produced has a fairly long lasting effect on short wave and natural wave communications. The greater the equivalent and the higher the explosion, the greater the effect. The higher the communications frequency, the smaller the effect.

C. Killing, Wounding and Destructive Effects of Nuclear Weapons

1. Nuclear Weapons Infliction of Casualties on Personnel

The first four of the five kinds of casualties and destruction produced by a nuclear blast inflict casualties on personnel. Within the radius of instantaneous killing and wounding of exposed personnel by a nuclear blast of 20 kilotons or more under conditions of intermediate visibility, most casualties are caused by light radiation followed by shock waves, and least by early stage nuclear radiation. For nuclear explosions of 10 kilotons or less, the radius of casualties caused by early stage radiation is greater than by light radiation and shock waves. However, even when the nuclear blast is equivalent to 10 megatons, the radius of casualties from early stage radiation is no more than 4 kilometers. The energy distribution from usual nuclear explosions is mostly in the form of shock waves followed by light radiation, and subsequently by radiation pollution. Casualties from early stage nuclear radiation are least.

Wounds to personnel caused by a single casualty factor are termed simple wounds; wounds caused by two or more casualty factors are termed complex wounds. Wounds may be divided into four grades in terms of their effect on ability to fight and possibility of being healed: slight wounds that usually occasion no loss of ability to fight and that can be completed healed; medium wounds that usually hurt ability to fight, but an overwhelming majority of which can be healed; severe wounds that cause immediate loss of ability to fight, but most of which can be healed; and extremely severe wounds that result in immediate loss of ability to fight, some of which can be healed.

a. Simple Wounds

Shock wounds. Shock waves can directly cause vibration in people's brains, can break bones and rupture the liver and spleen, and perforate the stomach, eardrums, and skin. In addition, the gravel and stones blown up from the collapse and destruction of defense works and structures cause indirect casualties to personnel. Direct casualties are paramount under field warfare conditions. In urban residential areas, in mountainlands and in forestlands, indirect casualties are paramount, and they extend over a wider area. The features of casualties caused by shock waves are as follows: first, casualties are of many different kinds effecting not only the exterior but the interior of the body as well. Second, external injuries are light while internal injuries are heavy. Third is rapid spread.

Light Radiation Injuries. Light radiation can directly inflict burns on people, or it may set fire to clothing or other materials, thereby inflicting burns indirectly. When a nuclear bomb of 10 kilotons or more explodes in the atmosphere, half of the exposed personnel on the ground receive simple burns. The smaller the equivalent yield of a ground explosion, the fewer the percentage of burn wounds, and conversely the greater the percentage. People who look directly at the fireball may have their eyes burned more extensively than their skin. The flash from a nuclear explosion may produce flash blindness (more severely at night than during the day) that causes people to see black or see stars and may result in a loss of eyesight in serious cases. Usually the eyes automatically recover within from a few seconds to several

hours after flash blindness. Burns to the eyes and hands during wartime have an immediate effect on the ability to observe and fire weapons, and may even result in loss of fighting ability. Characteristics of injuries to people from light radiation are as follows: First is a directional characteristic, most burns occurring to portions exposed toward the direction of the blast. Second is more burns to the eyes and respiratory organs than under conventional circumstances. Third is the shorter the duration, the lighter the burns.

Early Stage Light Radiation Injuries. Large does of nuclear radiation may give rise to radiation sickness. A radiation dosage of less than 50 roentgens produces no illness. The severity of radiation sickness is determined largely by the amount of radiation. Radiation sickness may be characterized as follows: first, injuries of a severe or greater nature are more numerous than injuries of an intermediate or lesser nature, amounting to between 60 and 70 percent of the total; second, acute radiation sickness has a pronounced incubation period and usually one does not lose ability to fight at once; third, casualties are spread over a wide area and symptoms are complex.

Classification of Degrees of Acute Radiation Sickness

Degree of Radiation Sickness	Amount of Radiation (roentgens)	Time of Occurrence of First Symptoms	Symptoms
Slight	100 - 200	Several days after exposure	Bone marrow ability to make blood slightly impeded; fatigue; dizziness; sleeplessness; gradual loss of appetite; nausea.
Inter-mediate	200 - 400	Several hours after exposure	Bone marrow ability to make blood moderately impeded; ability to make blood; slight bleeding; infectious and gastro-intestinal disorders, with trichomadasis.
Severe	400-600	Several hours	Bone marrow ability to make blood severely impeded; bleeding; marked infectious and gastro-intestinal disorders; falling hair; slight nervous disorders may occur.
Extremely severe	More than 600	1 hour after exposure	Bone marrow ability to make blood severely impeded; bleeding; infection; repeated vomiting; severe diarrhea; may suffer serious disorders of the central nervous system

Damage From Radiation Pollution: Injuries to personnel from radiation pollution arise out of the effects on the body of radiation rays. They follow three routes to cause damage. One is through outside contact. In moving about contaminated areas, personnel are injured by radiation rays. The second is internal when radiation materials enter the body through the respiratory tract, the digestive tract or wounds causing injury. The third is skin contamination, serious contamination of the skin giving rise to injury. Injuries are characterized by: first, external radiation being the primary cause of injury; second, the total radiation dosage being equal, injury from a single exposure to radiation is worse than from several exposures; and third, usually there is no immediate loss of ability to fight.

b. Complex Injuries

Unprotected personnel are prone to complex injuries resulting from the functioning of several casualty causing factors. Complex injuries may be divided into three categories as follows: first are complex injuries primarily in the nature of radiation injuries; second are complex injuries primarily in the nature of burns; and third are complex injuries primarily in the nature of shock injuries. Nuclear explosions smaller than 10 kilotons cause complex injuries primarily from radiation, and nuclear explosions of 2 kilotons or more produce mostly complex injuries in which burns are paramount. The

injuries they inflict on personnel may be characterized as follows: first are complex injuries that are also mutually aggravating; and second are that the main injury among the complex injuries determines development of the injuries.

2. Destructiveness of Nuclear Weapons on Weaponry and Defense Works

a. Destruction of Weaponry

Destruction of Infantry Weapons. The radius of destruction for infantry weapons is smaller than for personnel. So long as personnel do not lose their ability to fight, usually they will be able to use the infantry weapons they carry. The effect is very slight on ammunition packed in boxes and stored in niches, and is about the same as on infantry weapons. So long as personnel are safe, the ammunition they carry on their person will not explode spontaneously.

Destruction of Artillery Pieces. Sighting devices on artillery pieces plus parts made of thin plate or fine rods of relatively low strength are prone to damage.

Destruction of Trucks and Prime Movers. Driver compartments, radiators and loading compartments of vehicles are most prone to damage. Damage is most serious when the side of the vehicle faces the blast center and second most serious when the front faces the blast. It is lightest when the back of the vehicle faces the blast.

b. Destruction of Defense Works

Destruction of Field Warfare Defense Works

The side walls of defense works are prone to receive crushing pressure from shock waves that dislocate or loosen them, or even result in their collapse. In addition, covering materials on defense works may snap or topple. Light radiation may set fire to the covering material. Coverings over bunker firing ports and passageways are prone to tilt, become dislocated, develop cracks, collapse and block entrances. When destruction is serious, the three dimensional structure cracks and collapses.

Destruction of Permanent Defense Works

Shock waves may cause the collapse of entries and exits of permanent defense works causing damage to openings, ducts, and vents that impairs use of the defenses. They may also damage protective doors with resultant casualties and damage to personnel and equipment inside. Only when the damage is serious will the whole structure crack and collapse.

D. Performance of Neutron Bombs and Features of Their Infliction of Casualties and Destruction

1. Neutron bombs depend primarily on the high energy neutrons produced at the instant of explosion to kill and wound effectives, causing personnel acute radiation sickness while causing little damage to weapons and structures. They can effectively kill and injure personnel inside tanks, counter the opponent's massed tanks, and nullify his dominance in conventional weapons.

2. Radiation pollution is very light following a neutron bomb explosion, so troops may enter the blast zone at once. Not only does this have very great military significance, but it also spares war zone inhabitants and cities from the dangers of radiation pollution.

3. Neutron bombs are fine weapons for use in the interception of guided missiles and to wipe out masses of aircraft in the sky. Neutrons can penetrate the cowlings of guided missiles causing the nuclear fuel to fission and generate heat rendering the weapon ineffective, causing loss of control by its electronic instruments or causing the nuclear weapon to explode prematurely.

4. The equivalent yield of neutron bombs is small amounting to approximately 1 to 2 kilotons, and various kinds of delivery vehicles may be used to fire them. If used as tactical support weapons, they may be dropped or fired in the form of bombs or missiles making for flexibility.

5. Defense against neutron bombs is very difficult. Protection against radiation requires not only materials made up of several kinds of materials but also to a certain thickness in order to gradually weaken and absorb the neutrons; thus protection is very difficult to achieve.

E. Nuclear Weapons Casualty and Destruction Characteristics*

1. Numerous Factors Causing Casualties and Destruction. A nuclear explosion can produce light radiation, shock waves, early stage nuclear radiation, radiation pollution and electromagnetic pulses. Most targets receive several of the factors at the same time, making injuries and destruction even more complex.

2. Broad Area of Casualties and Destruction. The area in which casualties will result to exposed personnel in an open area by a nuclear explosion with a 1 kiloton equivalent yield roughly approximates that of seven artillery battalions (five 155mm artillery battalions and two 203mm artillery battalions) using new type conventional artillery shells in a single mass firing. The casualty area for personnel in dispersed foxholes and inside tanks would be between 20 and 30 times larger than from the massed firing of the aforementioned seven artillery battalions.

3. Extent of Casualties and Destruction Heavy. Ground detonation of a nuclear bomb with a 1.2 megaton equivalent yield would produce a shock wave at 200 meters from the center of the blast that would throw a tank 15 meters causing serious damage to the tank when it hit the ground. A 40 meter deep V-shaped tunnel under the center of the explosion, the southern end of which was 51 meters from the blast center and the western end of which was within 42 meters of the blast center would be completely destroyed and all living creatures inside the tunnel would be killed.

4. Short Duration of Radiation Pollution. One hour following the explosion of a nuclear bomb with a 12 kiloton equivalent yield, the maximum radiation rate on the ground near the center of the blast is 43,000 roentgens per hour. The boundary of the vestigal cloud area where the radiation rate is 100 roentgens per hour reaches 10 kilometers, and the effect lasts for from several days to several tens of days or may even continue for several months or more.

6. Nuclear Weapons Casualty Radius (Kilometers) Against Exposed Personnel on Open Ground

伤情等级	1千吨		2千吨		5千吨		1万吨		2万吨		5万吨		10万吨		20万吨		50万吨	
	地爆	空爆	地爆	空爆	地爆	空爆	地爆	空爆	地爆	空爆	地爆	空爆	地爆	空爆	地爆	空爆	地爆	空爆
极重度	0.72	0.71	0.79	0.78	0.91	0.89	1.02	1.00	1.15	1.12	1.35	1.33	1.55	1.87	1.84	2.63	2.82	4.07
重度	0.78	0.78	0.86	0.85	0.98	0.97	1.10	1.08	1.23	1.20	1.43	1.81	1.69	2.49	2.40	3.46	3.69	5.27
中度	0.87	0.87	0.95	0.94	1.07	1.06	1.19	1.18	1.34	1.52	1.58	2.33	2.19	3.21	3.05	4.41	1.65	6.35
轻度	0.98	0.98	1.06	1.05	1.19	1.18	1.32	1.32	2.05	3.05	3.00	1.20	3.90	5.60	5.04	7.16	6.96	10.2

Key:

1) Degree of injury
2) Extremely serious
3) Serious
4) Medium
5) Slight
6) 1 kiloton
7) 2 kilotons
8) 5 kilotons
9) 10kt
10) 20kt
11) 50kt
12) 100kt
13) 200kt
14) 500kt
15) Ground explosion
16) Atmosphere explosion

7. Nuclear Weapons Casualty Radius (Kilometers) Against Personnel Inside Medium Tank

伤情等级	1千吨		2千吨		5千吨		1万吨		2万吨		5万吨		10万吨		20万吨		50万吨	
	地爆	空爆	地爆	空爆	地爆	空爆	地爆	空爆	地爆	空爆	地爆	空爆	地爆	空爆	地爆	空爆	地爆	空爆
极重度	0.43	0.44	0.49	0.50	0.59	0.59	0.69	0.67	0.80	0.77	0.98	0.90	1.21	1.07	1.36	1.25	1.58	1.40
重度	0.48	0.49	0.54	0.55	0.65	0.64	0.74	0.73	0.85	0.83	1.02	0.97	1.23	1.15	1.55	1.26	2.10	1.71
中度	0.57	0.58	0.63	0.64	0.74	0.74	0.84	0.84	0.96	0.95	1.26	1.11	1.59	1.29	2.00	1.58	2.71	2.14
轻度	0.66	0.68	0.73	0.74	0.84	0.85	0.95	0.96	1.07	1.07	1.34	1.24	1.69	1.45	2.13	1.83	2.89	2.48

Key:

1) Degree of injury
2) Extremely serious
3) Serious
4) Medium
5) Slight
6) 1 kiloton
7) 2 kilotons
8) 5 kilotons
9) 10kt
10) 20kt
11) 50kt
12) 100kt
13) 200kt
14) 500kt
15) Ground explosion
16) Atmosphere explosion

8. Intermediate Blast Radius (Kms) on Nuclear Weapon Targets

Blast Mode	Ground Blast										Air Blast									
Equivalent (1,000 tons)	1	2	5	10	20	50	100	200	500	1000	1	2	5	10	20	50	100	200	500	1000
Model 59 Medium Tank	0.13	0.17	0.25	0.32	0.42	0.60	0.78	1.05	1.46	1.90	0.09	0.12	0.17	0.23	0.31	0.45	0.59	0.80	1.17	1.60
Model 62 Light Tank	0.19	0.24	0.33	0.42	0.54	0.75	0.95	1.23	1.70	2.20	0.15	0.19	0.27	0.35	0.42	0.62	0.81	1.05	1.46	1.90
Model 63 Armored Vehicle	0.22	0.28	0.38	0.49	0.63	0.87	1.10	1.40	1.93	2.46	0.19	0.24	0.34	0.44	0.56	0.78	1.00	1.29	1.79	2.32
Recoilless Gun	0.23	0.30	0.43	0.55	0.71	0.99	1.25	1.62	2.22	2.85	0.20	0.28	0.40	0.54	0.70	0.99	1.25	1.62	2.25	2.92
Mortar	0.20	0.28	0.41	0.53	0.70	0.97	1.22	1.58	2.18	2.80	0.16	0.24	0.37	0.51	0.67	0.95	1.20	1.54	2.17	2.83
Armored Force Observation Device	0.25	0.34	0.50	0.66	0.88	1.26	1.63	2.16	3.08	4.20	0.24	0.34	0.51	0.70	0.93	1.35	1.78	2.30	3.35	4.48
Truck	0.26	0.33	0.47	0.61	0.78	1.08	1.37	1.78	2.50	3.20	0.25	0.33	0.46	0.62	0.79	1.11	1.45	1.83	2.65	3.40
Trench	0.28	0.34	0.46	0.58	0.74	1.00	1.25	1.60	2.16	2.74	0.27	0.34	0.46	0.58	0.72	1.00	1.25	1.58	2.15	2.75
Wall port	0.22	0.28	0.37	0.46	0.59	0.80	1.01	1.26	1.71	2.15	0.19	0.24	0.32	0.40	0.50	0.69	0.87	1.10	1.46	1.88
Dugout	0.25	0.31	0.42	0.53	0.67	0.91	1.15	1.45	1.95	2.45	0.23	0.29	0.39	0.50	0.62	0.84	1.07	1.33	1.80	2.30
Light shelter	0.22	0.28	0.34	0.46	0.58	0.80	1.00	1.28	1.70	2.30	0.19	0.24	0.32	0.40	0.50	0.68	0.86	1.10	1.45	1.85
Reinforced Shelter	0.16	0.21	0.29	0.35	0.44	0.60	0.77	0.95	1.28	1.63	0.12	0.15	0.21	0.27	0.33	0.45	0.56	0.72	0.96	1.20

9. Designation of Contaminated Areas and Effects on Troop Movements

Designation of Contaminated Area	Ground Radiation Rate When Entering Contaminated Area (roentgens/hr)	Time of Entry Into Contaminated Area (Hours after blast)	Amount of Radiation 24 hours After Blast (roentgens)	Amount of Longterm Residual Radiation (roentgens)	Amount of Effect on Unit Movement of External Radiation
Slight	2 - 10	0.5 1 6	2.3 - 12 4.0 - 20 14 - 68	3.8-19 6.7-33 40-200	Can proceed on foot with due attention to length of time
Intermediate	10 - 50	0.5 1 6	12 - 58 20 - 100 68 - 340	19-95 33-170 200-1000	Possible to move on foot or in vehicles for limited lengths of time
Serious	50 - 100	0.5 1 6	58 - 120 100 - 200 340 - 680	95-190 170-330 1000-2000	Length of time strictly limited. Should go by vehicle.
Extremely serious	>100	0.5 1 6	>120 >200 >680	>190 >330 >2000	Avoid area if possible. Should detour or speed through in armored vehicle

Remarks

1. The values for radiation dosage given on the left side of the table correspond to the lower limits; the values on the right side correspond to the upper limits.

2. Wartime control of radiation dosage for personnel is 50 roentgens for the whole body per exposure (with no further exposure for a period of 30 days). Annual accumulated amount of radiation should be no more than 150 roentgens, total body exposure being no more than 250 roentgens.

Chapter II. Chemical Weapons

A. Summary Statement on Chemical Weapons

1. What Chemical Weapons Are*

Chemical weapons are chemical substances termed military toxicants (or toxicants for short) that are used in warfare to poison people and animals. Various kinds of artillery shells, bombs, rocket shells, missiles, poison smoke containers, hand grenades, land mines and sprayers are collectively termed chemical weapons.

2. Combat Forms of Toxicants

After chemical weapons have been used, the form in which toxicants cause casualties is termed the combat form. The combat forms of toxicants are vapor form, mist form, smoke form, liquid droplet form and powder form. The mist and smoke forms are collectively termed aerosols.

Vapor form. Toxicants are vaporized to become gas molecules that spread in the air.

Mist form. Toxicants are dispersed to become liquid particles suspended in the air.

Smoke form. Toxicants are dispersed to become solid particles suspended in the air.

Liquid droplet form. Toxicants are dispersed to become liquid scattered on the ground and on objects.

Powder form. Toxicants are powdered and sprayed on the ground or let loose in the area.

Once toxicants have been used, some have a single combat form while others have several simultaneously existing combat forms with a single form predominating. The toxic cloud mass produced in an instant by explosion of a toxic bomb or the toxic cloud mass formed when a sprayer sprays are collectively termed primary cloud masses. The toxic cloud masses that vaporize from contaminated ground or objects are collectively termed secondary cloud masses. Both these kinds of cloud masses can cause air toxification over an appreciable area.

3. Types of Toxic Agents*

Classed by Toxic Effect	Nerve toxicants that damage the normal functioning of the nervous system. Also termed phosporous-containing toxicants. Main kinds are Sarin, Soman, and VX
	Vesicant toxicants that cause cell necrosis and the ulceration of tissue. Main kinds are mustard gas and lewisite.
	Whole body poisoning toxicants that destroy the oxidizing function of cell tissue causing toxification of the whole body through lack of oxygen. Main kind is hydrocyanic acid.
	Incapacitants that interfere with human thinking and motile functions, rendering people temporarily unable to fight. The main kind is BZ.
	Asphyxiating toxicants that damage the lungs and cause asphyxiation through lack of oxygen. The main kind is phosgene.
	Tearing agents that directly irritate the eyes, upper respiratory tract and the skin. The main kinds are chloroacetophenone, adamsite and CS.
	In addition, the United States Army has used large quantities of herbicides (also called weed killers) such as agent orange, agent white, and agent blue, Monuron, and Bromacil.

Classification by Tactical Use	In terms of Casualties	Lethal toxicants. This category of toxicants is highly lethal. They are used mostly to kill and wound a protagonist's effectives and to weaken his ability to fight. They include Sarin, Soman, hydrocyanic acid and phosgene. Absorption of highly concentrated nerve or systemic toxicants in the form of vapor or aerosol induces death within 1 minute. Lethal toxicants may also be divided into quick killing agents and slow-poisoning agents. The former are toxicants that produce symptoms and lead to death very rapidly following exposure and include substances such as Sarin, Soman and hydrocyanic acid. The latter are toxicants that require a certain period of incubation following exposure before producing symptoms and death and include phosgene. Non-lethal toxicants. Unless subjected to extremely high concentrations, this category of toxicants usually does not produce death; however, they frequently incapacitate the body or nerves and cause a rapid but temporary lowering of ability to fight. This includes toxicants such as adamsite, BZ and mustard gas. Though this category of toxicants does not produce death; their rapid or sustained effect can quickly impair the adversary's movements, thereby giving the user the upper hand.
	In terms of speed of inflicting casualties	Quick acting toxicants. This category of toxicants can produce toxic symptoms very fast and either cause the quick death or temporary loss of the adversary's ability to fight. They include toxicants such as Sarin, VX, hydrocyanic acid, chloroacetophenone and BX. Within several seconds following ingestion of large quantities of hydrocyanic acid, apprehension and vertigo set in; within 1/2 hour loss of consciousness ensues. Breathing stops within 1 hour. When personnel are attacked with an irritant, the irritation becomes unbearable within 1 or 2 minutes. Use of irritants in a surprise attack on strongpoints, tanks and armored personnel carriers is fairly effective. Delayed action toxicants. Following poisoning with this category of toxicants, usually between 1 and several hours are required for toxic symptoms to appear. Only after a certain incubation period is the enemy's fighting ability impaired. Such toxicants include mustard gas, lewisite and phosgene.

In terms of duration in inflicting casualties

Temporary toxicants. This category of toxicants usually form a gas, a mist or smoke following use Duration of effectiveness in causing casualties is short, amounting to only from several minutes to less than 1/2 hour. They include Sarin and hydrocyanic acid plus BX, chloroacetophenone, adamsite and CS in smoke form.

Persistant toxicants. Usually this category of toxicant forms droplets or becomes powder following use. It is used mostly to contaminate the ground, objects or water supplies. Some may be used to produce a fog to contaminate the air. It is effective for a sustained period of time in causing casualties, usually persisting from several hours to several days. Main kinds are Soman, VX, mustard gas and lewisite.

Toxicants that are effective in causing casualties for a sustained period of time are affected not only by the nature of the toxicant itself but also by the temperature and the method employed at the time of their use. For example, when Sarin is used at high temperature, it has a short period of efficacy; when temperature is low, it persists for a long time. As another example, when mustard gas is used in the form of droplets, it persists for a long time; when used as a mist, it has a short duration. Similarly irritants such as chloroacetophenone and adamsite are usually used as temporary toxicants, but when they are spread on the ground in powdered form, they contaminate the ground and the air for a long time, thus becoming persisting toxicants.

B. Combat Performance of Toxic Agents and the Nature of Damage They Inflict

1. Combat Performance Capabilities of Soviet and American Armed Forces Toxic Agents

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Key:

1) Category
2) Nerve type
3) Systemic type
4) Respiratory type
5) Vesicant type
6) Incapacitating type
7) Name
8) Sarin
9) Tabun
10) Soman
11) VX
12) Hydrocyanic acid
13) Cyanogen chloride
14) Phosgene
15) Mustard gas
16) Lewisite
17) BZ
18) Code name
19) USSR Army
20) U.S. Army
21) Duration of effectiveness in inflicting casualties
22) From more than 10 minutes to several hours
23) Several hours in summer; several days in winter
24) Several minutes to more than 10 minutes
25) Several minutes to more than 20 minutes
26) Several hours to several days
27) Toxic effects and symptoms of poisoning
28) Damages nervous system's normal functioning leading to paralysis and death. Symptoms: myosis, salivation, sweating, difficulty breathing, facial pallor, twitching of whole body, cramps, coma
29) Induces acute lack of oxygen in tissue cells and systemic poisoning leading to death. Symptoms: numbness of the mouth and tongue, headache, respiratory difficulty, bright red skin, convulsions, dilation of pupils
30) Damages respiratory organs leading to lung edema, acute lack of oxygen and asphyxiation. Symptoms: tearing, coughing. After entering incubation period is difficulty in breathing, facial pallor, shock, death.
31) Damages cells and cell nuclei causing muscle ulceration. Symptoms: skin red and swollen with blisters and ulceration. Poisoning of respiratory tract can cause congestion and edema of the mucosa leading to bronchitis
32) Damages normal functioning of choline and adrenalin thereby causing the incapacitation of the nerves and body. Symptoms: Dilation of the pupils, slow reactions, shaky movements, nervousness and lethargic sleep
33) Combat form
34) Gas, mist, droplets

35) Gas, mist
36) Gas
37) Mist, droplets
38) Smoke
39) Protection
40) Wear gas mask and protective clothing
41) Wear gas mask
42) First aid
43) Atropine inoculation and artificial respiration
44) Breathing of amyl nitrite
45) Avoid activity and keep warm
46) Remove poison droplets
47) Evacuation from contaminated area
48) Disinfecting
49) Disinfecting of droplet contamination
50) Not necessary
51) Needed
52) Field warfare identification
53) Droplets may seem like a fine mist
54) Colorless
55) Pale yellow, oily droplets
56) Gray smoke
57) Irritants
58) Remarks
59) Chloroacetophenone
60) Adamsite gas
61) CS
62) CR
63) Several minutes in smoke form; between more than 10 and tens of hours in liquid form
64) Powerful irritant to the eyes and respiratory tract. Symptoms: Tearing and sneezing. Vomiting in serious cases.
65) Powder form
66) Wash with soap and water
67) In the USSR army, KHAB denotes poison shell. In the United States army, GAS means poison shell
68) Toxicants may be mixed for use in which case symptoms may differ from the foregoing symptoms

类别	名称	代号 苏军	代号 美军	伤害作用的持续时间	毒理作用与中毒症状	战斗状态	防护要求	急救	消毒	野战识别特征
神经性	沙林	P—35	GB	十几分钟至几小时	破坏神经系统的正常功能，以致麻痹死亡。症状：瞳孔缩小、流口水、多汗、呼吸困难、面部青紫、全身肌肉抽搐、抽筋、昏迷。	气状 雾状 液滴状	戴防毒面具着防护服	注射阿托品进行人工呼吸	液滴染毒需消毒	液滴可呈现细雨雾状
神经性	塔崩	P—18	GA							
神经性	梭曼	P—55	GD							
神经性	维埃克斯		VX	夏天几小时冬天几天						
全身中毒性	氢氰酸	P—2	AC	几分钟至十几分钟	引起组织细胞急性缺氧而全身中毒，以至死亡。症状：口舌麻木、头痛、呼吸困难、皮肤鲜红、抽风、瞳孔散大。	气状 雾状	戴防毒面具	吸入亚硝酸异戊酯	不需要	无色
全身中毒性	氯化氰		CK							
窒息性	光气		CG	几分钟至二十几分钟	损害呼吸器官，引起肺水肿，急性缺氧而窒息。症状：流泪、咳嗽、转入潜伏期后，呼吸困难、面青紫、休克、以至死亡。	气状	同上	避免活动保持温暖	同上	无色
糜烂性	芥子气	P—74	H	几小时至几天	破坏细胞和细胞核，使肌肉溃烂。症状：皮肤红肿、起水泡、溃烂；呼吸道中毒能造成粘膜充血和水肿，甚至发生支气管肺炎。	雾状 液滴状	戴防毒面具着防护服	去掉毒液	需要	淡黄色油状液滴
糜烂性	路易氏气	P—13	L							
麻痹性	毕兹		BZ	几分钟至十几分钟	破坏胆碱能与肾上腺素能的正常功能，而使神经和躯体失能。症状：瞳孔散大、反映迟钝、行动不稳、神经失常、昏睡。	烟状	戴防毒面具	教离毒区	不需要	白灰色烟状

类别	名称	代号 苏军	代号 美军	伤害作用的持续时间	毒理作用与中毒症状	战斗状态	防护要求	急救	消毒	野战识别特征
刺激性	苯氯乙酮		CN	呈烟状时几分钟，呈液状时十几小时至十几小时	强烈刺激眼睛和呼吸道。症状：流泪、打喷嚏、咳嗽气吐	同上	同上	用肥皂水清洗	同上	雷达
刺激性	亚当氏气	P—16	DM							
刺激性	西埃斯		CS	几分钟至						
刺激性	西阿尔		CR	几分钟						

注 1.苏军XAB表示毒剂排，美军GAS表示毒气

2.有些毒剂可能混合使用，出现的症状可能与上述症状不同

Nature of Injuries Inflicted by Toxic Agents*

Widespread casualties. Toxicants can contaminate the air and the ground over a fairly wide area and the contaminated air may be spread by the wind to a substantial area. Everything else being equal, comparison shows the casualty area ranges from several times to more than 10 times as great for chemical shells as for fragmentation shells. A chemical attack causes casualties not only among personnel lacking protection in the area attacked and downwind from it for a certain distance, but it also penetrates tightly sealed defenses to cause casualties to effectives in shelters.

Numerous ways of causing casualties. Conventional weapons rely primarily on bullets and shrapnel to kill or injury personnel directly, while chemical weapons can contaminate the air, ground, objects, water supply and food. When personnel breathe contaminated air, when their skin, mucous membranes (or wounds) come in contact with toxic droplets, or when they unwittingly ingest contaminated water or food, they can be poisoned and injured.

Long duration. Conventional weapons kill and wound only during the instant in which they explode, while the killing and wounding effect of chemical weapons persists for a long time. For example, following the explosion of Sarin toxicant, the killing and wounding effect of the polluted air can last for anywhere from several minutes to several hours. After the ground and objects have been contaminated with VX, its killing and injuring effect may endure for from several days to several weeks.

C. Methods of Chemical Attack*

1. Chemical Attacks To Inflict Casualties

a. Chemical attack to kill and injure the adversary's effectives. Usually such an attack is by surprise with the launching of a sudden, concentrated and in-force attack on a certain target (or area) in lethal or semi-lethal density for the purpose of killing or injuring effective forces. When the USSR army carries out a chemical attack against a well equipped and well trained force, it usually launches a sudden, massive and concentrated attack within a short period of time (lasting from 15 seconds to 1 minute) using quick acting lethal toxicants in an effort to eliminate 50 percent or more of the fighting force within the area attacked. When it launches a chemical attack to kill and wound against effectives who have no protective equipment and who lack training, it usually fires quick acting toxicant shells intermittently so that the density of air pollution is not high but is effective over a long period of time.

2. Delaying Chemical Attack

Chemical attacks for the purpose of delaying the movements of an opponent generally employ persisting toxicants to create a contaminated area for the purpose of restricting the opponent's movements. In order to delay the opponent's military activities, attacks are made against the opponent's reserves, his effectives weakened (such as rendering 20 percent of personnel

unable to fight), roads over which the opponent moves attacked in order to hinder his movement, and the opponent's vehicles, artillery and usable terrain are contaminated to restrict his use of equipment and terrain. In order to do this, the Soviet army has ruled that an attack of fairly long duration may be mounted, the first attack being completed within 3 to 5 minutes. After having carried out the contamination, a supplementary attack may be launched depending on meteorology and topography so as to maintain a certain density of contamination and produce an persisting contaminated area.

3. Harassing Chemical Attack

This is a chemical attack carried out for the purpose of harassing the opponent's combat movements and tiring out his effectives. Usually a small amount of quick acting toxicant is used to carry out intermittent chemical attacks that force the opponent to wear protective equipment for long periods of time for the purpose of tiring effectives. When the USSR army fires regular shells, it simultaneously fires a small number of quick reacting toxic shells in an effort to threaten the opponent psychologically and weaken his will to fight, or else so that unprotected personnel will leave defenses to harass its combat formations, the better to kill or wound them with other firepower.

D. Effects of Meteorology and Terrain on Use of Chemical Weapons

1. Effects of Meteorology*

a. Wind. Wind direction determines the direction in which a toxic cloud mass spreads. Usually, when an enemy uses a favorable wind direction (a following wind or a lateral wind) to launch toxicants, he uses temporary type toxicants when the target is nearby or when the wind direction is unstable, and usually his own forces wear gas masks. Wind speed affects the density of air contamination. A wind speed of 1 to 4 meters per second is favorable for maintenance of an injurious density. When the wind speed is high, the contaminated air spreads rapidly and its density declines swiftly, so the depth to which it causes injuries is short. When wind speed is greater than 6 meters per second, it is not easy to maintain an injurious density.

b. Atmospheric temperature. When the temperature is high, liquid toxicants evaporate rapidly and the density of contaminated area is high, thereby increasing the effectiveness of toxicants in causing casualties. However, toxicants in droplet form do not last long. When the temperature is low, liquid toxicants evaporate slowly and density of air contamination is low, meaning a weakening of the toxicant's injurious effects. Some toxicants even congeal and are unable to cause casualties.

c. Vertical stability of the atmosphere. By the vertical stability of the atmosphere is meant the extent to which the air flows up and down directly influencing the extent of casualties chemical weapons cause. Usually, there are three conditions as follows:

Convection. The higher above the ground, the lower the temperature. At this time, there is a dramatic upward and downward movement of the air, and contaminated air can spread upward rapidly causing a swift decline in density.

The period when it is effective in causing casualties is short and the affected area is small. This condition does not favor enemy use of chemical weapons.

Inversion. The higher above the ground, the higher the temperature. When this situation exists, there is virtually no upward and downward air motion, and contaminated air cannot easily spread upward. Instead, it hugs the ground and can be readily maintained at a density that causes casualties for a long period of time. The affected area is large. This is a favorable condition for enemy use of chemical weapons. Inversions usually occur on clear days (when the wind speed is less than 4 meters per second). After twilight until dawn of the following day, the inversion is most intense, but it begins to break up after sunrise.

Isotherm. This is an atmospheric condition in between convection and inversion. It is a middling condition for enemy use of chemical weapons. This condition usually occurs at dawn, toward evening and on overcast days.

For the above reasons, the enemy is most likely to use chemical weapons during inversion or isotherm conditions such as toward evening, during the night, at dawn, or on overcast days.

d. Precipitation (rain or snow). Heavy rain or continuous light rain can scatter airborne toxicants, and wash away toxicant droplets on the ground or on objects. Dilution of certain toxicants renders them ineffective. Some toxicant may flow into low-lying areas or into creeks or rivers where they pose a long-term danger or contaminate the water supply. Heavy or medium-heavy snows may temporarily cover contaminated ground. When snow is 20 centimeters or more deep, it forms a barrier against toxicants.

2. Effect of Terrain

Terrain mostly affects the spread of toxic cloud masses and the speed of dispersal. When a toxic cloud mass encounters high ground in the process of spreading, the contaminated air will flow over both sides or the top of the high ground, and it will halt temporarily in some areas of little or no wind. When it encounters long stretches of mountains, the contaminated air will change its direction of spread to follow the course of the mountain, spreading along mountain valleys causing damage fairly deeply. On open land and on water surfaces, toxic clouds can move forward smoothly. The toxic air spreads rapidly and effects a wide area, but the duration of time during which it can cause casualties is short and the extent of damage is slight. Toxic gases cannot spread easily in lowland areas, in bays, in dense forests, or in residential areas, and the area they affect is small, but they persist for a long time and the extent of damage they cause is serious.

Chapter III. Biological Weapons

A. Summary Statement on Biological Weapons

1. What Biological Weapons Are*

The poisons produced by pathogenic organisms (including bacteria, rickettsia, chlamydia and viruses) and by viruses that are used in warfare to injure people and animals and destroy farm crops are called biological warfare agents. The various kinds of bombs, missile warheads, aerosol generators and sprayers that carry biological warfare agents are termed biological weapons.

2. Types of Biological Warfare Agents

Classed by degree of injury	Incapacitating agents that mostly cause a temporary loss of ability to fight, such as brucella bacillus and Venezuelan equine encephalitis.
	Patheogenic warfare agents cause deadly illness, the death rate being greater than 10 percent, including plague bacillus and yellow fever virus.
Classed as to communicability	Communicable warfare agents spread swiftly, becoming epidemic in a very short period of time and persisting for a substantial period. These agents include plague and smallpox
	Non-communicable warfare agents infect only by contact. Botulin is an example, which is used mostly against campaign and tactical targets.

3. Methods of Releasing Biological Warfare Agents

a. Release of biological warfare agent aerosols

When solid or liquid biological warfare agent particles are suspended in the air, they are termed biological warfare agent aerosols. They float around on the wind to contaminate the air, the ground and food and water supplies, and they are able to penetrate unprotected defense works. When personnel inhale a certain quantity of biological warfare aerosols, they may become sick. Release of biological warfare agent aerosols is the principal means that the enemy uses to spread biological warfare agents. The specific methods and equipment used to do this are given below.

1) Biological bombs. Biological bombs and missile warheads produce aerosols through the way in which they explode.

2) Aerosol generators. These are usually carried by aircraft to effect release and are soundless.

3) Spray boxes. Spray boxes may be used for low altitude spraying by aircraft upwind from targets, or they may be used by ships for release at sea to blow toward the land.

b. Dropping of Bacteria-bearing Media

Bacterial-bearing insects and miscellaneous things are packed in special containers for release by aircraft. The specific methods and equipment used are given below.

1. Four-compartment bombs. These resemble regular bombs in appearance and weight, but are divided into four compartments. When used, they split open about 30 meters above the surface of the ground to spread the insects, small animals, feathers and toys packed inside them.

2. Cardboard tubes with parachutes. These resemble illumination shells in exterior appearance and are suspended from parachutes. They are used to spread insects that are easily killed.

3. Thin shell devices. The outer shell of these devices is a round, think covering made of calcareous material that is loaded with insects and small animals. When it hits the ground, it breaks open to release the insects and small animals.

c. Other methods

Dispatch of secret agents to release biological warfare agents to contaminate water supplies, food and ventilation ducts, or leaving behind articles contaminated with germs when withdrawing.

B. Role of Biological Weapons in Inflicting Casualties

1. Routes By Which Biological Warfare Agents Enter the Human Body*

Inhaling. Air that has been contaminated with biological warfare agents may enter people's body through the respiratory tract.

Accidental eating (or drinking). Water and food that has been contaminated with biological warfare agents may enter people's bodies through the digestive tract.

Skin contact. Biological warfare agents may enter the body directly through the skin, mucous membranes or wounds, or via insect bites.

Inasmuch as the methods of release vary and because of differences in the nature of biological warfare agents themselves, the paths by which each agent enters the body are not entirely the same.

2. Patheogenic Symptoms of Biological Warfare Agents

Once biological warfare agents have entered the body, they may damage physiological functions and result in death. After most biological warfare agents have caused sickness, different symptoms in the form of fevers, headaches, total body weakness, vomiting and diarrhea, coughing, nausea, breathing difficulties and aching of part or all of the body may appear. (See accompanying table for the basic characteristics of enemy biological warfare agents).

3. Characteristics of Casualties Inflicted by Biological Warfare Agents*

a. Strong pathogenisis and widespread contamination. Biological warfare agent germs are strongly pathogenic. Just a small amount of germs entering the body can cause sickness or death, and a wide area can be contaminated easily. For example, the spraying of biological warfare agents by a single aircraft can produce a several hundred or several thousand square kilometer contamination area downwind causing people to become ill.

b. Communicable. Some biological warfare agents such as plague, smallpox, cholera and typhus are highly communicable. Unless preventive measures are taken immediately following the outbreak of illness, disease will become epidemic very quickly.

c. Harmful effect of long duration. The period during which biological warfare agent aerosols can cause harm is usually several hours (2 hours during daylight and 8 hours at night), but when conditions are favorable, the time is longer. Cholera vibrio discharged into water may live for scores of days under certain conditions. Plague bacillus can survive for several weeks in shaded places. Anthrax bacillus gemma may survive in soil for several years. Some biological warfare agents may survive in the bodies of insects for long periods of time and even be transmitted from one generation to another.

d. No immediate casualties. A certain incubation period is required between the entry into the body of biological warfare agents and the onset of illness. The length of time required depends largely on the type of agent and the dosage that enters the body. Usually, a minimum of several hours and a maximum of between 10 and 20 days is required. During the incubation period, the contaminated person has no obvious symptoms and is still able to fight.

e. Markedly affected by natural conditions. Strong sunshine will kill most microbes within several hours, and high winds and convection currents will dissipate aerosols very quickly. Temperature, humidity, rain, snow and topography all have an effect on biological warfare agents.

Table Showing Basic Characteristics of Enemy Biological Warfare Agents

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Key:

1) Name of biological warfare agent
2) Plague bacillus
3) Cholera vibrio
4) Typhoid bacillus
5) Glanders bacillus
6) Meliodosis bacillus
7) Anthrax bacillus
8) Brucella bacillus
9) Tularemia bacillus
10) Botulin bacillus toxin
11) Smallpox virus
12) Dissemination method
13) Aerosols
14) Insects and animals
15) Food contamination
16) Invasion routes
17) Inhalation
18) Accidental ingestion
19) Contact
20) Mucous membranes
21) Incubation period (days)
22) Communicability
23) Strong
24) Weak
25) None
26) Main symptoms of pathogenic communicable disease
27) Fever. Bubonic plague causes swelling of lymph glands with extreme pain. Chest pain from pneumonic plague with bloody sputum and difficulty breathing.
28) Nausea, severe vomiting and diarrhea, dry skin, muscle spasms and prostration
29) Fever, with the appearance of pityriasis rosea and swelling of the skin, constipation or diarrhea
30) Skin rash, diarrhea, muscle ulceration
31) Fever, boils on skin, diarrhea, muscle ulceration, headache.
32) Fever. Difficulty in breathing and chest pain from respiratory anthrax. Red papules, blisters and hard scabs from cutaneous anthrax.
33) Undulant fever. Heavy sweating, wandering arthritis, muscle pain, headache, enlarged liver and spleen
34) Fever. With glandular type, whole body aches and lymph glands swell. Chest type produces chest pains, bloody sputum and coughing.
35) Vision blurred, double vision, drooping eyes, nausea, vomiting, entire body lethargic.
36) Fever, face and exterior of body has pupules which give way to a rash of blisters and pustules that form scabs.
37) Quarantine
38) Observation of infected personnel, the number of days observation being the maximum incubation period required for the illness. The period of blocking off of the quarantine area should be figured from the last case of the disease to the longest incubation period for the disease. For

diseases that are carried via insects, usually the blocking off of the area can be lifted following disinfection and eradication of insects.
39) Staphylococcus toxin
40) Flu virus
41) Yellow fever virus
42) Dengue fever virus
43) Oriental equine encephalitis virus
44) Occidental equine encephalitis virus
45) Venezuelan equine encephalitis virus
46) Forest encephalitis virus
47) Lifute [4539 1133 3676] Valley virus
48) Jikongkenya [1015 1313 5146 7161] virus
49) Aibola [1002 3134 2139] virus
50) Hours
51) Strong (where there are mosquitoes)
52) Vomiting and diarrhea, chest pain, headache, completely enervated
53) Fever, shivering, headache, aching limbs, stuffy nose, runny nose, dry throat
54) Fever, nausea and chills, headache, back and leg pain, nausea with vomiting, jaundice, proneness to nosebleeds.
55) Fever and sometimes chills, headache, muscles and joints ache, complete enervation, skin rash, proneness to nosebleeds.
56) Fever, twitching, rigid occipital muscles, limbs numb, face and legs swollen.
57) Fever, shivering, headache, aching muscles, limbs numb, delerious
58) Fever, shivering, headache, sore muscles, sore throat, nausea and vomiting.
59) Fever, red face, headache, stiff neck, complete fatigue, nausea and vomiting.
60) Fever, whole body pains, complete fatigue, nausea and vomiting
61) Fever, shivering sometimes, joints and spinal column pains forcing patient to stoop, skin rash
62) Fever, vomiting, headache, aching muscles, proneness to bleeding, severe diarrhea

战剂名称	传播方式：气溶胶	传播方式：昆虫动物	传播方式：污染食物	侵入途径：吸入	侵入途径：误食	侵入途径：接触	潜伏期（天）	传染性	所致传染病的主要症状	检疫
鼠疫杆菌	+	+		+		+	1—9	强	发热。腺鼠疫淋巴腺肿大、剧痛。肺鼠疫胸痛、血痰、呼吸困难	对受污染人员实行观察，观察日数以该病的最长潜伏期为准。疫区封锁时间从最后一例病人隔离算起，到该病最长潜伏期满为止。虫媒传染病一般在消毒、灭虫后即可解除封锁。
霍乱弧菌		+	+		+		1—5	强	恶心、严重上吐下泻，皮肤干燥，肌肉痉挛，衰竭。	
伤寒杆菌	+	+	+		+		6—21	强	发热，皮肤有玫瑰疹，腹胀、便秘或腹泻。	
马鼻疽杆菌	+		+	+	结膜		1—14	弱	皮疹，腹泻，肌肉有溃疡。	
类鼻疽杆菌	+	+	+	+	结膜		4—7	强	发热，皮肤有脓疱，腹泻，肌肉有溃疡，头痛。	
炭疽杆菌	+	+	+	+	+	+	1—7	强	发热。吸入性炭疽呼吸困难、胸痛。皮肤炭疽有红色丘疹、水疱、硬痂。	
布氏杆菌	+		+	+	+	+	6—30	弱	波状热，大量出汗，游走性关节痛，肌肉痛、头痛，肝脾肿大。	
野兔热杆菌	+	+	+	+	+	结膜	3—10	无	发热。腺型全身痛，淋巴腺肿大。胸型胸痛、血痰、咳嗽。	
肉毒杆菌毒素	+		+	+	+		0.5—2	无	视力模糊、复视、眼睑下垂，恶心、呕吐，全身无力。	
天花病毒	+			+		+	7—16	强	发热，颜面、外露体表先有丘疹，以后有水疱疹，脓疱疹，结痂。	

战剂名称	传播方式：气溶胶	传播方式：昆虫动物	传播方式：污染食物	侵入途径：吸入	侵入途径：误食	侵入途径：接触	潜伏期（天）	传染性	所致传染病的主要症状	检疫
葡萄球菌毒素	+		+	+	—		1—6小时	无	上吐下泻，腹痛，头晕，全身无力。	同上
流感病毒	+			+			0.5—2	强	发热，寒战，头痛，四肢酸痛，鼻塞，流涕，咽喉发干。	
黄热病病毒	+	+		+		+	2—12	强（有蚊）	发热，恶寒，头痛，背和腿痛，恶心呕吐，黄胆，鼻易出血。	
登革热病毒	+	+		+		+	4—10	〃	发热，有时怕冷，头痛，肌肉关节痛，全身无力，皮疹，鼻易出血。	
东方脑炎病毒	+	+		+		+	5—10	〃	发热，抽搐，枕肌强直，四肢麻痹，脸腿浮肿。	
西马脑炎病毒	+	+		+		+	7—10	〃	发热，恶寒，头痛，肌肉痛，四肢震颤，神志不清。	
委马脑炎病毒	+	+		+		+	2—14	〃	发热，寒战，头痛，肌肉酸痛，咽喉疼痛，恶心呕吐。	
森林脑炎病毒	+	+		+		+	7—14	弱	发热，面红，头痛，颈项强直，全身疲乏，恶心呕吐。	
立夫特山谷热病毒	+	+		+		+	4—6	〃	发热，全身疼痛，全身疲乏，恶心呕吐。	
落孔肯雅病毒	+	+		+		+	3—12	〃	发热，有时寒战，关节脊柱痛迫使患者身体呈弓形，皮疹。	
埃波拉病毒	+			+			4—19		发热，呕吐，头痛，肌肉痛，易出血，严重腹泻。	

Chapter IV. Protection Against Nuclear, Chemical and Biological Weapons

1. Basic Principles of Protection Against Nuclear, Chemical and Biological Weapons*

a. Active destruction and strict protection. By active destruction is meant the assembly of all effective firepower and the taking of other actions to destroy the enemy's nuclear, chemical and biological weapons to prevent their use or to weaken capacity to use them. By strict protection is meant use of well-conceived protective organizations, full protective preparations and effective protective actions to support the free movement and sustained combat effectiveness of the armed forces under conditions when nuclear, chemical or biological weapons are being used.

b. Use of group protection primarily to strengthen support to professional soldiers. Group protection means the bringing into full play of the initiative and enthusiasm of the whole body of officers and men, organizing conscientiously on the basis of the character of units concerned. The main component of group protection is the establishment and perfection of protection organizations, the intensification of training in protection, and the adaptation of general methods to specific situations to take various kinds of simple protective measures. By support to professional soldiers is meant giving full play to the role of chemical defense troops and other specialized personnel, timely direction to protect military units and the masses of the people, and assumption of responsibility for professional support to some major targets, and to complete certain fairly technical protection duties.

c. It is necessary to be adept in the use of technical equipment and to make widespread use of rudimentary protection measures. In the Chinese armed forces, various kinds of chemical defense equipment and devices are fundamental to units carrying out protection. However, in a protracted war or when fighting alone, or in a wartime situation of difficulties in replenishing equipment, it will still be necessary to rally and rely on the broad masses of people to use rudimentary protective devices and methods to carry out protection.

2. Major Actions for Protection Against Nuclear, Chemical and Biological Weapons*

1. Use of various reconnaissance techniques for timely discovery of enemy deployments of nuclear, chemical and biological weapons, and use of the situation regarding intentions and preparations. The main things to be ascertained are as follows: deployment areas, launching positions, control facilities and locations of ammunition dumps; intentions and techniques for use, targets and areas that may be attacked; establishment and nature of obstacles to enemy nuclear and chemical attacks, particularly signs of enemy use on the immediate front.

2. Amassing of effective firepower or use of other active techniques to destroy enemy nuclear, chemical and biological weapons. Should such enemy weapons come to light in the course of combat, effective firepower should be assembled to try to destroy them before they can be used or while they are

being transported. If they have already been used, the enemy should be forced to halt their use or his ability to continue to use them should be weakened. When assembling firepower to destroy them, targets that pose the greatest threat to troop units should be destroyed first.

3. Establishment of a stringent observation and reporting network for timely discovery of signs and circumstances of an enemy nuclear, chemical or biological weapons attack, and use of all kinds of communications techniques for timely, accurate and priority dispatch of intelligence information about enemy nuclear, chemical or biological weapons attacks. Not only should armies and divisions set up dedicated nuclear and chemical observation posts for the sake of organizing reliable protection, but observation posts at all levels should be concurrently assigned responsibility for discerning signs of attack and for observing the situation with regard to attack. When signs of an attack are discovered and an enemy attack is encountered, the observation posts should report the circumstances to higher authority at once, and headquarters should use intelligence channels and various communications techniques for timely, accurate and priority transmission of reports on nuclear, chemical and biological warfare attacks.

4. Full use of favorable terrain and meteorological conditions and strict use of camouflage and dispersal of deployments to conceal movements. Strict camouflage is another important aspect of concealing movements and preserving military strength. Military units, no matter whether attacking or defending, and no matter whether at the front or in rear areas must use all kinds of camouflage measures in order to avoid or reduce losses from enemy nuclear and chemical weapons such as electronic jamming of enemy communications, setting up phony targets, issuing false intelligence, and feigning movements. Deceiving the enemy through formulation of strict security measures and cutting off of information in order to hide the intentions of military units to move. Efforts to disperse the deployment of troops and weapons to hide movements.

5. Construction of various kinds of fortifications for protection. Principal fortifications should guard against attacks by nuclear, chemical and biological weapons. In order to make fullest use of the protective function of fortifications and insure the reliability of fortifications for protection, efforts should be made so that main fortifications will be able to guard against NBC attack, with improvements added little by little. The inspection, repair and use of NBC defense installations and support for protection within the fortifications should be the responsibility of designated persons. All lulls in fighting should be used to advantage to repair fortifications and installations for defense against NBC attack in order for the fortifications to remain able to provide protection.

6. Organization of the supply of chemical defense devices and technical support for them, with full use being made of manufactured equipment and equipment that is readily at hand for protection. Protective equipment is to be supplied first to the main direction and later to secondary directions; first to the front and later in- depth, first to meet urgent needs and later to meet less urgent needs, supporting key areas. The method of sending supplies forward or replenishing them at fixed points should be adopted. All levels are to maintain a certain proportion in reserve.

In order to make up for the lack of manufactured equipment and difficulty in supply during wartime, materials that can be used should be collected widely and every effort made to use captured materials. Manufactured materials should be kept in good condition and inspected, maintained and repaired according to a system in order to raise their utilization rates.

7. Organization of mass medical prevention and epidemic prevention sterilization so that when the threat of an enemy nuclear, chemical or biological weapons attack comes about organization of mass medical prevention and epidemic prevention can be done at once. This is an important task for headquarters and logistical departments. Its main components are as follows: to make preventive inoculations and to give preventive doses of medicine to unit personnel in the combat area; to inspect the health and epidemic prevention situation in areas in which units are deployed; to carry out mass health and epidemic prevention work to get rid of disease causing micro-organisms and bad conditions that give rise to sources of contagion; and to establish epidemic prevention stations and epidemic prevention teams to give specific guidance on epidemic prevention work.

8. When military units are active in a contaminated area, they should take protective actions at once and follow safety regulations. Military units in contaminated areas should organize rotational rest, rotation of shifts or evacuation from contaminated areas in accordance with instructions from higher authority. Those passing through contaminated areas should either do the best they can in passing through or detour around the areas as combat circumstances and terrain dictate.

9. Following an enemy nuclear, chemical or biological weapons attack, the situation should be ascertained at once and adjustments made in combat deployments to continue the combat mission. Rescue, fire fighting and repair of fortifications should be done at once. Radiation, chemical and biological testing and dosage controls should be conducted to determine contamination. Disinfection and cleaning up of contamination should be done as duties and the contamination situation dictate. Food and potable water that may have been contaminated should be checked and hygenically treated.

3. Indicators of Enemy Preparations To Use NBC Weapons

A. Indicators of Possible Enemy Use of Nuclear Weapons:

Discovery of enemy nuclear weapon means of delivery (launchers).

The presence at warehouses, unloading points, airfields or launch positions deep within the enemy's interior of special purpose vehicles and of specially marked bombs, shells, or crates, or of loading and unloading and strict security and camouflage in the course of movements.

Sudden increase in enemy meteorological reconnaissance such as an increase in the number of meteorological observatory (or station) observations and an abrupt increase in the number of meteorological telegrams.

Sudden increase at launching sites of radio control facilities or issuance of nuclear attack warning signals.

Sudden increase in construction of frontline fortifications, sudden withdrawal or covering of military units and the taking of other protective measures.

B. Indicators of Possible Enemy Use of Chemical or Biological Weapons:

Specially marked shells or bombs and special containers (such as airplane sprayers) at warehouses, unloading points, airfields or launch sites deep within the enemy's interior as well as the presence of special vehicles (such as sprinkler vehicles), guarding or convoying, and the issuance to personnel of protection or detection devices. Discovery of assembly points for special purpose explosives.

Sudden issuance of protective devices, antidotes to units in enemy frontline positions, their carrying of protective devices while at work, or their sudden withdrawal or going under cover.

Sudden general inoculation and vaccination of personnel in enemy deployment areas though no contagious diseases have occurred and though it is not the season for outbreaks of disease.

4. How to Organize the Crushing and Destruction of Enemy NBC Weapons

Targets: Efforts should be concentrated on the destruction first of those targets that pose a threat to us from among enemy nuclear, chemical and biological weapons launching sites, means of delivery and transportation vehicles, command and control facilities, reserve warehouses and bases, nuclear weapons in particular.

Time: Efforts to destroy and wipe out nuclear, chemical and biological weapons before the enemy is able to use them or while the enemy is in the process of using or transporting them.

Methods: Methods of destruction will be determined by the distance from targets as well as the capability of China's armed forces to carry out destruction. Destruction may be carried out by field artillery,

anti-aircraft artillery, the air arm, rockets or missiles. In the same way that Vietnamese people's armed units shot down more than 19 aircraft that were spraying toxicants in the Tay Nguyen area in 1969, even when hits are not scored, enemy aircraft can be forced to fly high thus lessening the effectiveness of toxicants. In addition, reconnaissance detachments, parachute troops, guerrillas, militia and local armed units may be sent deep behind enemy lines to carry out sabotage. An example was the destruction by Vietnamese peoples armed units in 1968 of warehouses containing toxicants and a considerable number of large transport aircraft capable to spraying toxicants at Longbinh, Nhabanh, Quinhan and Hiencang. In September of the same year, a warehouse containing toxicants was raided at Trinhminhsi Bridge in Hiencang making it impossible for the enemy to use toxicants for the time being. Army and division artillery were frequently used to destroy targets far behind enemy lines. Reconnaissance detachments and guerrillas can carry out sabotage raids against rocket launching vehicles and warehouses deep within enemy territory, or they can call in the air arm to destroy them.

5. Principal Features of Gas Masks*

Model Numbers		Type-64	Type-65	Type-69
Use:		To protect the respiratory organs, eyes and face from damage caused by toxicants, radiation particles and biological warfare agents.		
Issuance:		To anti-chemical warfare troops and detachments	Combined arms armies	
Weight (kgs)		1.4	0.59	0.8
Protection Times	Cyanogen chloride	43 minutes	30 minutes	25 minutes
	Sarin	10 hours	10 hours	6 hours or more
	VX	2 hours	30 minutes	30 minutes

6. Protection Kit Performance*

1. Anti-phosphorus needle. Used in rescue from poisoning by nerve toxicants. May also be used in the treatment of poisoning from organic phosphate agricultural pesticides.

2. Skin disinfectant. Used mostly to disinfect skin that has been contaminated by liquid toxicants. Able to disinfect a 1,000 square centimeter skin surface, which is equivalent to the exposed skin area of the human body.

3. Type-64 protective mouth mask, which is used mostly against biological aerosols. When a gas mask is not available, it can also protect against radiation dust and gases.

7. Organization for Rescuing Wounded from Nuclear Blast Casualty Areas

Characteristics: A nuclear blast area will be large and casualties numerous; the condition of the wounded will be very complex and the amount of rescue work to be done will be great. Defense works, roads and bridges will have been destroyed; communications will be blocked, or there may even be disastrous fires. The enemy can quickly carry out airborne landings and ground attacks.

Organization of Rescue

1. Assembling of Rescue Teams To Carry Out Rescue

The mainstay of teams for the rescue of the wounded will be primarily permanent medical personnel, with militia and civilian laborers joining in. When necessary, teams may be made up of transferred combat units as well and personnel for radiation detection will also have to be assigned to these teams. Each rescue team may be divided into several small teams and be provided for the transportation of implements and rescue materials, the better to complete the mission in a rescue area independently. All personnel must be alert to protecting themselves and to the need to control the amount of radiation they receive. Following an enemy nuclear attack, all detachments should actively organize self-rescue and mutual rescue efforts.

2. Organizing Removal of Wounded to the Rear

The wounded must be evacuated rapidly from the casualty area to medical institutions in the rear in order to insure prompt treatment. When circumstances permit, the wounded who cannot be removed to the rear for the time being may be concentrated in sheltered terrain where there is no radiation contamination. In places accessible to vehicles, emergency treatment should be given first followed by assembly for evacuation to the rear. At the time of movement to the rear, movement should be in batches based on the degree of seriousness of wounds. The wounded who require emergency treatment should be the first to be sent to the rear. Wounded who are able to walk but who cannot engage in fighting should be organized for evacuation under their own power to go to the rear for treatment.

In order for the wounded to be sent to the rear expeditiously, all forms of transportation should be equitably used as dispersal of the wounded requires. Roads should be designated for movement to the rear and a good job done of regulating traffic.

8. Main Functions and Uses of Several Disinfectants

Name	Color, Smell, Form	Available Chlorine	Solubility In water	Solubility In organic solvent	Toxicants Eliminated	Form Used	Things That Can Be Disinfected
Sanheer 三合一	White powder; chlorine smell	56-65%	Yes	No	Vesicants & phosphorous toxicants	Suspension, 1:7 -- 1:9	Ground, fortifications, wharves, rubber goods
						Clear liquid	Weapons, technical equipment, skin
Calcium hypochlorite	Same as above	80-85%	Readily	No	Vesicants & nerve toxicants	Water solution (1:10)	Weapons, ground, rubber, wood, wharves
Bleach	Same as above	28-32%	Yes	No	Vesicants & phosphorous toxicants	Suspension, clear liquid (1:4-1:5)	Ground, fortifications, weapons, technical equipment
NaOH (caustic soda)	White solid		Readily	In alcohol	Phosphorous toxicants; Lewisite	5-10% aqueous solution	Ground, glass vessels, rubber goods
Ammonia water	Colorless liquid		Freely soluble	In alcohol	Phosphorous toxicants	10% ammonia	Weapons, equipment, skin, ground, fortifications.
						20% ammonia (winter)	Weapons, equipment, ground, fortifications.
Sodium bicarbonate	White powder (or solid)		Yes	No	Phosphorous toxicants	2% aqueous solution	Eyes, ears, throat, nose, etc.
Sodium carbonate (Soda)	Same as above		Yes	No	Same as above	Same as above	Clothing (Soak or boil)
Disinfecting powder	Same as above				All toxicants	Powder	Skin, clothing, weapons, equipment
"191" disinfectant	Liquid (Alcohol-amine-caustic soda disinfectant)				All toxicants	Solution	Utensils, equipment

9. Requirements for NBC Defense of Field Warfare Defense Works

Kind of Defenses	NBC Defense Requirements
Trenches, communications trenches, cliff caves, bunkers	1. Trenches and communications trenches are to be built in a curved or interrupted line as the terrain requires, and should be deepened whenever possible. In areas where the soil is loose, trench walls should be covered. 2. When ports in the walls are not covered, they should be built in an arch shape.The natural protection layer should be no less than 0.7 meters thick and should generally go around two corners. More than one entrance should be provided for the trenches. Where conditions permit, protective planks should be added. In sections of trenches or communication trenches where ports are built into the walls, they should best be covered. 3. Fire protection measures should as plastering with mud should be taken when flammable material protrudes so as to heighten radiation reflection and fire protection.
Machine gun fortifications and observation fortifications	1. So long as tactical and technical requirements can be satisfied, defense works should be made as small and as low as possible in order to increase the thickness of the protective layer above. Soil surrounding and atop defense works should be tamped and ideally should be covered with sod. 2. In order to strengthen cave defense capabilities without impairing firing or observation, every effort should be made to reduce the dimensions of firing ports and observation ports, and either protective shielding or protective airtight shielding should be installed. A protective door should be installed for entry and exit, and communications trenches connected to entries and exits should best be covered. 3. Anti-radiation protective measures should be emphasized in construction.
Bunkers and shelters	1. Entranceways are the weak points in bunkers and shelters. In order to prevent the collapse of walls and the blocking of entranceways, communications trenches that connect with entranceways should best be covered. In key fortifications, entries and exits facing two different directions should be set up. In order to prevent the shattering of protective doors causing the indirect wounding of personnel in fortifications, passageways leading to bunkers and shelters should best be at a right angle to them. 2. In the construction of bunkers and short caves, full advantage should be taken of the terrain and every effort made to build low fortifications. When conditions permit,

protective doors equal in strength to the main structures should best be built. The natural protective layer of short caves should generally be more than 3 meters thick. When short caves are built in weathered rock, strengthening should be done.

3. In order to provide effective protection against early radiation to personnel within fortifications, dugouts and bunkers and the protective layer atop bunkers should be no less than 1 meter thick. Fill dirt and the covering layer of earth around structures should be compacted.

4. Close attention to making structures air tight and providing ventilation.

10. Use of Group Shelter Defense Works

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1) Utilization Times

a. Isolated Protection

1. Nuclear, chemical or biological weapons attack when there are no facilities to filter toxicants and provide ventilation

2. Toxicant filtration and ventilation facilities are available, but density of toxicants is rather high, toxicants are temporary in nature or the nature of toxicants has not been determined.

3. The filtration and ventilation system has been destroyed; there is a fire near the air intake or the intake is blocked.

b. Filtered Protection

1. Following the passing of a highly dense toxic cloud.

2. When contaminated area enters fortifications.

3. Equipment to seal fortifications has been damaged.

2) Use Regulations

a. Before an Attack

1. Closing of protective doors only , but no closing of airtight doors (or screens).

2. Closing of the first airtight door (or screen) during an enemy artillery barrage (or air raid).

3. When warning of a nuclear, chemical or biological weapons attack is received, all airtight doors (or screens) are to be closed.

b. During (or After) an Attack

1. During isolated protection, personnel are generally forbidden to enter or leave. Blackouts are instituted; smoking is forbidden; physical exercise is reduced; and health is watched.

2. During filtered protection, 3 or 4 people may enter or leave in groups no more than twice each hour.

3. Only a single airtight door (or screen) may be opened when leaving or entering defense works.

4. Personnel and materials that have not been disinfected may not enter the interior of defense works.

3) Items To Be Alert To

1. When defense works have not been used for a long period of time or following their use for a period of time, airtightness should be checked. Methods commonly used in making such checks include: the light method; the flame method and the soap bubble method.

2. Defense works should be regularly ventilated and kept dry and clean.

11. Protection When Transiting or Stopping in Contaminated Areas

Distinctions	Protective Measures	Requirements
On foot or in motor vehicles (armored vehicles or tanks)	Carry a gas mask or mouth mask; tie the "three openings" [collar, arm and leg openings] tightly; wear gloves; wear high top rubber shoes or liberation shoes (The gas mask need not be worn when there is no dust in the atmosphere)	Rapid advance avoiding raising dust. Maintain a large distance between vehicles. Avoid touching contaminated things insofar as possible. When on foot, every effort should be made to detour around high radiation areas.
Inside tanks or armored vehicles	Wear gas mask or mouth mask	Close all ports and hatches, and shut off all fans
In high radiation areas:		
When the radiation rate is 100 roentgens or above	Use the protection that defense works afford, personnel going into defense works first for protection and waiting until the radiation rate drops to a certain extent before resuming activity outside again.	Efforts to reduce the raising of dust; no removal of protection at will; elimination of contamination in places frequented by personnel. No eating or drinking in contaminated areas. When absolutely necessary, cooking & eating above ground may be allowed when the radiation count is below 5 roentgens, the purity of food & water being maintained. Radiation does that personnel have received should be measured regularly
When the ground radiation rate is 50-100 roentgens or above	Rotation for rest. Depending on combat situation, duty personnel should be left in defense positions to handle individual protection, with all others going into defense works to rest. Transfers: When the situation permits, exposed personnel should be transferred to areas where their detachments are deployed or to low radiation areas.	

12. Protective Measures for Transiting a Contaminated Area

Distinctions	Protective Measures	Requirements
Temporarily toxic areas	Gas mask	Select high ground devoid of plant life for travel. Insofar as possible travel upwind in contaminated areas and avoid lowlying places, shell holes and forests (or high grass) as well as places that are clearly damp. When going through high grass, movement should be in single file insofar as possible. The contamination of personnel should be checked regularly and treatment given promptly
Sustained toxic areas		
On foot in high grass areas	Wear gas mask, gloves and boot covers or use plastic or rice straw to wrap the legs and feet	
On foot on flat land or in low grass	Wear gas mask and gloves. Put on rubber shoes and tie trouser legs tightly	

13. Preventive Measures for Travel Through Biologically Contaminated Areas

Distinctions	Protective Measures	Requirements
Biological warfare agent aerosols	Wear gas mask or mouth mask, or use a towel or sling to cover the mouth and nose	
Bacteria-bearing vectors	Wear a protective hat for protection against insects and wear protective clothing or tie the "three openings" tightly. Wear rubber shoes for protection against insect bites. Exposed skin may be smeared with repellent, using 3 to 5 ml each time. Don't get it in the eyes and don't smear it all over the body in order to avoid causing excessive poisoning	Insofar as possible, travel upwind in contaminated areas, keeping an increased distance and avoiding the raising of dust. On bright days in daylight hours, travel across low-lying land insofar as possible. On overcast days, and during early and late hours, select high ground for travel insofar as possible

14. Protective Measures When Stopping in Contaminated Areas

Measures	Methods	Points for Attention
Use the protection that defense works provide	Personnel should into field defense works for protection from contamination. Personnel in defense works should remain calm, avoid unnecessary activity, and ban smoking and the lighting of fires so as to avoid oxygen consumption	1. Detachments should be organized to complete important duties. If the situation permits, work should be planned for cooler parts of the day.
Use of protective materials	Wear gas masks; put on boot covers or wear rubber shoes. Alternatively, use plastic or burlap to wrap the legs and feet	2. Changing of protective materials as necessary depending on the effectiveness of the material in prevention against toxicity and the density of toxicants.
Use of favorable terrain for protection	Insofar as possible, troops should be deployed on high ground and in places where contamination is light and upwind from the contaminated areas.	When possible, provide a decontaminated area in which troops can sleep, eat and eliminate.
Rotation for rest	Detachments should be organized for rotation to anti-chemical warfare shelters, to small plots that have not yet been contaminated or to places that have been detoxified in order to rest.	

15. Organization and Method of Execution for Infantry Company Movement Through Contaminated Areas

	Issuance of Instructions on Movement including: a) situation in contaminated area, b)time of advance and arrival as well as deployment positions, and c) contact signals and other pertinent requirements while on the march
	Inspection of Weapons, Equipment & Ammunition
	Inspection of the Issuance of Chemical and Radiation Checking Equipment Used by Companies
Preparations Before Transit	Assembly of Personnel of Drink Boiled Water and Take Antidotes
	Protection of Personnel, Equipment, Food and Cooking Utensils

Inspection and Protection of Vehicles and Guns

Inspection and Echelon by Echelon Reporting of the State of Readiness

Issuance of Orders to Advance

Issuance of Supplementary Instructions

Work Prior to Crossing Border of Contaminated Area

Organization of Further Transit Preparations

Vehicle Inspection and Closing of Vehicle Doors and Windows

Reconnaissance Teams Ascertain Contamination Situation Along Route of March

Correct Control Over Formations, Distances and Speeds During Advance as follows: a. Formations. Wind abeam: echelon formation; With the wind and against the wind: several columns. Distances. Personnel: About 3 meters apart; Vehicles: No less than 100 meters. Speed. Regular speed for the most part, but on the double through seriously contaminated areas

Regular Inspections of Personnel Contaminations

Maintenance of Communications with Higher Levels

Decisive Handling of All Situations

16. Methods of Decontaminating Personnel

Removal

Dab the contaminated parts of the body with plain water or use a towel, gauze or cotton to dry the affected area.

Disinfection

Skin: Soak up the toxic liquid with cotton or a rag; then disinfect with a skin disinfectant.

Eyes, mouth, nose: A 2% aqueous solution of acid sodium carbonate (i.e., sodium bicarbonate) may be used to rinse and cleanse, and to wash out the mouth.

Wounds: A 2% solution of acid sodium carbonate or a 0.1 percent aqueous solution of potassium permangenate may be used to rinse.

To kill germs, the affected part should first be treated with a bactericide and then rinsed clean with plain water.

Note: The above methods will effect partial decontamination. When conditions permit, washing may be done using soap and water and large quantities of plain water may be used to wash the whole body, that is, for complete decontamination. Wounds should be protected from water.

17. Methods of Decontaminating Clothing

Elimination

Patting method: Stand facing the wind or with the wind to one side and pat oneself from top to bottom from 1 to 3 times.

Shaking method: Stand with the wind to one side; hold garments by the shoulders or by the waist and shake them vigorously.

Washing method: Wash clothing frequently during the same day, wearing gloves, a mask and a plastic apron while doing so to prevent contamination.

Disinfection

Cleaning method

Soak up the toxic liquid with cotton balls, then smear with a disinfectant, rubbing the effected part from the inside outward for 2 or 3 minutes, then wash with water.

Boiling method

Place contaminated clothing in a pot and boil for from 0.5 to 2 hours.

Sunning method

Hang the contaminated clothing and sun and air for a long time so that the toxic agent evaporates naturally.

Killing bacteria

Place contaminated clothing in boiling water and boil for from 0.5 to 1 hour, or soak slowly in a bactericide; for fur and synthetic fibers, fumigate with a bactericide.

18. Decontamination of Weapons and Equipment

Elimination
  Brushing method:
    Use brushes and dry grasses to brush contaminated surfaces.
  Wiping method:
    Dry: Use cloth or cotton gauze to wipe several times in one direction.
    Wet: Use cloth or gauze moistened with water or disinfectant.
Disinfection
  Wiping method:
    Wipe weapon surfaces with cloth, gauze, or brush dipped in disinfectant. For wood, rubber, plastic, leather, and other soft materials, the amount of disinfectant and the number of repetitions should be increased. Alcohol, gasoline, or kerosene can be used for precision instruments and machines (such as small arms or binoculars).
Killing bacteria
  Flushing method:
    Thoroughly flush with water, or flush with water after first using a bacteriacide, and wipe dry.
  Fumigation method:
    Use a bacteriacidal fumigant for precision instruments and devices.

19. Decontamination of Fortifications and Ground Surface

Elimination

Digging method:

First remove the loose surface layer of soil beginning in the upwind direction; then remove soil to a depth of 2 to 3 centimeters going from near to far. When digging, do not raise dust, and bury contaminated items in a place where they can cause no harm to personnel.

Flushing method:

Use a spraying truck or a water pump to wash hard surfaces proceeding from top to bottom, from forward to rear and from inside to outside.

Disinfection

Digging method:

Dig away the contaminated lay to the following depths: earth, 4 to 7 centimeters; snow, 20 to 25 centimeters. After removal, both personnel and implements should be disinfected.

Covering method:

Use uncontaminated material to cover contaminated surfaces using the following depths of different materials: soil, gravel and ashes, 10 centimeters; sod or rice straw, 10 to 15 centimeters.

Ventilation method:

Get rid of contaminated air in defense works by ventilating or blowing air.

Incineration method:

For places lacking surface vegetation, straw may be laid at 1 to 1.5 kilograms per square meters, and should then be sprayed with a flammable liquid such as gasoline. (In summer, the amount of gasoline should be 0.1 to 0.2 liters per square meter; in winter, it should be 0.5 to 1 liter per square meter). It should be lighted from an upwind direction. Care should be taken to remove flammables from the surrounding area.

Chemical method:

Use disinfecting equipment to spray disinfectant on the ground evenly so as to cause a chemical reaction with the contaminants thereby effecting disinfection.

Killing bacteria

Wiping, spraying, fumigating

Clean with bactericide, spray or fumigate the interior of defense works. A frequently used fumigant is DDV or benzene hexachloride

Incinerating, flushing, digging

The ground may be treated with sanheer [0005 0678 0059] or bleaching powder. It may also be burned, washed, or dug away to kill bacteria.

20. Methods of Decontaminating Food and Water

Elimination

Water

Precipitation

Add 20 grams of clay per liter of contaminated water. Stir in the same direction for 5 minutes. After standing for 15 minutes, the top layer of clean water may be used.

Absorption

Add one package of purifier and a suitable amount of alum per liter of contaminated water. Mix for three minutes with a stick and use after the water has settled.

Filtration

Homemade filtering device: place 3 meters of straw on the bottom and then three layers of gauze or a layer of stones and sand each to a depth of 3 centimeters on top of and below the straw, covering the top with two layers of cloth or straw. Pour water slowly through the filter.

Staples

For granular grain, winnow first to remove contaminants, then wash twice. The top layer of flour in sacks may be removed to get rid of the contaminated part. Well packed foods may be swept off, brushed and washed, then eaten.

Other foods

Use washing, brushing, cutting, or paring methods to remove surface contamination.

Disinfection

Contamination by vapor or smoke

Remove contaminated surface and rinse with clean water. Food contaminated by vapor can also be ventilated until the poisonous odor disappears.

Foods contaminated by droplets

For packaged foods, first disinfect the outer surface to get rid of the contaminated part, then ventilate. For vegetables and meat, remove the surface layer and wash several times.

Water

Contaminated water should usually not be used.

Killing bacteria

Foodstuffs

The boiling method or a bactericide may be used.

Water

Water may be drunk after boiling for between 5 and 10 minutes. Water to be used by large numbers of people may be treated with sanheer or bleaching power. One or 2 drinking water sterilization tablets may be put into water to be used in military water canteens. After 30 minutes, the water may be drunk.

Chapter I. Principles for Infantry Combat Movements*

1. On-the-ground Verification of the Situation in an Effort To Command Correctly

Accurate combat command is a fundamental condition for achieving victory in warfare. Thorough knowledge of the enemy and one's own situation, determining the pattern of enemy movements and using this pattern in one's own movements makes possible the matching of subjective command with objective circumstances. This is the primary means for realizing accurate command.

Commanders of infantry detachments should be thoroughly familiar with the number of personnel, of weapons, and of the amount of ammunition in their own detachments, and they should have a profound knowledge of the combat skills and combat morale of units under their command, and know at any time their specific locations in combat and their combat situations. They should have a precise understanding of the plans of higher authority and the support to be provided to the detachments and understand the situation of friendly neighboring forces so that they will "have a clear understanding of their own circumstances." In addition to studying the enemy situation in terms of intelligence provided by higher authority, after receipt of a combat mission, they should quickly organize and personally conduct reconnaissance (on-the-ground reconnaissance, eavesdropping, questioning of inhabitants, interrogation of prisoners, and firepower reconnaissance) to gain a real understanding of the enemy's firepower, deployments and state of readiness for combat, to figure out the nature of enemy movements and plan the kinds of combat movements he should make himself. He should seek out the enemy's strong points and weak points in an effort to "have a clear understanding of the enemy's circumstances." He should fully clarify the terrain situation and characteristics in the combat area through the interpretation of maps (or photographs) and through on-the-ground surveys, thereby clarifying the effects of the terrain on both the enemy's and one's own combat movements. Next, he should link together in a composite judgment the enemy's and his own situation, the terrain and the weather, comparing conditions that are favorable and unfavorable for both the enemy and his own forces and seek a plan of combat action that will overwhelm the enemy and achieve victory. While fighting is going on, it is necessary to constantly take account of changes occurring between the enemy and one's own forces, making timely revisions or reaching new decisions so that one's own combat movements are consistent with the changing objective circumstances so as to win victory.

2. Resolute Annihilation of the Enemy and All-out Efforts To Reduce Losses

Self-preservation and annihilation of the enemy is the fundamental objective of combat and it is also a fundamental principle of combat. Furthermore, it is the basis for all other principles of combat. All combat movements are for the purpose of self-preservation and annihilation of the enemy. Since one cannot ultimately preserve oneself without annihilating the enemy, the most effective method of self preservation is annihilation of the enemy. Consequently, the main goal of combat is annihilation of the enemy; self preservation is second. In order to annihilate the enemy, units must carry forward a spirit of valiant combat without fear of sacrifice, using skills and tactics for active triumph over the enemy. Self-preservation and passive

evasion of combat is positively not permissible on any pretext. In addition, inasmuch s there are differences between the strength of the enemy's and our own forces and in environmental conditions for combat, during different combat movements at at different times during combat, it may sometimes be necessary to place self-preservation first in order to seek favorable combat conditions and times. At such times, units should take all possible protective actions in the course of combat movements, doing everything possible so that they will not sustain losses or will sustain fewer losses so that they will have the strength to wipe out the enemy under different circumstances or at another time. No matter what the circumstances or the time, the basic requirement in unit combat should be to do all possible to have the smallest possible losses while annihilating as many of the enemy as possible. Under special circumstances, when the overall combat situation requires, units should not sacrifice everything in exchange for overall victory.

3. Concentrate Troops and Firepower To Destroy the Enemy One by One

Concentration of troops and firepower to destroy the enemy one by one is a primary combat method by which fendui gain victory over the enemy. In offensive and defensive operations alike, units should generally concentrate their own troops and firepower to attack a major objective in an effort to wipe out a portion of the enemy facing them by attacking first while checkmating the others. Next troops and firepower can be shifted to attack the other group of enemy to achieve the goal of attacking and wiping out each and every enemy. When going on the offensive, dominance in troop strength or firepower should be brought to bear against the whole target being attacked or part of it so as to insure victory from the attack. When on the defense, troops and firepower should be concentrated to guard main positions and to attack and destroy enemy tanks, infantry vehicles and infantry troops.

When support firepower assigned by higher headquarters begins suppressing enemy strength in front of a fendui, though that fendui need not focus its troops and firepower on one spot, it should nevertheless make a distinction between primary and secondary targets, or between the primary parts and the secondary parts of a target, or it should set priorities for targets to be attacked so as to be able to assign forces and firepower to targets properly rather than spread forces unevenly or disperse firepower.

4. Readiness to Fight at Any Moment, Thorough Preparation Before Battle

Thorough organization and preparation is one basic requirement to insure victory in battle. There is a large element of surprise in modern warfare; the time to prepare is short; and organizational work is complex. Units must constantly maintain a spirit of readiness and the material preparations necessary to go into battle at any time, going into action on the first command. After receiving their combat mission, they should quickly and thoroughly organize in preparation to attack.

In order to insure rapid and complete organization and preparation, units should scientifically calculate and apportion time using the advance orders of higher headquarters as a basis. They should take firm grip on key points for readiness as dictated by the mission and circumstances at the time. Cadres should apportion responsibility while simultaneously organizing separately to

act to insure the rapid and concealed completion of combat preparations within the time limits set by higher headquarters. In planning organization for combat, priority should be given to situations that might occur during battle and alternative preparations made to meet them. Particular emphasis should be given preparations for battle actions under most arduous conditions.

When circumstances and the mission require, fendui must joint combat at a particular time even though their combat preparations may not be complete. Incomplete readiness may not be used as a pretext for missing combat opportunities. At such times, actions must be taken to fight while organizing and to fight while preparing in order to make up for the lack of preparation prior to combat.

5. Rapid Dispersal and Concealment and Sudden Concentration To Attack the Enemy

Use in battle of modern technical weapons and equipment requires that every action of units on the battlefield must be carried out extremely quickly and be concealed. Formations must be dispersed to the maximum extent possible in order to reduce the discovery rate by various detection methods that the enemy employs and to reduce the casualty rate cause by the enemy's various weapons. In addition, in order to be able to concentrate troops to annihilate the enemy at the time and places necessary, units must also be able to concentrate forces and firepower rapidly and secretly to launch a surprise attack against the enemy. Therefore, before going into combat, units must do all possible to move rapidly, in concealment, and in dispersal while maintaining their fighting strength. Upon entering into battle, they must seek by all means possible to concentrate forces and firepower rapidly to attack the enemy ferociously for a quick battle that is quickly decided. While on the march and concealing movements, units should adopt military formations that make for rapid action and deployment and make for the maintenance of fighting strength. When advancing toward the enemy under threat of the enemy's air force and artillery firepower, dispersed company (or platoon) column formations, or rows, or left and right echelon formations or triangular formations in readiness for battle should be adopted.

For rapid concealment during concentration or dispersal, units must have advance combat movement plans and preparations; they should train and nurture the habit of speed; they should be adept in the use of terrain; they should rehearse night movements; they should be adept at camouflage; they should be able to disperse and change their formations as the terrain and changes in the enemy's circumstances require; and they should have proficient command and all kinds of support measures.

6. Valor and tenacity, hand to hand combat and night fighting are the fine traditional style and tactics of infantry combat in China's armed forces. They remain key elements in winning victory over the enemy in modern warfare.

The intensity, strain and arduousness of modern warfare places very high demands on the spirit and will of men. Infantry units must carry forward a style of valor and tenacity, of not fearing to make sacrifices, of not succumbing to fatigue, of fighting continuously and of fighting independently. Now matter how intense, how hectic and how arduous circumstances may be, they

must be able to advance courageously, prevail over all enemies, and not be prevailed over by others. So long as one man remains, he must tenaciously carry on the fight to the end.

Night warfare and hand to hand combat can not only weaken the advantages modern enemy armies enjoy in technical equipment, but they are also tactics that bring into play the strengths of the infantry in China's army. When advancing by night, infantry units have to be adept in using darkness and terrain for concealment in approaching the enemy rapidly and launching a surprise attack using the firepower and explosive devices of combat at close quarters to smash the enemy's tanks and wipe out the enemy's infantry. When on the defensive, infantry units have to be adept in use of the terrain, fortifications and camouflage to conceal personnel and weapons, to reduce the damage and casualties caused by the enemy's long-range firepower, and to preserve their own combat strength while waiting for the enemy to approach to use firepower suddenly and violently at close quarters and a valiant counterattack to smash the enemy's tanks, annihilate the enemy's infantry, hold fast, valorously and tenaciously holding fast to positions and thwart the enemy's continuous assaults.

The carrying forward in modern warfare of a courageous and tenacious style, and daring to and being adept at hand to hand combat and night warfare to wipe out the enemy requires that infantry units strength the role of party branches as a powerful fighting force, intensify political ideological work, buttress training in night fighting and hand to hand combat, improve the quality of combat spirit of all personnel and their tactical and technical levels, learning how to both use proficiently and counter new night vision devices.

7. Close Coordination of Operations; Initiative In Mutual Cooperation

Coordinated operations in modern warfare means a concerted attack in terms of targets (or mission), times and places on the enemy by units from all service arms using a unified plan. Strictly precise coordinated operations among infantry units and artillery, tank, engineer and anti-chemical warfare units, between infantry units and air force units, and between infantry units and friendly as well as subordinate units (or personnel) are extremely important conditions for victory in coordinated warfare by the army.

The principle of coordinated operations makes the infantry paramount in coordination among all branches of services. In coordination among various infantry units, the unit that is to carry out the main mission is paramount. In an attack, active support must be given to the most forward units. In defense, active support to units in a dangers position or to those most severely pressed.

Strictly accurate coordination of operations among the various branches of service requires that unit commanders thoroughly organize and coordinate operations in accordance with instructions (or plans) of higher headquarters and their own decisions. All units must establish a high conception of the whole and strictly follow the rules of coordinated operations, maintaining uninterrupted communications, resolutely completing in accordance with plans the mission they have been assigned, and taking the initiative in cooperation and providing mutual support. Should coordinated operations suddenly be damaged, they should be revived at once.

8. Skill in Observing the Battlefield Situation and Taking the Initiative in Flexible Control of the Enemy

Skill in observing the battlefield situation and taking the initiative in flexibly commanding the units battle actions is a fundamental requirement in commanding combat.

Conditions are complex on a modern battlefield and change is swift. Unit commanders must use their faculties of keen observation and judgment for steady observation of the battlefield situation, for sizing up the enemy's and his own situation, for promptly discovering and exploiting the enemy's weaknesses and errors for active and courageous movement of his forces and firepower without violating the overall combat plans of higher headquarters, as well as closely dovetailing firepower and movement so as not to lose opportunities to strike the enemy. When the situation is undergoing dramatic changes, or when contact with higher headquarters has been broken, it is particularly important that the commander courageously bear responsibility for deciding the actions to be taken and use tactics and actions in keeping with the current situation to overcome the enemy and win victory. When placed in a passive situation, whatever courses of action can be taken should be promptly and decisively taken to get out of the passive situation quickly and regain the initiative.

9. Organization of the Various Kinds of Support To Insure No Combat Hitches

In addition to the actions taken by higher headquarters to support unit combat operations, units must themselves organize combat, materiel and technical support actions to insure that combat movements take place without a hitch.

Unit combat support includes: reconnaissance (observation), posting guards, defense against nuclear, chemical and biological weapons, engineering operations and camouflage. Unit materiel and technical support includes: supply (replenishment of rations, ammunition, weapons and materials), health and sanitation, technical maintenance and other such logistical matters.

No matter whether on the march, in bivouac or in combat, unit commanders must thoroughly organize all support activities, organize reconnaissance, and promptly acquire the intelligence needed for combat operations. They must organize the posting of guards in rings and promptly discover and resist enemy raids. They must organize observation, reporting and protection against nuclear, chemical and biological weapons. They must organize the construction of defenses and use the terrain to conceal personnel and equipment. They must construct and equip anti-tank obstacles as combat requires. They must organize camouflaging, and do active battle against the enemy's optical and electrical devices. They must organize combat logistics teams, rely on all personnel and the combat logistics teams joint efforts as combat needs and material requirements dictate to assure unit combat needs in ammunition, material and rations. They must initiate self help and mutual help for prompt rescue of the wounded.

10. Use of Lulls in Fighting for Attention to Reorganization and Rest

The power of modern weapons to cause casualties and destruction means that units' combat strength is very prone to damage and injury. The intensity and hectic nature of combat fatigues personnel extremely easy. Unit commanders must be adept at using every combat lull they can use to give attention to combat mobilization, reorganization, replenishment of ammunition and materials, rations and troops, to rescue the wounded and to organize personnel for rest in order to revive and maintain combat strength to insure continued prosecution of the combat mission. When circumstances warrant, they should also organize critiques of combat experiences to improve tactics and skills that can be used in later combat. Battlefield rest and reorganization time is limited, so priorities must be clearly established, attention devoted to key matters and troops be ready to go into battle at any time. At the same time, it is necessary to enhance alertness, dispersal and concealment and guard against enemy raids.

Chapter II. Infantry Fendui Offensive and Defensive Combat Mission and Strengthening

A. Offensive Combat

1. Infantry Fendui Offensive Combat Mission*

Breakdown	Mission	Width and Depth of Front (meters)		
		Width	Separation	Depth
Defense of Field Positions Under Enemy Attack				
Battalion:	May act as the first or second echelon of the regiment or as reserves for the division. May sometimes act as an advance party or as a deep-thrusting or a flanking detachment. When having a first echelon main attack mission for the regiment, it may be responsible for destroying two motorized infantry platoons, or may sometimes be responsible for wiping out one motorized infantry company.	1000-2000	300-400	200-300
		2000-3000		300-700
Company:	Usually attacks as part of battalion. May serve as a first or second echelon for the battalion, or may act as an in-depth penetration (airdropped) detachment or as a destroy and impede detachment. Its basic mission when serving as the first echelon of attack for the battalion is usually as follows: to wipe out the enemy that is attacking targets and to develop the attack in a predetermined direction. Its basic mission when serving as the battalion's second echelon is usually as follows: to reinforce the first echelon company's attacking force and to exploit the victory. Alternatively, it may take turns with the first echelon in wiping out the enemy that is attacking targets. Its mission when assigned the mission of in-depth penetration (airdrop) is usually as follows: To attack the enemy's missile and artillery positions, command posts, radar stations, signal stations and rear area facilities. It may alternatively seize key points, cut off the enemy, cut withdrawal routes or be part of a frontal assault.	400-500	100-200	300

Platoon:	Usually attacks as part of a company. When it serves as the company's first echelon of attack, its basic mission is to wipe out enemies attacking targets and developing attack in a prescribed direction. When it serves as the company's second echelon, its basic mission is to strengthen attacking forces and help the first echelon attain victory. It may alternate with the first echelon to wipe out enemies who are attacking targets.	150-250	30-50

Explanation: 1. "Infantry Combat Regulations" (draft pending approval) provides that companies may attack along a 500 meter front and platoons may attack along a 150-200 meter front.

2. In the column for the width and depth of the front, the data above the horizontal line is for the primary attack; the data below the line is for a holding attack.

Chance Encounter Combat

Battalion: Battalions may be included in higher headquarters dispositions as an advance party when on the march, or battalions may serve as advance guards or be made a part of the main force. When it serves as an advance guard, its mission is to wipe out enemy guard detachments, to take favorable terrain, to seize and control strategic points, and to support main the development and entry into combat of the main force.

Company: Usually companies are included in battalion formations (and platoons in company formations), or they may have a mission as a point unit or be a part of the main body in an advance. The company's mission when it serves as a forward point is to stop enemy ground reconnaissance and to guard the main force from enemy ground attack. When it encounters the enemy, it should deploy ahead of the enemy and occupy favorable terrain ahead of the enemy in order to wipe out the enemy in either a sudden attack or an ambush and support the main force to deploy and advance into battle under favorable conditions. Usually the point is no more than 3 kilometers ahead of the main units, and no more than 12 kilometers in the case of motorized units on the march.

Anti-airborne Combat

Battalion: Battalions may carry out anti-airborne combat as part of the dispositions of higher headquarters, or they may carry out an independent anti-airborne combat mission.

Company Companies usually carry out an anti-airborne combat mission as part of the dispositions of higher headquarters, but sometimes even companies may carry out a mission independently. When companies (or platoons) are a part of the dispositions of

Platoon: higher headquarters, they may serve as raiding parties for the battalion (in the case of companies) and for companies (in the case of platoons), or as vanguard detachments or reserves for the regiment (or) battalion. The mission of a raiding party is to work together with the vanguard detachment to cut off, surround and annihilate the airborne enemy's main force. The mission of a vanguard detachment is to get to the anti-airborne area as quickly as possible to wipe out the enemy's vanguard detachment and to throw the enemy's airborne deployments into confusion, to occupy favorable ground, to block enemy concentration or mobility and to support the entry into battle of main forces. The mission of reserves is to strengthen the raiding power of the raiding party, to consolidate or increase the fruits of victory, and to deal with unexpected developments.

Ambush Combat

Battalion: Battalions may be part of the dispositions of higher headquarters charged with the mission of flanking, blocking or rear attacks; they may also have the mission of conducting ambushes independently.

Company and Platoon: Companies or platoons may either act within the dispositions of higher headquarters or independently carry out an ambush mission. When they carry out an ambush mission as part of deployments by higher headquarters, they may act as flanking, blocking or rear attack detachments, or as reserve or blocking detachments. When they carry out an ambush mission independently, they will usually be sent out directly by either the regiment (or battalion). Their mission is to wipe out the enemy's reconnaissance units or other independently operating detachments, or to lie in ambush near strategic points within predetermined areas for wiping out the enemy, or to occupy key points ahead of the enemy and both protect and operate in conjunction with the main forces to wipe out the enemy. Alternatively, they may conceal themselves in advance along enemy air transportation routes to shoot down enemy air transportation.

Obstacle Destruction

Company: When a company has a destroy and impede mission, usually it is sent out by a second echelon (or reserve) battalion to destroy and impede in accordance with an overall plan drawn up by regiment. Its mission is to serve as a raiding party to clear the way through obstacles in front of the enemy's frontlines, and to act in accordance with instructions from higher headquarters to maintain and widen the way in order to support the smooth movement along the way of attacking units.

Platoon: When a platoon is responsible for the destruction of enemy obstacles, it is usually sent out by a second echelon (or reserve) company to destroy obstacles as part of an overall

plan drawn up by battalion. Its mission is to open a way through obstacles in front of the enemy's frontlines, and to act in accordance with instructions from higher headquarters to maintain and widen the way in order to support the smooth movement along the way of attacking units.

2. Reinforcements Available for Infantry Detachment Offensive Warfare*

Breakdown			Tanks	Suppression Artillery	Anti-tank Missiles	Recoilless Guns	Engineers	Anti-chemical Detection Troops	Flamethrower Troops	AA Machineguns	Heavy Machineguns	Support
Combat Against Enemy Held Position	Bn	Main Attack	1 Co - 1 Bn	1 Co - 1 Bn	1-2 Pl.	1 Pl - 1 Co	1-2 Pl.	1 squad	1-2 squads			2 - 4 bns. suppression artillery
		Halt. Attack	1 - 2 Co.				1-2 Pl.	1 squad				1 - 2 bns Suppression artillery
		Main		1 pl. mortars		1 pl.			1 squad	1 Pl.	1 Pl.	Tanks, art'y, anti-tank m s
		Halt.										engineers.
	Commando Pl.					1-2 squads			1 team			Hdqs. fire-power
Anti-airborne Combat	Bn		1-2 Co.	1 Co - 1 Bn			1 squad - 1 Pl	1 squad				Hdqs fire w/ local & mil t support
	Co. Pl.		Refer to combat against enemy held position									
Ambush Combat	Bn		1 Co.	1 mortar company	1 Pl	2 Pl - 1 Co	1 squad					Supported by locals & mil i
	Co.			1 Mortar Pl.		Can get	Can get			Can get	Can get	Hqs. art'y
	Pl.					Can get					Can get	Hqs arty
Destroy & Impede	Co.					1 Pl	1 sq.	1 team			1 Pl	Hqs art'y & path clearin
	Pl.					1 sq.	1 sq.	1 team			1 sq.	unit firepow r

Remarks: When an infantry battalion is responsible for the main attack against enemy field warfare defensive positions, it can be reinforced with from one platoon to one company of 85 mm cannons.

B. Defensive Combat

1. Infantry Fendui Defensive Combat Mission*

Breakdown	Mission	Defense Front & Depth (meters)			
		Front		Depth	
Fortified Position Defensive Combat			Separation		Distance
Battalion:	May serve as the first echelon in regimental deployments carrying out a defensive mission in the main direction or in the secondary direction. Alternatively, it may serve as the regiment's second echelon. May sometimes conduct defense independently. When serving as the regiment's first echelon, its mission is to hold fast to the main position, to repel continuous attacks by enemy massed tanks and to foil enemy attacks. When it serves as the regiment's second echelon, its main mission is to hold fast to secondary positions and to prevent the enemy from launching an attack in depth. Alternatively it may buttress defense by the first echelon or take the first echelon's place in defense. When it carries out counterattacks to wipe out intruding enemy, or when it conducts an independent defense, it may protect movements by the main force on exposed flanks and hold fast to tactically important points.	2000 -3000	1000	2000 -3000	2000 -3000
Company and Platoon:	Usually a company organizes defense as part of battalion dispositions and a platoon organizes defense as part of company dispositions. They may serve as a first echelon unit, a second echelon unit or as reserves. The mission as a first echelon unit is to hold fast to frontline positions and to use their firepower to launch attack or counterattacks in front of their positions to kill or wound large numbers of the enemy and smash the enemy's continuous assaults. The mission as a second echelon unit is to hold fast to positions, to block the enemy from expansion in depth, and to support or take the place of the first echelon in combat, launching counterattacks as	800 -1200 300 -400	400 -600 200 -300	1000 300	400 -600 200 -300

	appropriate to wipe out enemies that have intruded into positions or airborne enemy. The mission of reserves is to support or replace units fighting to hold positions using their firepower and counterattacking intruding enemies. Sometimes, they may coordinate with neighboring units to wipe out airborne enemies.			
Field Warfare Position Defensive Combat				
Battalion:	When defending as part of regiment's deployments, a battalion may serve as a first echelon unit to conduct defense in the primary or secondary direction. Alternatively, it may serve as a second echelon unit. Sometimes it may have an independent defense mission. When it serves in a first echelon unit capacity, it is deployed on the frontline; when it serves in a second echelon unit capacity, it is deployed on the second line of defense. When it has an independent mission, it is responsible for guarding a specific strategic area (or direction).	2000 -3000	1000	2000 -3000
Company and	Usually companies and platoons are part of deployments made by higher headquarters. They may function as first echelon, second echelon or reserve units. Their mission as a first echelon unit is to hold fast to frontline positions,	800 -1200	400 -600	1000
Platoon	using their firepower to carry out attacks and counterattacks in front of the positions to kill and wound large numbers of the enemy and to smash their repeated assaults. Their mission as a second echelon unit is to hold fast to in-depth positions and to stop the enemy from expansion in depth, and to support or take the place of the first echelon in combat, launching counterattacks as appropriate to wipe out enemies that have intruded into positions or airborne enemy. The mission of reserves is to support or replace units fighting to hold positions using their firepower and counterattacking intruding enemies or airborne enemies.	300 -400	200 -400	300

Garrison Unit Coastal Islet Defensive Combat		Front	Depth
Battalion:	May defend large or medium size islands as part of garrison regiment dispositions, or may independently defend an islet. When defending large or medium size islands, battalions are deployed in regimental frontline positions.	4000-5000	2000-3000
Company:	Usually included in defense organized by higher headquarters. Holds frontline positions or in-depth positions or defends part of an islet. May also independently garrison a small island	When defending as part of a defense organized by higher headquarters, units are usually more than those that the terrain of the defense front can support. In major sections where the enemy may land, the defense front may be correspondingly shortened.	
Platoon:	Carries out defense mission as part of company deployments; holds platoon strongpoints.		
Frigid Area Defensive Combat			
Battalion:	Usually carries out mission as part of higher headquarters dispositions, but sometimes carries out mission independently. When carrying out mission as part of higher headquarters dispositions, it may serve as a first echelon unit, or it may serve as a second echelon or reserve unit.	The defense front to be defended by infantry units in frigid areas may be increased over what it usually is.	
Company:	Usually carries out mission as part of higher headquarters dispositions, but may serve as a first echelon, second echelon or reserve unit. Sometimes may be responsible for outpost combat duties. May also organize independent defense in order to hold a strategic point or independent objective.		
Platoon:	Usually carries out mission as part of higher headquarters dispositions, but may serve as a first echelon, second echelon or reserve unit. May sometimes be responsible for outpost combat duties. May also organize independent defense in order to hold a strategic point or independent objective.		

Urban Defensive Combat

Battalion:	----------[blank]----------		
Company:	Companies usually carry out defense that has been organized by battalion and platoons carry out defense that has been organized by the company. They may serve as a first or second echelon unit, or they may sometimes function as reserve units for regiment (or battalion). When they serve as a first echelon unit, their mission is as follows: to defend	200-300	400-600
Platoon:	frontline buildings and fortifications, using their firepower in conjunction with various obstacles in repeated combat with the enemy killing and wounding or wasting large numbers of the enemy and smashing the enemy's repeated attacks. When serving as a second echelon unit, their mission is to hold fast resolutely to in-depth strongpoints, to block enemy attacks through streets, alleys and subways, and to wipe out intruding enemies. Sometimes they may be used to help or to alternate with the first echelon in defense.	70-100	150-200

Defensive Combat in Deserts, Gobi, and Grasslands

Company	Usually carries out mission as part of defense organized by battalion. Sometimes carries out independent defense mission. When defending as part of battalion organized defense, companies may serve as first echelon, second echelon on reserve units.	Determined on the basis of the importance of the defensive alignment and the lay of the land. Usually larger than under general terrain conditions.
Platoon	Usually carries out mission as part of defense organized by company; sometimes performs independent defense mission. When defending as part of company organized defense, platoons may serve as first echelon, second echelon or reserve units.	

Explanation: 1. When infantry carries out defensive combat in deserts, gobi and grasslands, its mission is usually part of the one organized by higher headquarters, but sometimes it may carry out an independent mission. In regimental defense in the primary direction, the frontal defense and the in-depth defense, given the same terrain conditions, is usually the same. When regimental defense in the secondary direction, it is appropriately larger than under general terrain conditions.

2. When a garrison battalion engages in defensive combat for a coastal islet or independently holds a small island, the defense front is figured on the basis of the circumference of the island. Therefore, the defense front is usually 1 to 2 times larger than for other defense positions.

3. "Infantry Combat Regulations" (Examination Draft) prescribes that a company's defense front may be as wide as 600- 800 meters, and that in-depth defense may be from 500-700 meters. A platoon's defense front and its in-depth defense may be 200-300 meters. In fortified position defensive combat, a company's defense front and in-depth defense may be 1,000 meters. For a platoon, it may be 500 meters.

Available Reinforcements for Infantry Fendui Defensive Combat

Subordination

Breakdown		Tanks	Mortars	85 mm Cannon	Recoilless Gun	Anti-tank Missile	Engineers	Anti-Chemical Detection	Flamethrower Troops	AA Machineguns	Heavy Machineguns	Medics	Repairmen	Support
Fortified Position Defensive Combat	Bn	1 Co.	1 Co.	1 Pl - 1 Co.	1-2 Pl.	Can be added	Can be added	1 squad				Can be added	Can be added	1 artillery bn.
	Co		1 Pl.		1 Pl	1 squad	1 squad	1 squad	1 squad	1 Pl.	1 Pl.			Can get higher hdqs firepower, 85 mm cannon tank support
	Pl				1 -2 squads				1 team		1 squad			Can get higher hdqs firepower

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Subordination

Breakdown		Tanks	Mortars	85 mm Cannons	Recoilless Guns	Anti-tank Missiles	AA Machineguns	Heavy Machineguns	Engineers	Anti-chemical Detection Troops	Flamethrower Troops	Support
Field Position Defense Combat	Bn	1 Co.	1 Co.	1 Pl 1 Co.	1 Pl - 1 Co	1 - 2 Pl			2 squads	1 squad	1 squad	1 battalion of artillery
	Co		1 Pl.		1 Pl	1 squad	1 Pl.	1 Pl	1 squad	1 team	1 squad	85 mm cannon, tanks & hqs firepower sometimes available
	Pl				1-2 squads			1 squad			1 team	Higher headquarters firepower
Garrison Unit, Coastal Islet Defense Combat	Bn					1-2 Pl			1 Pl	1-2 squads		Higher headquarters art'y firepower
	Co				1-2 Pl.		1 Pl				1 squad	Headquarters firepower and navy and air firepower
	Pl				1-3 squads						1 team	Same as next above

Remarks: 1. When infantry units shift from hurrying to attack to defense, usually the number of subordinate units (and weapons) changes. When they receive the mission of hurrying to defend as part of higher headquarters dispositions, subordination is frequently the same as for defense of field positions. When they carry out an independent mission, the amount of subordination depends on specific circumstances, and us usually greater than for field warfar defense. It is sometimes strengthened in the course of combat. During combat, support from higher headquarters airmen and artillerymen is possible.

2. The amount of strengthening of infantry units for "urban defensive combat," "frigid zone defensive combat," and "desert, Gobi and grasslands defensive combat" has to be decided on the basis of the number of reinforcements and weapons available to higher heqdquarters and the position in which the unit is in. Under normal conditions, one can refer to "Field Warfare Position Defensive Combat" for the amount of reinforcement.

3. Mission and Reinforcement of Mechanized Infantry Unit Offensive Combat

Breakdown	Mission	Front	Depth	Reinforcement
Offensive Combat Against An Enemy Defending a Field Position				
Company:	In offensive combat, the mission that is usually assigned a company that is part of higher headquarters dispositions or that has been reinforced with tanks is principally to attack moving enemies, enemies who have not consolidated their position or enemies defending positions. They may also carry out other offensive combat missions of a combat nature or under special conditions. When companies (or platoons) are carrying out a mission, no matter whether as part of higher headquarters dispositions or with the assignment of a tank battalion (or company), they may serve as the first echelon, or they may serve as or be made part of reserves. When they serve as the first echelon, they may have a main attack or a halting attack mission. Their role in a main attack mission is as follows: to launch bold and tenacious attacks to penetrate the enemy's defense positions, to wipe out enemies that are attacking targets, and to develop an attack in a prescribed direction. Their role in a halting attack mission is as follows: to use active combat maneuvers, to coordinate with the main attack units in attacking designated targets, and to surround and annihilate the enemy. When combat moves along smoothly, they may shift to become a main attack force. The mission when serving as a reserve force is as follows: to buttress attacking forces, to expand the fruits of victory of the first echelon, to resist enemy counterattacks, or to assume other duties.	500 m to 700 m 150 m to 200 m	Usually decided by higher headquarters in view of enemy situation and terrain	When the company mounts a main attack either as part of higher hqs disposition or with tanks assigned, usually mortars and chemical detection troops are assigned. Armored personnel carriers may also obtain one or two squads of recoilless guns. When a company attacks as part of higher headquarters dispositions, it may also be assigned one or two tank platoons or support from platoon tank company. During combat,it may also receive airborne or artillery firepower support.

(continued)

When carrying out an independent mission, they may be responsible for deep thrusts, for follow-up attacks, for occupying nuclear breakthrough points, for posting guards and for transportation.

Hasty Defense

Companies usually carry out hasty defense in the course of defensive combat, or they may carry out other defensive combat missions of a combat nature and under special conditions. Companies (or platoons) may be assigned a tank battalion (or company), or they may perform a first echelon or second echelon unit mission as part of the dispositions of higher headquarters. They may also operate independently. The mission of a company serving as a first echelon unit is as follows: to hold fast to frontline positions and to smash the enemy's attacks. When a company has a mission as a battalion second echelon unit (or reserve unit), it is deployed at strategic points behind the first line of defense where it uses its firepower to support companies in the frontline of combat and supports the flanks and the points where units adjoin. It halts enemy expansion in depth and on both flanks, acts in concert with counterattacks by higher headquarters and wipes out enemy intrusions. When the enemy carries out a nuclear attack, it seals off openings created by the enemy nuclear attack and replaces serious damaged first echelon units.	When direct contact is made with the enemy, the size of the front and in depth may be smaller than when there is no direct contact with the enemy.	When a company has a first echelon unit or else has an independent mission, it may be reinforced with mortars, tanks and engineers. Armored personnel carriers may have recoilless guns attached. During battle, companies (platoons) may get support from higher headquarters firepower as well.

Remarks: When tank units are attached to a mechanized infantry company (or platoon), the attacking front is the same. 2. Troop and weapons reinforcements are under company centralized command with no delegation downward.

Chapter III Basic Principles (Requirements) of Infantry Fendui Offensive and Defensive Combat

A. Offensive Combat

1. Basic Principles Regarding Assaults Against Enemy Defended Field Combat Positions*

Assaults against enemy defended field combat positions means attacking already occupied positions when enemy troops have been deployed and firepower is ready, and when field warfare fortifications and obstacles have been built, but when the enemy positions have not been entirely consolidated and complete.

Thorough Organization and Full Preparedness

Once commanders have received their mission, they should proceed from the most difficult and most complex scenario, quickly scout out the enemy's situation and the terrain, formulate combat plans and carry out complete combat mobilization. In organizing preparedness, they should devote attention to key points, simplify procedures, spell out division of labor plans using parallel work methods and take actions step by step, both making every minute and second count and acting realistically. They should maintain strict secrecy and complete concealment and strengthen defenses, completing combat preparations within the time limits set by higher headquarters. Sometimes, in order not to miss opportunities, even though preparations are not complete, they should follow orders and go into battle. They should be adept at organizing even while they fight and preparing while they fight.

2. Concentration of Troops and Selection of Enemy Weak Points for Carrying Out the Main Attack.

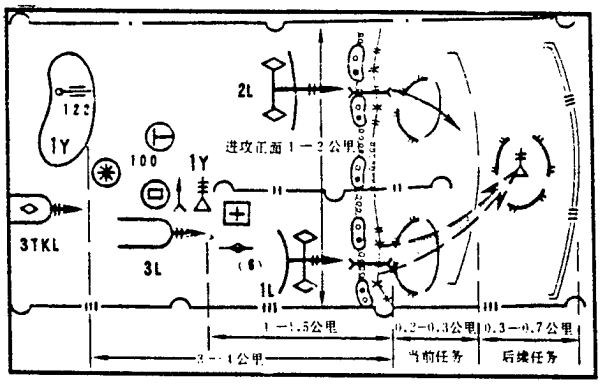
Concentration of troops to carry out the main attack is the important rule for vanquishing the enemy. In order to score victory in offensive combat, detachment commanders must concentrate their main forces and weapons in the main direction of attack and at the attack points to achieve absolute dominance. Ordinarily, they should outnumber the enemy three to five times, including a ratio of between 4 and 6 against 1 in anti-tank weapons versus enemy armor. During battle, commanders should be adept at reacting to the combat situation, concentrating their troops and firepower for use against targets of opportunity and other targets of decisive significance so as to create dominance in comparative troop strength and a powerful attack force.

Attack points are locations for the concentration of troops and firepower to penetrate the enemy's defenses. Attack points are usually designated by higher headquarters, but sometimes commanders may make the selections themselves. When making the selection themselves, commanders should act in accordance with the intentions of higher headquarters, the mission on the basis of the enemy situation and the terrain, and with the situation of their own troops in mind. They should concentrate on the selection of attack points on the enemy's exposed flanks, at junction points in the enemy's lines and

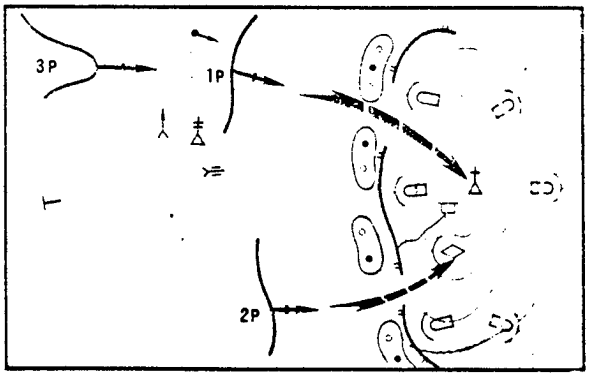
where enemy troop strength firepower, fortifications and obstacles are relative weak, and at points where it is easy to approach and deploy under cover, easy to make the most of firepower and of coordinated action, easy to make a breakthrough and an envelopment, and easy to cut off, surround, and wipe out the enemy. Frequently not all the foregoing conditions can be found, so commanders must survey the overall situation, make a complete analysis, make the most of advantages while avoiding disadvantages, and resolutely come to a decision so long as the major conditions have been met.

Once the attack point has been decided, commanders must additionally select an initial position for making the attack and a route of approach to the enemy. The initial position for attack will usually be favorable terrain 400 to 600 meters in front of the enemy's positions. ("Infantry Combat Regulations" (Examination Draft) rules that the initial point be 300 to 500 meters).

In the deployment of troops, units must act in accordance with the intentions of higher headquarters, the mission, the enemy situation and the terrain, deploying to attack the enemy heavily. Battalions (or companies) usually form two attack points, but companies sometimes conduct a single point attack. Platoons usually carry out a single point attack. Battalions (or companies)



Attack Deployment of Infantry Battalion Forming Two Echelons



Infantry Company Assault Deployment

usually group into two echelons, the first echelon consisting of two companies (or platoons), and the second echelon consisting of one company (or platoon). When the attack front is fairly narrow and the mission calls for an attack in fairly great depth, three companies (or platoons) may be divided into three echelons. When the attack front is fairly broad and the mission calls for a fairly shallow attack, a single echelon may be formed, but one or two platoons (or squads) must be held in reserve. A platoon usually forms up into one echelon. The battalion (or company) command and observation post is usually to the rear of the first echelon company (or platoon) in a position that provides good observation and command. The combat logistics team is disposed behind the battalion (or company) combat formation close to the second echelon in a position from which it can move things to the front or to the rear. In order to strengthen the attacking force of the first echelon (especially the main attack fendui), some of the mortar and flamethrower fendui and some of the recoilless guns and heavy machine guns organic to or received as reinforcements by battalions (or companies) may be assigned to the first echelon. The remaining firepower should be under direct command of the battalions (or companies) and be used to provide direct support to combat by each company (or platoon) When attacking isolated targets, every effort should be made to deploy among many roads and to focus on surrounding and attacking them, carrying out a centripetal attack against the enemy to achieve the goal of decisive and complete annihilation of the enemy.

3. Deep Thrusting To Cut Off and Wipe Out the Enemy One by One

Deep thrusting and cutting up is a basic tactic for wiping out the enemy one by one. Gaps in the enemy lines and weak points must be used in order to penetrate to the rear of enemy positions in a courageous deep thrust and cutting up, and every effort should be used to thrust all the way to behind the enemy's flanks to cut off his avenues of escape, block reinforcements and create a situation for surrounding and wiping out the enemy. During battle, full use should be made of the threat of small groups moving along many paths to cut the enemy up into numerous pockets that are unable to help or coordinate with each other when faced with destruction, so the enemy cannot benefit from his advantages and strengths, thereby setting the stage for wiping out the enemy one by one. A battle focus must be established, first striking at the enemy targets that pose the greatest threat of causing harm to or wiping out our forces, then going on to the others, wiping them out while surrounding them and combining envelopment with annihilation.

4. Resolute and Bold Combat at Close Quarters To Wipe Out the Enemy

Resolute and bold combat at close quarters to wipe out the enemy is a major factor in winning victory over the enemy, and is a traditional tactic of China's army. When a fendui attacks an enemy that relies on armored combat vehicles and firepower for defense, it must work with the equipment available to it and be adept at using combat at close quarters to wipe out the enemy, using its strengths to attack the enemy's weaknesses. Doing this requires full use of terrain, correct selection and concealed occupation of a position from which to make an attack, using every available means to shorten the attack distance in order to conserve physical strength, carrying out a quick and ferocious attack to achieve the element of surprise and resolutely penetrating the enemy's positions. Units should dare to press close to the

enemy under cover of firepower, exhibit a spirit of courage and tenacity, bring about a stalemate situation, weaken the power of the enemy's sophisticated weapons to the maximum extent possible, maneuver flexibly and quickly, and resolutely annihilate the enemy.

5. Active Cooperation and Close Coordination

Detachment commanders must establish a concept of viewing the situation as a whole making fullest use of the strengths of fendui from all service arms and constantly coordinating the actions of all fendui. All units must strictly abide by regulations on coordination, both actively completing their own mission and actively cooperating and providing mutual support as the combat situation requires in a joint effort to wipe out the enemy.

When coordination is lost or damaged, fendui commanders should promptly readjust or actively figure out ways to revive coordination. When this proves impossible, they should actively take the initiative in accordance with the intentions of higher headquarters to complete the mission independently and on their own initiative.

2. Basic Requirements Regarding Offensive Warfare When the Enemy Is Not Firmly Established*

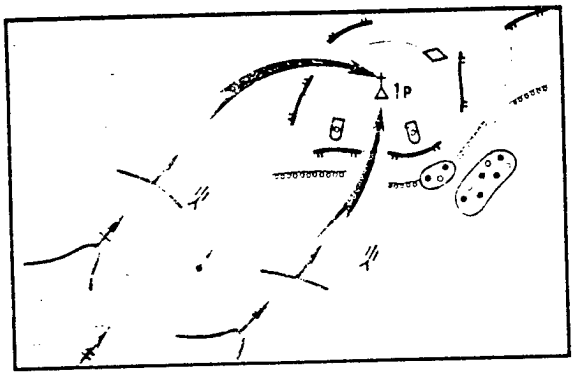
Offensive combat against an enemy that has not yet firmly established himself means the launching of an offensive against a temporarily halted enemy who is preparing hurriedly to go on the defensive or against airborne troops who have just landed. This is an urgent mission for which the time for organizing preparations is short and where circumstances may change dramatically. Opportunities for combat are fleeting.

a. Firm Attention to Combat Opportunities and Swift Preparation

Once fendui commanders receive their mission, they should resolutely make decisions on the basis of prior preparations or knowledge of essential points, make good use of the time available, emphasize key points, simplify work procedures, scientifically divide labor, adopt parallel work methods and swiftly organize combat, making every effort to complete all preparatory work within the shortest possible time. Sometimes, even though preparations may not be complete, it is necessary to go into battle at the time set by higher headquarters so as not to lose combat opportunities, organizing and preparing during combat as fighting takes place.

b. Take Advantage of the Enemy Not Being Firmly Established To Attack Swiftly and Annihilate the Enemy

Fendui should take advantage of the time when the enemy has not yet firmly established himself to do all possible to annihilate the enemy at once through swift attacks. In launching a swift attack, fendui should act on the basis of the intentions of higher headquarters, the fendui's mission, the enemy's situation and the terrain to mobilize their troops and weapons, making every effort to shape an attack that uses many avenues and has key



points in attacking objectives. Frequently the method of launching an attack is to attack while on the march. Alternatively, when attack preparations have been completed at the position from which the attack is to be launched, an attack may be launched. When launching an attack while on the march, commanders should organize fendui to complete attack preparations in assembly areas or during the process of moving in and deploying. They should seek to use the darkness of night and inclement weather, or to advance indirectly under cover of artillery fire or a smoke screen to launch the attack. Alternatively, they may halt briefly on favorable terrain 200 meters beyond the enemy's front to launch a swift attack. Before launching the assault, a brief and ferocious barrage may be made on direction of higher headquarters. Advancing under the cover of firepower, the attacking fendui launches a sudden and valiant attack, penetrating the enemy's positions at one fell swoop, making every effort to insure that the first attack succeeds for a quick and decisive battle. Should the swift attack fail to succeed, the situation should be surveyed at once, deployments readjusted and a powerful attack organized.

c. Take Advantage of Gaps in Enemy Lines To Make a Deep Thrust and Cut the Enemy Off

After fendui have penetrated the enemy position, they should use gaps in enemy positions, flanks, favorable terrain or the favorable situation created as a result of the penetration to execute a deep thrust courageously and cut the enemy up, outflanking him, surrounding him, and attacking him along many avenues and in many directions. They should take enemy command and observation posts, key defense points and such important objectives, destroy the enemy's organizational system, cut apart his deployments, halt his movement or withdrawal and annihilate the enemy one by one. In the course of launching an attack against a stubbornly resisting enemy who blocks the offensive, artillery support for infantry and tank units should be organized rapidly to carry out a powerful attack. A combination of firepower, demolition and sudden and violent attack should be used for resolute annihilation of an enemy whose development of an attack against our main forces has little effect and who cannot readily be wiped out quickly. Small numbers of troops should be used first to tie down and keep an eye on the enemy while the main force circles around rapidly and continues to develop victory followed by a phased attack and annihilation.

d. Resoluteness and Boldness for a Quick Decision Through Combat at Close Quarters

Detachments should carry forward the PLA's glorious tradition of combat at close quarters and night combat during battle, and the fine combat style of bravery in battle, fearing neither sacrifices nor fatigue, to overwhelm the enemy's heroism. They should take advantage of the time when the enemy has not yet established himself for quick movement in close to the enemy to launch sudden attacks. They should advance ferociously and quickly, penetrating the enemy's positions, bringing fully to bear the power of small groups operating independently who fear neither pincer attacks nor isolation, and who dare to fight with the enemy at close quarters using their own strengths and the enemy's weaknesses to wipe out the enemy in combat at close quarters and decide battle quickly.

3. Requirements for Chance Encounter Combat*

Chance encounter combat is combat that occurs when the enemy and our own forces happen upon each other in the course of movements. They are a kind of combat for attacking a maneuvering enemy. Chance encounter combat may be divided into expected encounters and unexpected encounters. In this kind of combat, the situation is rather muddled at the time of contact when both sides have exposed flanks, when the combat situation changes rapidly, when the form of combat changes quickly and when combat movements are hurried and sharp. Consequently, it is necessary to strive to gain the initiative, victory over the enemy going to the one who acts first.

a. Intensification of Reconnaissance and Being on Guard; Maintenance of Full Combat Readiness

Once unit commanders receive their mission, they should study the enemy situation, the terrain and the road situation in detail using instructions from higher headquarters and intelligence that has been obtained. They should estimate times and places when an encounter with the enemy might take place, plus possible actions to be taken at the time of the encounter, deciding on the spot deployments on the basis of chance encounter combat requirements. They should have several pre-determined combat plans and organize thoroughly every kind of combat support. A high degree of vigilance should be maintained while on the march through enhanced observation and the posting of guards in order to gain information at once, discover the enemy as quickly as possible, and gain ample time to organize for battle.

b. Victory to the One Who Acts First; Seizing the Initiative

Victory to the one who acts first and seizing the initiative are determinants of victory in chance encounter combat. Units involved in chance encounter combat must do all possible to gain the initiative and overwhelm the enemy by acting first. This requires fullest use of favorable conditions and concealment of movement plans to make it difficult for the enemy to discover our movements too early in order to weaken the advantages that the enemy's technical equipment enjoy. Once combat is triggered, commanders should make quick decisions and issue decisive commands to deploy rapidly to seize key points and make full use of advantages his unit enjys in engaging in combat at

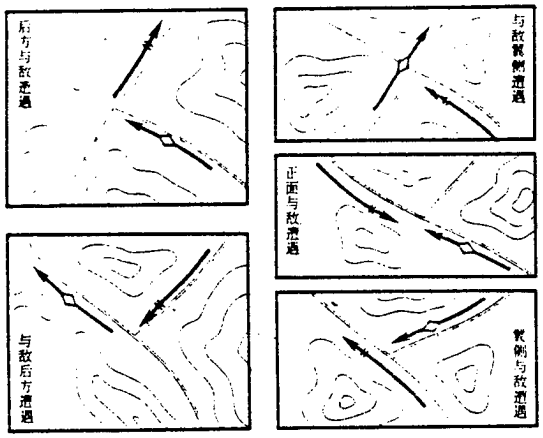
close quarters. Every effort should be made to make a sudden attack on the enemy at close quarters to take the initiative in battle. At the same time, commanders should make flexible use of tactics as circumstances require, take positive actions, and strive to take the initiative and avoid passivity.

c. Bravely Attack the Enemy's Flanks and Rear

Units should make full use of the enemy's exposed flanks and gaps in the course of chance encounter combat and take advantage of enemy weaknesses such as terrain and roads that limit movement of the enemy's machines. Some troops should hold the enemy frontally while the main force ferociously attacks the enemy's flanks and the sides of his rear, courageously penetrating the enemy's combat formations to cut up and annihilate the enemy rapidly. At the same time, support to one's own flanks and rear should be buttressed to prevent outflanking by the enemy.

d. Judge the Hour and Size Up the Situation for Flexible Use of Tactics

There are numerous circumstances in chance encounter combat that may restrict plans for movement of our forces at the time of contact; consequently, various tactics must be applied in a flexible manner as different circumstances dictate. During chance encounter combat when both sides are facing each other, should we discover the enemy first, if time permits and the terrain is favorable, ambush may be employed to strike the enemy. If time is pressing and terrain unfavorable, swift attack may be employed to strike the enemy. In chance encounter combat when both sides are moving in the same direction, or when an airborne landing occurs, depending on circumstances, the enemy may be wiped out in a face-to-face encounter and strategic points taken, or else nearby favorable terrain may be taken to cover the shift of main forces or to deeply to strike the enemy. When our forces engage in deep penetration and outflanking, or when they happen upon the enemy when acting as an advance party, usually they should avoid the enemy; necessary troops should be dispatched to keep close watch while main forces advance rapidly toward their objective.



4. Requirements for Anti-airborne Warfare*

Anti-airborne warfare means combat to wipe out airdropped enemies (including by parachute, by transport aircraft, and by helicopter). Whenever the mission is urgent and preparation time is short, when the aerial threat is substantial and the air defense mission is arduous, when advantageous fighter aircraft are in short supply and combat patterns are ever changing, and when the situation is complicated and command coordination is difficult, an airdropped enemy may be more readily cut up and surrounded.

a. Advance Preparations, Aggressively Seizing the Initiative

Situations arise suddenly in anti-airborne combat, and tasks are urgent. Consequently, once a fendui receives its mission, it should pay strict attention to time, doing everything possible to make all preparations before combat begins. These preparations include the following: On-the-ground reconnaissance and study to formulate combat plans; political mobilization to bolster ideological preparedness; building of necessary fortifications and obstacles in places where the enemy is likely to land from the air; making ready all kinds of materials and equipment; a good job of dispersal, concealment, camouflage and protection; establishment of methods for air observation and the reporting of information; and organization of exercises in advance of combat that are based on plans.

When preparation time is short, fendui commanders should arrange matters scientifically in focusing on preparations. In an emergency situation, even though preparations may not be complete, they should organize the fendui rapidly to go into battle, preparing as they go and organizing as they fight.

b. Quick Action and Acting First To Overwhelm the Enemy

Accurate understanding of the situation is a prerequisite for quick action and correct command of anti-airborne combat. Detachment commanders must be completely cognizant of the patterns of action of enemy airborne operations and not be deceived by airborne feints or false airborne operations. They should make a complete analysis of all circumstances from every angle, discarding the spurious and retaining the genuine to arrive at a correct decision. Should enemy intentions to launch an airborne attack suddenly become evident, they should act quickly and act first to overwhelm the enemy. They should be able to make decisions quickly, advance quickly, spell out missions quickly, and launch an attack.

Quick decisions require that once fendui commanders receive advance orders from higher headquarters, they immediately act on the basis of the mission and the understanding of the situation to review plans quickly, make firm decisions, and organize the fendui to move expeditiously to get ready.

Quick advance means that, while moving forward, fendui should do all possible to overcome obstruction by enemy aerial and ground fire, to increase their speed of advance, and to reach the anti-airborne zone within the time set by higher headquarters.

Spelling out the mission means that once the mission has been spelled out, fendui must establish a strong sense of time, devote attention to key points, simplify procedures, improve methods, simplify everything that can be simplified, combine everything that can be combined, not spell out matters echelon by echelon when they can be spelled out at the same time; not spell out in a centralized fashion matters that can be spelled out separately, and not take the time to stop to spell out matters that can be spelled out while on the move. No matter what methods are adopted, every effort should be made to complete the spelling out of matters in the shortest possible time.

In launching an attack, the fendui enters the deployment zone. If the enemy has just landed and is in process of drawing together and concentrating forces, or if he is process of moving toward pre-set objectives, an attack should be launched against him while on the march. Should the enemy have already gone on the defensive, it is only necessary to spell out the mission briefly and immediately attack, attacking ferociously and fighting fast to wipe out the enemy who has not yet consolidated his position.

c. Ferocious Attack and Quick Penetration for a Quick and Decisive Battle

Anti-airborne combat required ferocious attack and quick penetration for a quick and decisive battle. In deploying, fendui usually form up into one echelon (though battalions may organize into a advance party one or two platoons of troops that have been reinforced as needed to take action first). The main body of troops and weapons are used in the primary direction of attack in a formation shaped like a fist. Every effort should be made to conserve troops for an attack in a secondary direction. Depending on how the situation develops, a small number of troops may be held in reserve. In deciding how to fight, full use should be made of gaps among the enemy and of his flanks for the courageous launching of deep penetrations to separate the enemy, to cause chaos and to chop up the enemy's deployments so as to prevent him from rallying, moving and concentrating his forces, hitting at his weak points and following up later to attack and wipe out the force. The spirit of combat should make use of our forces heroic spirit of crushing all enemies, of making full use of small groups operating independently, and fighting the enemy at close quarters for a quick and decisive battle.

d. Active Cooperation and Close Coordination

Detachment commanders should closely organize coordinated action among all fendui and reinforced fendui for all phases of fighting in advance in accordance with the directives of higher authority and their own decisions. During battle, commanders should follow the execution of actions by attacking units who are carrying out principal missions, themselves personally observing the battlefield to gain a timely understanding of the situation. They should also use all available communications facilities as the situation dramatically changes for constant coordination of the combat actions of all fendui. All fendui should firmly establish thinking in coordinated warfare, comply with unified command, strictly observe coordination rules, actively cooperative, provide mutual support, and coordinate as one in attacking the enemy. When circumstances change or coordination is destroyed, they should continue fighting while coordinating the actions of all units, or else they should re-organize the coordination of activities. They should act within the overall

intentions of higher headquarters, taking overall victory as their goal, taking prompt action at their own discretion, taking the initiative in cooperating with the actions of adjacent units and militia and uniting as one to complete their combat mission.

5. Requirements for Ambush Warfare

Ambush warfare entails the pre-placement of troops in ambush at the sides of routes that the enemy must traverse to await the enemy, or to lure him into our ambush area and suddenly launch an attack in a battle to destroy the moving enemy quickly. Ambush is characterized by advance preparation and awaiting opportunity to attack the enemy; reliance on good positions that favor surprise attack; rather high need to conceal intentions; swift changes in circumstances, and complex organization of command. The fundamental requirement in ambush warfare is secret concealment, the launching of an attack at the right time, surprise and boldness, and rapid annihilation of the enemy.

a. Accurate Understanding of the Enemy Situation

Commanders should figure out enemy movements or the pattern of enemy movements from higher headquarters' notices on the enemy situation, and from reports from local units and militia, plus their own reconnaissance, and they should be able to ascertain when and where the enemy will set out, troop strength, intentions and line of movement, times when he will pass through certain places, and the way he reconnoiters and keeps on the alert to provide data on which to determine ambush deployments.

b. Selection of Good Ambush Areas

Commanders should secretly enter the designated area for covert reconnaissance of the terrain to select an ambush area (attack zones, positions from which to attack and waiting areas). Selection of the attack zone must be on a route over which the enemy must pass, be capable of carrying only a limited number of people, be such that the enemy cannot spread out or maneuver, and along the two sides of it, ideally there should be a strategic point with an overview. The position from which to attack (or ambush) that is selected should be on one side or both sides of the attack zone and be suitable for the concealment and disposition of forces to intercept the enemy. It should be a good position from which to use firearms and be suited both to make best use of firepower and surprise attack. It should have a concealed route for entry and exit. The waiting zone should be located to the rear or on the sides of the attack position and permit dispersal, concealment and deployment of troops. It should be a place that can be rather easily protected, and it should be next to the attack position insofar as possible. If the attack position is well concealed and has good conditions for protection, a waiting zone need not be chosen.

c. Correct Deployment of Forces

Deployment for ambush should be done on the basis of the enemy's possible movements, the mission of one's own unit and terrain conditions, every effort being made to deploy in the shape of a pocket (two sides). Terrain limitations

may require that troops and weapons be deployed on favorable terrain on only one side from which an attack may be launched and firepower put to use. So long as the terrain favors concealment, every effort should be made to array ambushing units close to the route of the enemy's movement in order to shorten the attacking distance and guarantee the surprise nature of the attack. Disposition of weapons should follow the principle of dispersal of weapons and concentration of firepower, location at key points and being readily movable. They should be arrayed close to one side or two sides of the road over which the enemy will pass, and all kinds of weapons must be placed at major sections of the road in the attack zone to form a direct point blank fire, flanking fire and oblique fire network primarily against tanks.

d. Real Concealment of Ambush Intentions

Real concealment of intentions is the key to a successful ambush. Therefore, fendui should, insofar as possible, move into the ambush area secretly under cover of darkness, in inclement weather and through concealed terrain. They should immediately post observers to keep watch and strictly block the passage of information. Personnel, vehicles and weapons should make use of the topography for dispersal and be well camouflaged. Wheel tracks and hoof marks should be eradicated to foil enemy air and ground reconnaissance. Before battle begins, radio silence should be maintained. Commanders and observers should take pains to conceal their observation, and they should fully understand enemy movements so as to guard against impetuosity or laxness. They should control the position well and strictly enforce ambush discipline, not be puzzled by enemy firepower reconnaissance or deceptive movements, and genuinely conceal the intention to ambush.

e. Swift Attack and a Swift Battle Swiftly Decided

When an enemy that possesses relatively strong mobility encounters an ambush attack, he may quickly deploy into combat formation and launch an attack against our flanks, seize favorable terrain to put up a stubborn resistance, or use gaps and weak points among our troops to break out of encirclement and flee. Therefore, commanders must personally observe the enemy situation and accurately understand opportunities for attack, giving the signal at once commanding fendui to launch a sudden and ferocious attack against the enemy in order to cut him off in front, block him in the rear, cut him apart in the middle and cut him up into several section forcing him into an unfavorable position. They then should capitalize on the lack of enemy awareness of the situation, the chaotic state of his formations and the lack of time to spread out to wipe out the enemy one by one.

6. Requirements When Detachments Are Responsible for the Destruction of Obstacles*

Units that destroy obstacles are responsible for opening ways through enemy obstacle zones. These units are temporarily organized combat support teams. Enemy emphasis in modern warfare on placing many kinds of obstacles in depth in front of their positions has had a very great effect on breakthroughs by our forces on positions defended by the enemy. Thus, the ability of fendui that are responsible for the destruction of obstacles to complete their mission quickly and correctly plays a major role in the achievement of victory in offensive warfare.

a. Thorough Reconnaissance and Full Preparation

Once a fendui has been assigned the mission of destroying obstacles, it should carry out on-the-ground reconnaissance and close-in reconnoitering, combining results in a study of the enemy situation. They should also query neighboring units to find out the layout of enemy obstacles and means of guarding and covering them. Depending on circumstances, they may send an engineering reconnaissance team to the enemy obstacle area to conduct a detailed reconnaissance. On the basis of reconnaissance results and the availability of personnel and equipment, a plan for the destruction of obstacles may be drawn up, mobilization for battle carried out, materials and equipment prepared and every effort made to make a division of labor and distribute equipment so that handling of the situation and methods used to destroy the obstacles will be in keeping with objective realities.

b. Scientific Organization and a Clear-cut Division of Labor

The forced opening of a road usually requires organization of a demolitions team, a firing team, a covering team, a reserve team, and a rescue team. Depending on circumstances, a debris removal and marking team may be organized as well. When secret scouting work is to be done, not only does a scouting team have to be organized, but each of the foregoing teams has to be organized too. The specific make-up of each of the teams is as follows: The demolitions team is made up of infantry troops, who may be be organized into various small teams as circumstances require. The firing team is made up of engineers and necessary infantry troops. The debris removal and marking team may be made up of engineers, infantrymen or a mixture of engineers and infantry. The covering team is made up from attached weapons fendui and infantrymen equipped with smokescreen devices. The reserve team is made up of infantrymen. The rescue is made up of medical personnel and medical soldiers. The number of personnel in each team should be decided on flexibly in accordance with their mission.

c. Active Cooperation and Close Coordination

Once the fendui commander has decided on a plan for destroying the obstacles, a coordination plan has to be drawn up and coordination among each of the units has to be organized on the basis of coordinated instructions from higher headquarters plus the commander"s own decision. In addition, the matters to be on the alert for and the signals to be used when coordinating with higher headquarters and fendui using the way through have to be made clear. In organizing coordination, the needs of the team that is to bear the main responsibility or the team faced with relatively greater difficulties in destroying obstacles should be foremost when setting times, setting places, setting methods and organizing separate segments of the operation. When obstacles are blown up, each team must establish a concept of the total situation and strictly follow coordination times and regulations. The teams must actively complete their own missions in accordance with the prescribed division of labor, and they should also give positive support to, closely cooperate in, and insure the smooth completion of the obstacle destruction mission.

d. Courage and Tenacity for Swift and Thorough Completion of the Mission

When an infantry fendui is responsible for destroying obstacles, it must carry forward a combat spirit of continuously fighting courageously and tenaciously without fearing sacrifices, advancing wave upon wave, valorously and resourcefully destroying obstacles as it goes through the enemy obstacle field, resolutely completely its mission on time.

e. Straightforward and Lively Command

Destruction of obstacles in the obstacle field in front of the enemy's positions brings units fairly close to the enemy where the threat from the enemy is great and the situation ever changing. When destroying obstacles secretly at night, the situation cannot be kept in view; therefore, commanders should focus on key matters and give straightforward and lively commands in a steady stream, and they should act within their purview to encourage units to overcome difficulties and complete the task of destroying the obstacles.

When giving commands, it is necessary to be adept at using all sorts of simple communications methods. During the night, especially, full use should be made of sounds and of night sighting and luminescent devices to improve communication and provide continuous command.

7. Requirements of Nighttime Offensive Warfare*

Nighttime offensive means an offensive combat action at night against a defending enemy. Poor nighttime visibility benefits our concealment of movement intentions and secret approach to the enemy for a surprise attack. It favors our making use of gaps and the flanks of enemy positions to make deep thrusts boldly to cut up the enemy, the bringing into play of the power of hand-to-hand combat, taking the enemy by surprise and wiping him out. However, nighttime is unfavorable for observation, for command and for coordination. Personnel loose direction and become weary. It is not favorable for units to carry out complex maneuvers or readjust deployments.

a. Surprise Attack and Annihilating the Enemy in Hand-to-hand Combat

When a unit attacks at night, it should make every effort to use surprise and to rely on a powerful attack. In order to be able to do this, units should use various methods, make full use of the favorable elements in various natural conditions, suddenly launching an attack at a night and place that the enemy least expects, catching him unawares. However, accompanying a surprise attack must be preparations for a powerful attack, so that should the surprise attack not work, a switch can be made at once to a powerful attack. When carrying out a powerful attack, a ferocious attack is made that penetrates the enemy positions in a single blow. Advantage is taken of the enemy's panic and bedlam to launch a ferocious attack for quick penetration and rapid expansion of the fruits of victory.

Close combat helps reduce the role of the enemy's superior equipment and permits most use of the power of our inferior equipment. Closing with the enemy produces an interlocking with the enemy, with the result that units need not fear enemy pincer attacks or flanking fire, and they dare to close with the enemy to the maximum extent possible. They dare to grapple with him in

hand to hand combat using a mixture of firepower, demolition and assaults that hit and blow up enemy armor and resolutely annihilate the enemy.

b. Heroic and Tenacious Independent Combat

Units engaged in combat must carry forward a combat style of courageous battle without fearing sacrifices or fatigue, and fight continuously. They must make full use of darkness and terrain advantages as well as gaps in the enemy's ranks that they can nimbly exploit with troops and the use of tactics, courageously thrusting deeply and carving up the enemy in attacks by small groups along many avenues in an attack on key points. No matter how arduous the situation, units should fearlessly dare to fight independently, actively taking the initiative in wiping out the enemy.

c. Active Struggle Against Enemy Night Sighting and Illumination Devices

Units must take account of the location and patterns of use of enemy night sighting and illumination devices, adopting various effective tactics to combat them.

1. Prompt Discovery and Destruction. Units should should use to the full the the illumination and night sighting devices in China's armed forces, using visual observation and night sighting devices observation together for prompt discovery of enemy night sighting and illumination devices so that firepower can be directed to destroy them.

2. Active Deception and Harassment. Detachments should act on instructions from higher headquarters to set up bogus targets or use small numbers of troops to carry out feints. They should make decoys to confuse the enemy. They should also lay smokescreens in a planned way, cause fires and scientifically use all sorts of light sources to blind and harass the enemy and cover the detachments movements.

3. Strict Camouflage. Today, not only thermal imagery but various other kinds of night sighting devices as well rely on the different reflectivity of light from targets and ground objects to discover targets. Therefore, in camouflaging personnel weapons and instruments, detachments have to make sure there is no emission or reflection of light so as to decrease the effectiveness of enemy night sighting and illumination devices.

4. Full use of ground features. During combat, fendui should make full, flexible and ingenious use of various ground features, changing combat formations and methods of moving as appropriate in rapid and concealed closing with the enemy.

5. Adroit Use of Inclement Weather. Inclement weather substantially impairs the use of night sighting and illumination devices. Therefore, fendui should make use of cloudy, rainy, misty and snowy nights to conduct surprise attacks against the enemy.

d. Keeping Informed About the Troops and Bolstering Command

During nighttime combat, fendui commanders should pay particular attention to keeping well informed about their unit and use coordinated plans as a basis for providing decisive, speedy and constant instructions to make sure that the fendui completely coordinates attacks on the enemy. The main actions to be taken are as follows:

1. Thorough Organization of Coordination and Support. Before battle begins, commanders should adopt a worst case scenario in the preparation of multiple plans. They should thoroughly and meticulously organize coordination and support so that their unit has a clear-cut understanding of its mission, tactics to be used, coordination methods, communications (or signaling) methods, and methods for dealing with enemy night sighting and illumination devices. They should appoint a guide fendui and designate a topographic feature that is clearly visible at night or provide an azimuth to guide the fendui's movements.

2. Commanders Out in Front. During battle, commanders should spell out the division of labor, focus on key points, and bolster command among all subordinate fendui. All subordinate or attached fendui commanders should move at the head of their fendui. When mortars are added, their observation posts should be with the infantry fendui commander so as to be able to provide prompt firepower support to the infantry in battle.

3. Strengthened Communications. Commanders in battle should make full use of all kinds of communications equipment and methods in issuing a steady stream of commands to their fendui. However, radio transmitters and various kinds of communications (or signaling) equipment should be strictly regulated. Flashing signals should be simple so that they can be readily distinguished and remembered, and strict camouflaging should be done.

8. Requirements of Offensive Warfare on Deserts, the Gobi and Grasslands

Desert, Gobi and grassland offensives are a kind of offensive combat operation carried out under special conditions to annihilate the enemy. These three kinds of terrain have substantial impact on fendui conduct of combat operations. On deserts, the Gobi and grasslands, observation distances are farther than on terrain in general; backlighting makes for fuzziness or mental confusion when observing objects making it difficult to determine land markers or gauge the distance to targets accurately. Since movement is difficult, it is easy to lose direction. Radio communication signals become weak; communications distances are short; and electric energy is consumed quickly. Though digging is easy when building defense works, holes are likely to cave in or fill up; thus the building of defenses takes a long time and great exertion. Concealment and camouflage are fairly difficult in desert areas; there is a severe shortage of water, and material support is more arduous and complex than normally.

a. Accurate Determination of the Enemy Situation, the Terrain, and Meteorology

Fendui commanders should flexibly adopt all reconnaissance techniques on the basis of the character of the enemy's defenses, accurately determine the

enemy's troops deployments, the lay out of positions, firepower array, the building of fortifications and the location of obstacles. In addition, he should determine the location of the enemy's flanks and gaps in the terrain that are advantageous to our forces, the degree of effect on the combat movement of our forces of roads and natural obstacles, water resources in the enemy's rear, and terrain favorable for approach by our forces. Special emphasis should be given to understanding weather conditions, and patterns of changes in the weather should be looked into. Every effort should be made to use weather conditions favorable to our forces and unfavorable to the enemy to attack.

b. Strict Camouflage

Fendui should strictly organize camouflage. Camouflage must be completely lifelike, adaptable and varied, and suited to the natural landscape of the desert, the Gobi and grasslands and to tactical requirements. All possible use should be made of landforms and weather conditions for fullest use of manufactured camouflage materials. When camouflaging, camouflage discipline must be strictly enforced, measures for the camouflaging of personnel, vehicles and all kinds of technical weapons being spelled out as well as measures to prevent detection of visible light or infra-red rays. Camouflaging should be conscientiously checked and actions taken to remedy problems. In addition, full use should be made of smokescreens, sounds and windblown sand and dust to deceive and confuse the enemy, to conceal the real and reveal the false and to give the enemy a false impression in order to support the concealed movements of troops and achieve surprise in battle.

c. Bold Deep Thrusts and Envelopment

Detachments should make full use of the enemy's exposed flanks and gaps in the terrain to carry out bold envelopments and deep thrusts to cut up the enemy. After penetrating the enemy's defenses, fendui should thrust ferociously and deeply into frontal strongpoints to cut off contact between enemy positions and set up a favorable situation for wiping out the enemy one by one. In organizing an attack against various dot shaped targets formed by sand dunes, it is particularly necessary to concentrate main forces to attack vital points and guard against spreading forces too thinly to attack every place at the same time.

When carrying out an attack against the enemy's rear flanks, after main forces have made a deep penetration of the rear flanks and are about to attack targets, a small number of troops should be assigned to take favorable terrain to prevent enemy reinforcement and escape. The main force should carry out a ferocious attack on the enemy's rear flanks, first wiping out the enemy in major targets and then moving forward from the rear flanks to work with the halting fendui in the front to produce a pincers front and rear to wipe out the enemy one by one.

When attacking the enemy frontally, some troops should be used to trust into the enemy's flanks or rear flanks. When necessary, they should thrust deeply behind enemy lines to seize important targets such as water sources or road intersections, to cut off enemy withdrawal routes, and to coordinate with main attack fendui in cutting up, enveloping and wiping out the enemy.

When attacking isolated or exposed strongpoints, it is necessary, first of all, to deploy for an enveloping attack using some troops to pin down the front of the enemy's position while the main body boldly penetrates deeply and cuts up the enemy's flanks or rear flanks in ferocious assaults that quickly annihilate the enemy in strongpoints.

Detachments that make deep thrusts and envelop the enemy's rear flanks should be skilled in traversing shifting sands, salt flats, marshes and such difficult stretches of terrain to achieve surprise in attacking the enemy.

Deserts, Gobi, and grasslands contain very few natural landmarks. Commanders should therefore be skilled in the use of maps, compasses, the sun, constellations and timepieces as well as natural features of the terrain and the landscape to figure out positions. They can put up route markers or use plainly visible and firmly implanted materials at hand as markers to show the fendui direction of attack.

d. Straightforward and Crisp Command

The principles to be used by commanders in organizing combat in deserts, the Gobi, and grasslands are identical to those for combat in general; additionally, however, when there are windstorms or when the sun is shining in one's face making observation difficult, commanders should command from the front of their fendui and particularly from the front of the main attack fendui.

In order to be sure that the correct direction of attack is maintained, maps showing topographic markers should be drawn for subordinate fendui who should also be provided with azimuths for movements that have been decided. When necessary, a guide fendui should be designated for each echelon and trained soldiers should be designated guides responsible for maintaining direction.

When the situation or the weather changes, commanders should firmly and calmly deal with the situation in a skillful and decisive manner changing a passive situation into one in which they have the initiative. When battle is going along smoothly, commanders should remain clearheaded throughout.

e. Fight Courageously and Tenaciously Without Dread of Difficulties and Hardships

Commanders should be skilled in carrying out political and ideological work with regard to the scorching heat of summer, the frigidity of winter, dramatic changes in temperature, windblown sand, frequent windstorms, lack of water, and great exertion by personnel so that fendui develop confidence about daring to fight and the inevitability of victory, and so that no matter the circumstances the fendui maintains an ebullient fighting spirit.

When the fendui lands in a predicament or when unexpected situations arise, commanders should firmly and calmly issue commands using exemplary actions in guiding the fendui to fight bravely.

Should the fendui lose its direction or its contact with higher headquarters or adjacent units, commanders should trust each other, encourage each other,

strengthen unity and tenaciously fight on alone without fear of sacrifices for resolute completion of their combat missions and find ways of making contact with higher headquarters and adjacent units.

9. Requirements of Offensive Warfare Under Frigid Conditions

Offensive warfare under frigid conditions means carrying out offensive combat when the average daily temperature is -15 degrees C or below, which has a markedly deleterious effect on combat operations when it lasts for a long period of time. In frigid zones where snow lies deep and the roads are slippery, unit mobility is a problem and speed of movement decreases. When on the march or in combat, troops are prone to fall out of ranks, to suffer frostbite or injuries from falling down, and the effectiveness of weapons and equipment declines. They are easily damaged; colored materials are easily exposed; and fendui concealment of movement and camouflage is difficult. Snowfalls and dense fog impair observation and when enemy positions are covered in snow drifts, we cannot readily discern them.

a. Use of Various Methods To Figure Out in Detail the Enemy Situation and the Terrain

Detachment commanders should make full use of their subjective activity to adopt various detection methods to find out the enemy's situation and the topography. Reconnaissance should make full use of snowy nights and days when snowstorms occur to get as close to targets as possible and carry out close-up reconnoitering. In the case of important terrain features or roads, they should either personally carry out on the ground reconnaissance or send others to do it. They should dispatch reconnaissance teams to important targets. These teams should make use of gaps in the enemy's defenses or circle around the enemy's flanks to the enemy's rear to carry out secret reconnaissance. When necessary, they may do eavesdropping, capture prisoners or carry out firing reconnaissance. They should be sure to check snow depths in the area of operations, the thickness of ice, the extent to which travel is possible, and advantageous enemy use of snow and ice as obstacles. They should check the atmospheric temperature and snow drifting as well as the extent of their effect on both the enemy and ourselves. They should particularly check the positions of snow covered tanks, armored vehicles, firing points, defenses and various obstacles, and they should fully analyze and evaluate the situation revealed through reconnaissance to reach correct conclusions and work out effective means for overwhelming the enemy and gaining victory.

b. Surmounting Ice and Snow Obstacles To Increase Mobility

When moving around, fendui should be adept at understanding the patterns of weather changes, and should increase their reconnaissance of roads in order to choose correctly the times and routes for movement. They should accurately figure movement times, do all possible to reduce the loads personnel carry and use sleds to haul heavy weapons, making fullest use of roads, areas of shallow snow and frozen rivers for movement. When conditions permit, they may use skis to increase their speed of movement. When they encounter a frozen slope or a dangerous road that is difficult to negotiate, they should do all possible to select a concealed circuitous route around it or else designate a squad (or team) to clear obstacles and open a way through. When crossing a frozen river,

they should check ice thickness before crossing. When they encounter obstacles created by the enemy's having blown up the ice making the ice unable to withstand pressure, they should use whatever materials are at hand to increase the strength of the surface of the ice. When necessary, they should increase distances between people and equipment and crawl across.

c. Use of Cold Snowy Nights for Surprise Attacks Against the Enemy

Bitter cold may demoralize a defending enemy, slow his reactions, and make him become negligent about being on guard. This plus the protection of inclement weather such as a snowstorm or dense fog favors our making a surprise attack. Therefore, fendui commanders must be adept at using snowy and frigid nights to approach enemy positions secretly, to concentrate forces on the enemy's flanks, and to drive through gaps into enemy positions, catching the enemy unawares and seeking to wipe out the enemy inside his own fortifications or leave him dazed and confused. Sometimes it is possible to send a small, crack fendui through deep snow or a place that is difficult to scale for a secret penetration of the enemy's rear and use a sudden and ferocious attack against the enemy to upset his deployments, a main force operating in conjunction with the small team to wipe out the enemy. When the snow is deep, a ski fendui may also be used to get through gaps in the enemy's defenses to penetrate his rear secretly and launch a surprise attack on his command post, his artillery positions, his communications lines and his rear area supply facilities, or to control strategic points. When attacking the enemy, observation should be intensified, the right opportunity selected, movements made secretly and all preparations made to deal with all sorts of situations.

d. Strict Camouflage and Concealment of Movements

When a unit moves in bitterly cold conditions, it should do so, insofar as possible, on snowy days, on foggy days, during stormy nights and such inclement weather. It should use terrain features and man made objects to the full and make sure to wipe out traces of movements. At the same time, it must thoroughly and meticulously camouflage everything to conform to the natural color of the winter season. When moving across snow covered land, personnel should usually cover themselves with white cloth or white bed sheets, or make camouflage cloaks. When conditions permit, they should use camouflage clothing that accords with the faded colors of the winter season or else use burlap bags or canvas to make camouflage clothing for themselves. Mules and horses may have their backs covered with camouflage nets or else weeds, hemp or such fibers may be woven into simple camouflage nets. Reflective parts of rifles must be covered. Materials that correspond to background colors may be used for this. They may be wrapped around them at a certain distance apart so the enemy will have difficulty making them out. Artillery, vehicles and equipment should be covered with white cloth, oil cloth that has been painted white, or canvas. Alternatively, they may be given a coat of paint. When conditions permit, manufactured camouflage nets may be used.

e. Improvement of Measures To Guard Against the Cold To Prevent Non-combat Personnel Losses

When units conduct an offensive under frigid conditions, they should guard against the cold in order to prevent non-combat personnel losses and to

maintain weapons and equipment always in good combat condition. When on the move under frigid conditions, personnel should be issued with equipment to protect them from the cold. Materials at hand may be used as well to make needed items to guard against the cold, and clothing regulations should be strictly followed to prevent snow blindness and frostbite. No overly long stops should be made, and when stopped, personnel should not lie down in icy and snowy places; otherwise melting snow and ice may seep into their clothes, shoes and socks. Personnel should also be sure to move their hands and feet and to rub their faces. When moving with light equipment, other equipment should be sent to designated sites by specially designated personnel. When traveling by vehicle, whenever possible a tarpaulin covering or a windbreak should be put up. Lots of dry straw should be put inside the vehicles; personnel should wear a lot of clothing, and they should frequently exercise their hands and feet and be forbidden to sleep. Personnel who are observing or standing guard should shorten their duty times and increase the number of times when changes are made. Insofar as possible, hot food and hot water should be supplied, and food with a high caloric content should be eaten. Dry grain rations should not have much moisture content so that they will not freeze hard. Pains should be taken to organize self rescue and mutual rescue, to look carefully for wounded personnel, and to rescue and forward the wounded promptly. Personnel who are being transferred should be properly clothed or covered with an overcoat or a wadded cotton garment. Attention should also be given regular checks to prevent frostbite.

Weapons should be cleaned and properly coated to prevent oil from freezing. When operated, excessive force should not be applied. One should pull the rifle bolt first before beginning to fire. When using optical instruments and compasses, one should be sure to wipe them clean so that they are always in good condition.

10. General Principles for the Use of Mechanized Infantry Companies (or Platoons) for Offensive Operations Against Enemy Defended Field Positions

In addition to the general principles that apply to the carrying out of infantry fendui attacks on enemy defended field warfare positions, the following principles should also be followed as the nature of the mechanized infantry fendui requires:

1. Combat Use of Infantry Combat Vehicles and Armored Personnel Carriers

Mechanized infantry companies (or platoons) should think about the use of combat vehicles in terms of the combat technical capabilities and the mission of infantry combat vehicles (or armored personnel carriers). Under ordinary circumstances, the main mission of infantry combat vehicles is combat, the transportation of personnel and weapons being secondary. Fendui go to battle mostly in vehicles and on foot secondarily. Armored personnel carriers primarily transport personnel and weapons and have combat as a secondary use. Personnel fight primarily on foot and in vehicles only secondarily.

Companies (and platoons) should make full use of the mobility and protection that infantry combat vehicles (and armored personnel carriers) afford, and should quickly make use of the results of nuclear attacks and fire attacks to maintain the surprise nature of offensive combat actions. So long as

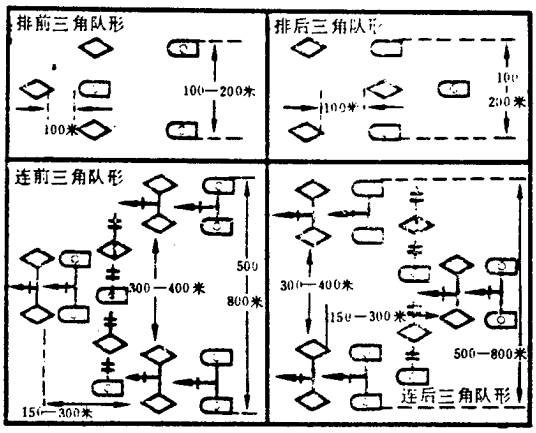
conditions permit, attacks while on the march should be carried out, and the high speed and continuity of offensives should be maintained with the safe distance between infantry combat vehicles and shell burst points being shortened so that the opponent does not have time to reorganize his resistance and to heighten the assault capabilities of armored combat vehicles.

b. Combat Formations

When mechanized infantry companies (or platoons) mount vehicles for a coordinated offensive with tank companies (or platoons), they should adopt the same combat formations as tank companies (or platoons). Combat formations include triangular formation, echelon formation, and straight line formation.

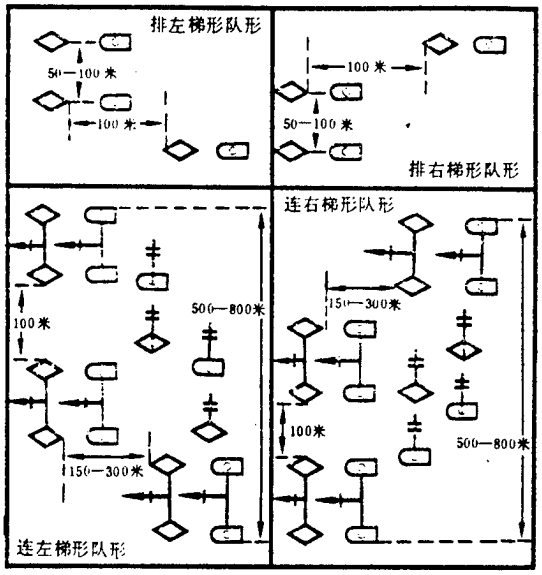
1) Triangular Combat Formation

Forward (or rear) combat formation is a formation that is frequently used by companies (or platoons) on the offensive. It is usually used in carrying out a change in direction of movement of troops or firepower as well as for the mutual covering of combat formations and insuring security of flanks.



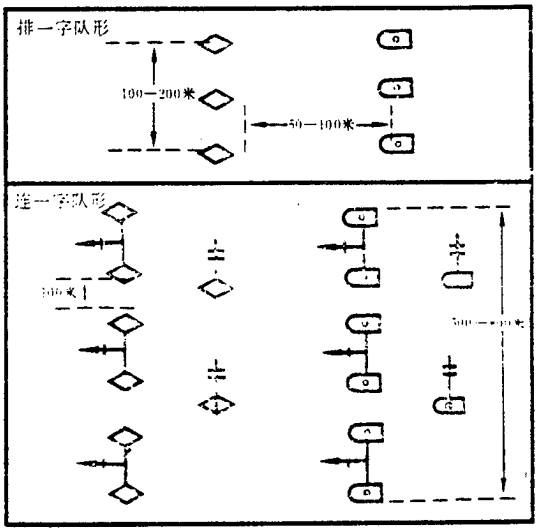
2) Echelon Combat Formation

A left (or right) echelon combat formation serves in bringing firepower to bear on one flank, and it can assure flank security. Against a frontal assault, however, it is fairly weak. Whenever a flank is concerned about the enemy and carries out an encirclement of an enemy strongpoint when adjacent units to the left and right are lagging behind, this combat formation is used.



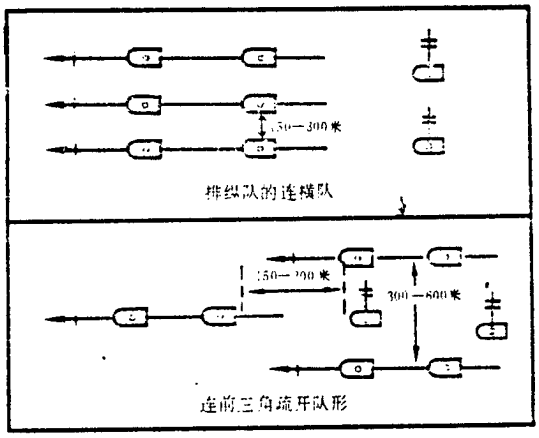
3) Straight Line Formation

The straight line formation is useful for simultaneous firing or assault when attacking an enemy frontally. It permits full use of attacking power. However, it is not useful in the movement of troops or firepower toward a flank.



The combat formations used by mechanized infantry companies (or platoons) going into combat on foot are basically identical to the combat formations of infantry companies (or platoons). Anti-air missile launchers usually follow along between 20 and 30 meters behind the dispersion line, the distance between missile launch personnel being kept at between 15 and 20 meters.

Mechanized infantry companies may use opportunities such as the effects of our nuclear attacks to facilitate rapid mobility and deploy into combat formation when closing with the enemy, pursuing the enemy or expanding a victory into the enemy's great depth. Company dispersal formations include a column of rows, front (and rear) triangular, and left and right echelon formations.



3. Areas and Zones

In order to complete attack preparations covertly, rapidly deploy and launch a surprise attack, mechanized infantry companies (or platoons) have to choose correctly the following areas and zones in accordance with instructions from higher headquarters.

a. Assembly Area

The assembly zone has to be selected in a place that permits dispersal and concealed deployment, that permits maneuvering and has a good water supply. When assembling in the area, mechanized infantry companies (or platoons) should make fullest use of the terrain in spreading out and making concealed deployments. Bunkers for vehicles and shelters for personnel should be built. They should be carefully camouflaged and all vehicle track marks erased. Vehicles should be inspected and maintained, and supplies of POL, ammunition and materials should be replenished. Preparations for combat should be swiftly organized, and preparations for the offensive should be completed. The assembly area is usually between 30 and 50 kilometers distance from the enemy's defensive positions.

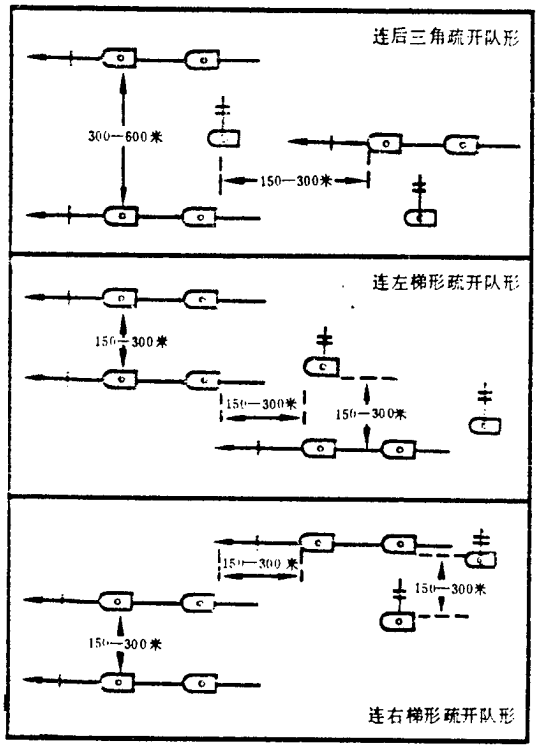
b. Dispersal Zone

The company dispersal zone should be selected where there is terrain on which vehicles can maneuver and be concealed. Usually it is about 1 kilometer from the deployment area.

c. Deployment Area

This area should be located beyond the point-blank range of tank and anti-tank artillery on terrain that permits concealed deployment and forward attack. The deployment area is usually between 1 and 3 kilometers from the enemy's defense positions. When terrain permits, this area should be as close to the enemy as possible.

When mechanized infantry companies (or platoons) mount their vehicles to carry out a forward assault in conjunction with tanks, they should deploy behind the tanks and as close to the tanks as possible. Individual infantry combat vehicles (or armored personnel carriers) should maintain a distance of approximately 100 meters from each other, and the company commander's command vehicle should move along between 150 and 300 meters behind the first echelon. When mechanized infantry companies (or platoons) advanced to the attack on foot, the company commander's command vehicle and individual infantry combat vehicles (or armored personnel carriers) advance in a line.



When mechanized infantry soldiers attack on foot, a place where the troops dismount from vehicles and positions from which they begin the attack have to be selected. In addition, a location for deployment of infantry combat vehicles (armored personnel carriers) and a route for their movement forward behind combat formations as infantry moves ahead on foot must also be selected.

The site for dismounting from vehicles must be chosen on terrain that permits observation and concealment. If terrain conditions permit, the site for dismounting from vehicles should be as far front as possible.

The positions from which the attack is to be launched should be selected beyond the obstacle zone in front of the enemy's defense positions on favorable terrain that permits concealment, observation and firing. When

attacking on foot, the positions for launching the attack should be between 400 and 600 meters in front of the enemy's frontline. When attack is in vehicles, the distance should be 1,000 meters. When terrain permits, the positions should be as close to the enemy as possible.

The location for deployment of infantry combat vehicles (or armored personnel carriers) should be selected close to the place from which personnel dismount from vehicles. The route of advance for infantry combat vehicles (or armored personnel carriers) behind the combat formations of infantry moving on foot should be selected on favorable terrain that permits vehicle movement, deployment and the rendering of firepower support.

B. Defensive Warfare

1. Basic Principles for Defensive Combat from Strongly Fortified Positions*

Defense from strongly fortified positions means holding fast from tunnels or from prepared fortifications, which serve as key strongly fortified positions. When fendui are defending from strongly fortified positions, they must establish the concept of holding fast for a long time and fighting independently, and they must be imbued with determination to remain in the positions. They must concentrate their main troop strength and weapons in the direction of the main defense, construct a system of strongpoints based on defense against tanks, and build an in-depth concentric circle firepower system primarily for the purpose of hitting tanks but also for firing at aircraft and airdrops. They must coordinate closely to make full use of the power of the whole, and they must use favorable conditions for strongly fortified position defense, rely on their positions, strictly defend them, actively attack and use stubborn combat actions to struggle repeatedly with the enemy, flexibly using firing, demolitions and obstacles as combat techniques to inflict large scale casualties on the enemy, to wear down the enemy and hold him in check, to smash enemy attacks, and to hold fast resolutely to the defense positions.

a. Selection of the Main Direction of Defense and Defensive Strongpoints

The main direction of defense and defensive strongpoints are usually selected by higher headquarters. Sometimes unit commanders may themselves select the main direction of defense and defensive strongpoints in accordance with the intentions of higher headquarters, the mission of their unit, the enemy's deployments and the terrain, reporting their selections to higher headquarters for approval .

The main direction of defense must be selected on a road or in a valley that runs through the defensive depth, which favors the enemy tanks and armored vehicles using it as the main offensive axis.

Defensive strongpoints should be selected in the main direction from which the enemy may attack at points related to the security of defense. They should be able to be held independently and be suited to defense against tanks and the exercise of firepower. Should there be no terrain suitable for defensive strongpoints, the terrain should be changed through the construction of stronger fortifications and increasing the density of obstacles to buttress defensive strength.

b. Forming Defensive Strongpoints Primarily To Be Used Against Tanks

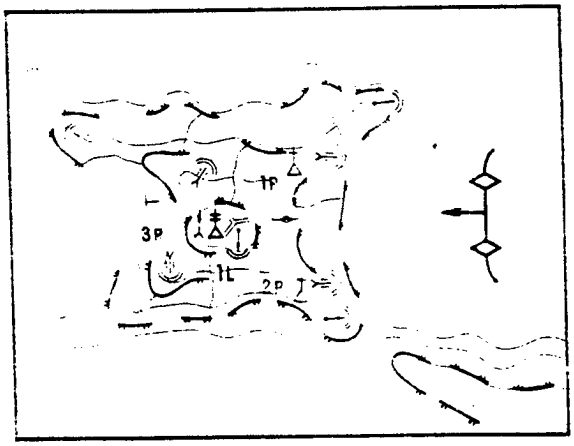
Defense against tanks is the foundation of modern defense. Units must use strategic points for the building of strongpoint defenses, primarily against tanks in order to foil the enemy's offensive and complete the combat mission.

Fendui strongpoints against tanks should be built on the basis of the degree of threat that tanks pose and the numbers of anti-tank weapons. The sites selected for strongpoints should be those within the defense area that play a decisive role in the stability of overall defense. Circular defensive positions should be built consisting of tunnels and prepared fortifications that are organically linked to all anti-tank fortifications. Substantial numbers of anti-tank weapons should be arrayed in-depth, in echelon formation, dispersed, and in concealment to build a substantial firepower density. Anti-tank firepower and anti-infantry firepower should be linked, should be used in combination with anti-tank obstacles, and should be coordinated with the anti-tank firepower of higher headquarters.

c. Troop Deployments

Fendui commanders employ their main body of troops and weapons in the main direction of defense on the basis of the intentions of higher headquarters, the mission they have been assigned, the enemy situation, the topography and the already established defensive positions. Usually companies have two platoons set up separate frontline strongpoints and one platoon form a strongpoint behind the frontline. Alternatively, the whole company may form a single strongpoint.





The fendui that defends the main strongpoints should be substantially reinforced in order to increase its defensive capabilities. Troop strength and weapons of fendui defending each strongpoint should be deployed in depth along the front, dispersed and concealed. The required number of troops should be used to defend above ground positions, with the main body of troops being deployed in tunnels. Requirements here are as follows: Ability to make full use of the strengths of fendui from each branch of service and ease in

close coordination and mutual support; ease in defense in defense against enemy attacks using nuclear and chemical weapons and reduction of damage to us from enemy firepower; ease in maneuvering and insuring the security of places where the flanks join to check enemy envelopment; ease in resisting continuous assaults by enemy tanks, armored combat vehicles and infantry troops; and benefits for holding fast for a long time and for fighting independently.

Fendui combat formations are composed of the combat formations of subordinate units and of directly commanded weapons fendui. Battalions (or companies), usually two echelons, and companies may also sometimes form a single echelon. The first echelon usually consists of two infantry companies (or platoons) or fewer than two infantry companies (or platoons) deployed in an echelon company position. It mission is as follows: to hold fast to the first echelon company (or platoon) position, to counterattack the continuous assaults of massed enemy tanks and infantry, using its firepower and tenacious combat movements to kill, wound and wear down the enemy, and to foil enemy attacks. Usually the second echelon consists of fewer than one infantry company (or platoon) and is arrayed in the second echelon company (or platoon) positions. Its mission is as follows: to hold fast to the second echelon company (or platoon) positions and prevent the enemy from developing an in- depth attack; to reinforce or replace the first echelon in defense; and to make counterattacks to wipe out intruding enemies.

When a company forms an echelon, usually this echelon consists of two platoons of troops deployed in-depth and in circles within strongpoints. Their mission is as follows: to hold fast to the position and to counterattack continuous assaults by enemy tanks, armored combat vehicles and infantry; to use a platoon of troops to reinforce company reserves made up of a certain number of anti-tank weapons and deploy in tunnels or in positions permitting concealed movement. Their mission is as follows: to be ready to move at any time to deal with unexpected situations; to conduct counterattacks to wipe out intruding enemies; and when necessary, they may reinforce or take the place of defending fendui.

Depending on the enemy situation, the terrain and the mission, platoons may deploy in triangular, circular, or echelon formation. Their mission is to hold fast to a strongpoint in front of or behind the company lines. Sometimes they may also hold fast to a position within a strongpoint.

Mortar fendui that are part of or that have been assigned to battalions usually are under direct command of and are centrally used by the battalion, and are deployed between the first and second echelon positions on favorable terrain between 1.5 and 2.5 kilometers distant from the front. Their task is to employ their firepower to support continuous combat by the first and second echelons. Sometimes they may also assign a mortar platoon subordinate to the battalion to the first echelon company. When a company is assigned a mortar fendui, it is under direct command of the company and is used by the company. It is deployed behind the enemy defense positions where it can bring its firepower to bear from concealed positions. Its mission is to use its firepower to wipe out enemy infantry troops and to suppress and wipe out enemy effects and weapons in defilade. When a battalion is assigned a recoilless gun fendui, it is usually made a part of anti-tank forces. When a company is assigned a recoilless gun fendui, it is usually assigned to a platoon, but

sometimes it may be placed under direct command of the company and assigned to a position that is greatly threatened by tanks or armored combat vehicles. Its mission is to attack and wipe out enemy tanks and armored combat vehicles attacking and intruding into our positions. Heavy machinegun companies are usually assigned to companies, one or two squads being placed under company command and the remainder being assigned to platoons for deployment in the frontlines of positions, on the flanks, and in permanent fortifications in the rear of positions, or else in field combat defenses. Their mission is to use their firepower to wipe out enemy infantry attacking and intruding into our positions and to fire at low-flying enemy aircraft. Antiaircraft machinegun fendui are under battalion command and are deployed near the command post where they are responsible for protecting it from air attacks. When a company is assigned an anti-aircraft machinegun fendui, it is controlled by the company and deployed close to the company command and observation post where its mission is to fight against low-flying enemy aircraft to protect the company command and observation post and main deployments against aerial attack, and to shoot down enemy armed helicopters and airborne troops. When necessary, they may be used to fight against ground targets. ATGM fendui assigned to battalions usually have their main strength assigned to the first echelon company with some troops being assigned to the anti-tank troops. When a company is assigned an ATGM fendui, it comes under company control and is deployed behind frontline positions in a place where it can use its firepower. Its mission is to do battle against enemy tanks and armored combat vehicles. Battalion anti- tank troops are usually made up of some recoilless gun and ATGM fendui troops as well as infantry fendui anti-tank teams and are deployed behind frontline positions in locations where concealed movement is possible. Mostly they are used to wipe out enemy armored targets and to plug nuclear breaches. When necessary, they occupy anti-tank position to carry out their mission. When a battalion is assigned an anti-tank gun fendui, it usually brings it under its direct command and uses it for its own purposes. Alternatively, some of the troops may be assigned to the first echelon company for deployment in the direction from which enemy tanks pose a threat. Alternatively, they may be deployed to anti-tank positions for steady struggle against enemy tanks. Tank fendui assigned to battalions usually serve as fire points, but sometimes some troops may be responsible for setting up ambushes. They are deployed in concealed terrain over which enemy tanks must pass within the battalion defense zone. Their mission is to attack and make deep thrusts into an enveloping enemy, to coordinate with counterattacking units to wipe out intruding enemies, and to insure the safety of flanks and points of contact. Light flamethrower fendui are usually assigned to platoons (or squads) for deployment in frontline trenches or in defense networks. Their mission is to wipe out attacking enemy infantry, and to use fire to destroy the observation devices and other technical weapons on enemy tanks and armored combat vehicles. Engineer fendui are usually under battalion (or company) command and are used as required. They are deployed near command and observation posts in a location where they may move in concealment. Their main mission is to provide technical guidance on engineering projects, to inspect and to build tunnels for three defensive uses, and to work with the infantry in the use of demolitions devices to attack and blow up enemy tanks and armored combat vehicles. Chemical warfare detection fendui (or teams) are usually commanded by battalions (or companies) for use as needed. They are deployed near command and observation posts in locations where they can move in concealment. Their main mission is to detect toxicants and radiation and

to check contamination and giving timely guidance to the fendui on protective measures. When necessary, they may also man observation posts.

d. Position Organization

The organization of a fendui's positions is decided by its mission, the enemy situation, existing defense works and terrain conditions. Basic requirements are as follows: full use of prepared defenses in existing tunnels and favorable terrain, reliance on strategic points to control mountain passes, valleys (and rivers), roads, and communications hubs. All strongpoints should be interdependent and mutually supporting for coordinated action. All positions should make irregular deployments suited to observation and the use of firepower, suited to the dispersed and concealed deployment of troops and weapons as well as the carrying out of movements, and suited to battle against tanks, infantry and airborne troops. They should form an independently defensible and mutually supporting whole that is both capable of resisting all enemy firepower attacks and the continuous assaults of large numbers of tanks and infantry troops and supports the annihilation of the enemy within the positions.

Battalion defense positions usually have the following make-up. First echelon company positions should be located in favorable terrain where firepower can be readily brought to bear, that is easily defended, and that where mutual support is possible. Position frontlines should be located on high ground obliquely facing the enemy with a screen of natural obstacles that has favorable terrain for observation by our troops and the use of firepower. The second echelon's positions should be located within the defense perimeter between 600 and 1,000 meters behind the frontlines on favorable land that permits solid defense.

Anti-tank positions can be made up of a network of positions, anti-tank weapon firing positions, and anti-tank obstacles, and should be linked to strategic defense points. Usually they have to be situated on favorable terrain in valleys, at transportation hubs and on both sides of main roads where the threat from enemy tanks is greatest. They are used for large scale destruction of enemy tanks and armored combat vehicles.

Battalion weapons firing positions include mortar positions, anti-tank gun positions and machine gun positions. Primary positions and alternate positions should be built for each kind of weapon. When necessary, temporary positions may also be built. The primary positions for mortars should be behind the first echelon company or near the second echelon company's positions on favorable terrain from which firepower can be brought to bear and movements concealed. Alternate positions should be on the flanks or to the rear of primary positions. Temporary positions should be near the first echelon company positions on concealed terrain suitable for attacks on an approaching enemy. Anti-tank and machine gun firing positions should be on well concealed terrain that lends itself to the tactical and technical capabilities of machine guns.

Battalion primary command posts should be located within the second echelon company defense perimeter on terrain that favors observation, concealment and command of fighting in the primary defense direction. The alternate command

post should be located on the real flank or to the rear of the primary command post.

The battalion logistics team should be deployed within the second echelon company defense perimeter or close to it on terrain that can be readily concealed.

Company defense positions are usually made up of frontline strongpoints, behind the lines strongpoints, mortar positions, network positions, ATGM positions, anti-aircraft firing positions and command and observation posts.

Frontline strongpoints are made up of first echelon platoon strongpoints, and they are the main positions for counterattacking enemy assaults. They should be located on terrain that permits firepower to be brought to bear and that is defensible and mutually supporting. Frontline positions should be located on high ground that faces the enemy obliquely and that is screened by natural obstacles. It should be terrain that is favorable for observation of the battlefield and for bringing firepower to bear. Behind the lines strongpoints are second echelon platoons positions. They are fall back positions from the frontline strongpoints and they prevent the enemy from launching an in-depth attack. They are nucleus positions for wiping out intruding enemies. They should be located on favorable terrain behind the lines to play a stabilizing role in defense.

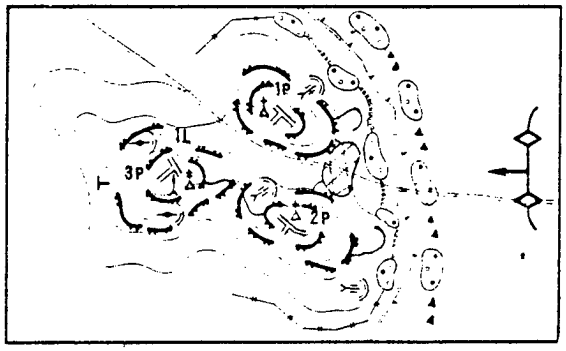
Mortar firing positions include primary firing positions, alternate firing positions and temporary firing positions. Primary firing positions should be located behind frontline strongpoints or close to behind-the-lines strongpoints where firepower can be brought to bear and where concealment and movement is possible. Alternate firing positions should be located on the flanks or behind the flanks of the primary positions. Temporary firing positions should be located on favorable terrain near frontline strongpoints or in front of frontline positions.

Network positions should be located on favorable terrain in valleys and along both sides of important roads where the enemy tank threat is greatest.

ATGM positions should be located behind the first echelon platoon in a location suitable for dispersal and concealment and where observation can be carried out and firepower brought to bear. Alternate firing positions should be built.

Anti-aircraft firing positions should be located near the command (and observation) post at a site that permits a view and firing in a circle.

The command (and observation) post should be sited so that it permits observation, permits command, permits concealment and permits the maintenance of contact between higher headquarters and subordinate units.



e. Firepower System

Fendui organization of fire support should be based on the enemy's situation, the mission, weapons capabilities, the terrain and the availability of alternate defense works. Principles regarding dispersal of weapons, concentration of firepower, stress on deployments and ease of movement should be carried out. Firepower should be concentrated against the enemy's main direction of attack and should consist of an in-depth firepower system arrayed in concentric circles to strike at infantry, aircraft and airborne landings. Requirements are full use of previously built weapons firing defense works that make for ease in centralized command and that have the densest firepower in sections threatened by tanks, that permit the power of weapons of all kinds to be brought fully to bear, and that combine various kinds of firepower with obstacles. They should be able to connect with a unit-built, continuous, multi-level firing network that goes from in front of the lines, the rear of the lines as well as the flanks of positions and from distant points to nearby points, with the emphasis on the nearby points, that combines firing from open and concealed positions and coordinates indirect and direct fire, flanking fire, oblique fire and counter fire.

Battalion firepower systems are usually organized to carry out the following missions: planning of anti-tank missile firepower and artillery firepower in locations that the enemy may occupy to begin attacks in order to destroy the enemy's offensive preparations.

The mission also calls for planning to use many kinds of firepower, principally anti-tank firepower from positions in front of the frontline, and particularly in places suited to enemy massed tank movements, in order to counter attacks by massed enemy tanks and motorized infantry. The zone for planning ATGM firepower is within 3,000 meters. Within 1,000 meters, planning should call for the deployment of tank and 85mm cannons at front line strongpoints. Within 300 meters, planning should call for 82mm recoilless gun and 40mm RPG firepower. In places where the enemy may dismount from vehicles, planning should call for artillery firepower. Within 400 meters, planning should call for rifles and machine guns to hit concentrated infantry firing sections.

For the plugging of breaches made by nuclear weapons, planning should call for artillery firepower and anti-tank firepower at places where the enemy may carry out nuclear attack.

Plans for the annihilation of intruding enemies should call for combat firepower from fendui supporting the counterattack and holding fast against areas in which the enemy may intrude and in pre-set counterattacking directions.

In order to check an enemy envelopment, planning should call for artillery and anti-tank firepower on the flanks and in terrain gaps between positions. Within the defense position perimeter in places suited to a concealed enemy approach, concealed firing points and counterfire points plus firepower to ambush enemy tanks should be established.

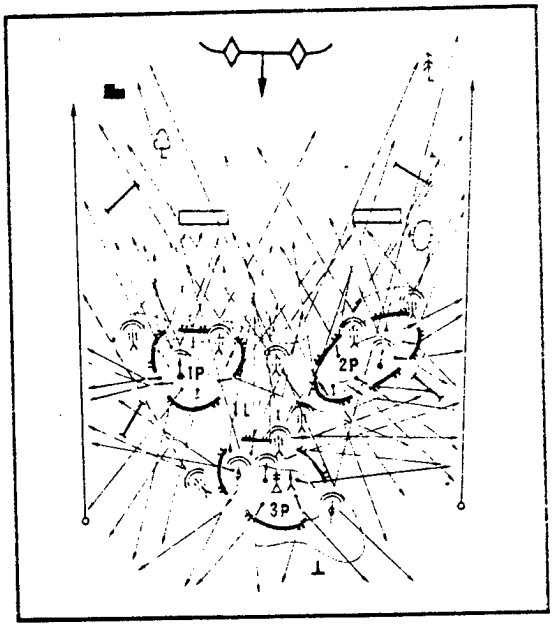
Planning for the purpose of holding fast to strategic points and to second echelon company positions should call for artillery plus all kinds of anti-tank weapons to form an interlocking fire network or "firing pocket" at strongpoints, from in front of second echelon company positions and flanks.

Support for fendui defending from tunnels should call for artillery firepower near the mouths of tunnels and on stretches that permit approach to the tunnels.

Air raid defense requires firepower made up of anti-aircraft machine guns, rifles and machine guns to fire at low flying aircraft.

Company (or platoon) firepower systems are made up of firepower to hit tanks, infantry, aircraft and airborne troops. Anti-tank firepower is made up of ATGMs, tanks, 85mm cannons, recoilless guns and rocket grenade launchers. ATGMs, tanks, 85mm cannons, and recoilless guns and rocket grenade launchers should be placed at 3,000, 800, 500 and 300 meters respectively. A circular network of intersecting fire should be set up in front of, at junction points between, on the flanks and in the rear of frontline platoon strongpoints. Behind the frontlines, behind-the-lines platoon strongpoints and company anti-tank weapons should be organized in a circular firing network. On concealed terrain that the enemy must cross, concealed firepower in the form of tank ambushes and hidden fire points should be set up. Plans should be made for the use of recoilless guns, 85mm cannon, tank and anti-tank fendui facing a pre-set counterattack position to knock out infantry firepower. This should be made to mortars, heavy machine guns, flamethrowers, rifles and machine guns. Within 400 meters of the front of platoon strongpoints in front of the defense line and on the flanks, machine guns, submachine guns (or rifles) should form a firepower network to hit infantry. In addition, in places in which the enemy may dismount from vehicles and launch an attack, plans should be drawn for the placement of mortars. Plans should be made to support counterattacking mortars in the present direction of counterattack. In front of and on the flanks of tunnels, plans should be made to halt enemy approach to the tunnels using mortars, machine guns, submachine guns (or rifles). Firepower for use against aircraft or airborne landings should consist of anti-aircraft machine guns or heavy machine guns primarily, plus some light machine guns, submachine guns (or rifles) to form an attack force against low or ultra-low flying aircraft. Emphasis should be placed on controlling the

direction of attack of enemy aircraft and on blocking the air space taken by enemy aircraft to intrude across ravines, valleys and forests. It is particularly important to protect ATGM firing positions, company command and observations posts and major defense strong points against air attack, and to prepare both flat trajector and downward fire. In places where helicopters may land troops, firepower should be made ready to attack landings in the air and on the ground.



When company commanders organize their firepower system, they should carefully assign the firing mission of weapons fendui in each and every platoon and company, and prescribe agreed upon landmarks and signals to fire, to cease firing and to designate targets.

f. Improving Defenses, Emplacement of Obstacles and Camouflaging

1) Improving Defenses

After a fendui occupies a position, it should become fully acquainted with the location, the number, and the quality of previous built tunnels and of permanent above ground defenses as a basis for the rapid construction of field warfare fortifications, NBC defenses and facilities for daily life, and the maintenance of the existing defense works. Network positions or other positions for attacks against tanks within the defense perimeter of different sizes may be built depending on the mission, the terrain, the enemy situation and operating conditions, and these should be dovetailed with the strongly fortified defenses. Basic requirements are that all defense works should serve both for concealment and for fighting, should be fully equipped and allow for the full exercise of firepower and movement. They should be strong, low, spread out, concealed and able to withstand attacks by all kinds of enemy firepower. They should have fairly complete facilities for defense against nuclear and chemical attacks and for daily life, and be able to insure that fendui will be able to fight, to hide, to move, and to live.

Improvement of defenses is usually carried out by doing the most important things first and less important things second, working on individual points first and on a wide area later, building firing positions first and trenches, communications trenches and networks of positions second, building combat facilities first and living facilities second in a planned way over a period of time. This work is done in conjunction with the clearing of fields of observation and fields of fire and improving the terrain.

2) Emplacement of Obstacles

Fendui should concentrate principal obstacle materials to emplace obstacles, particularly anti-tank obstacles, of many kinds and in many rows in the main defense direction and in areas over which tanks are likely to move. In emplacing obstacles, full use should be made of the terrain, and the terrain should be improved, natural obstacles and man-made obstacles being used in combination, anti-tank obstacles and anti-infantry obstacles being used in combination, exploding obstacles and non-exploding obstacles being used in combination, existing emplacements and temporary emplacements being used in combination, and obstacles and firepower working in combination, the emplaced obstacles not preventing the movement of our own units.

Fendui should work with engineers to use the plans of higher headquarters for the building and emplacement in front of front lines of tank trenches, tank precipices, tank traps, minefields, barbed wire, post obstacles and such obstacles to produce a multi-row obstacle zone. On the flanks and to the rear of all strongpoints, anti-tank and anti-infantry obstacles should be built and emplaced, and in areas that tanks must traverse, anti-tank minefields and other obstacles should be emplaced. Demolitions should be made ready for use at any time on possible enemy approach roads, bridges, fords and defiles.

3) Camouflage

Fendui should make full use of manufactured materials and materials at hand to fully camouflage personnel, defense works and positions so that they fit in with the terrain, the plant cover, the season and weather conditions. Camouflaging of weapons, vehicles and other technical equipment should be done so that they do not reflect light, infrared rays or rays that radar detection equipment can pick up, and all marks left by tracked vehicles should be erased. When conditions permit, decoy defense works, decoy positions, and decoy targets should be built so as to hide the real and reveal the false in order to deceive and confuse the enemy.

7. Position Control (See Management Section)

8. Active Cooperation and Close Coordination

Fendui should thoroughly organize coordination among individual fendui, with neighboring units, with support units and with the militia with regard to mission, times and places on the basis of the intentions of higher headquarters and their own decisions. Main requirements are for each fendui to establish a conception of the overall situation, to correctly understand the intentions of higher headquarters to cooperate actively, to lend mutual support and to strictly carry out all regulations regarding the coordination

of actions. Commanders should organize thoroughly coordination among all fendui, make full use of total strength, and set up and maintain smooth contact and communications in accordance with the principles of capabilities and uses of weapons of the various branches of service involved. They should regularly take action to support and promptly readjust or revive coordination that has been lost or damaged.

2. Requirements of Defensive Combat from Field Warfare Positions*

Defense from field warfare positions means defense that relies on field warfare positions. Usually it is conducted under conditions of very incomplete readiness. It is characterized by an emergency mission, short preparation time, less that fully complete organization of preparatory work and the building of positions from scratch.

In carrying out the defensive combat mission from field warfare positions, not only is it necessary to follow the basic principles of defensive combat from strong positions of selecting a primary direction of defense and strategic defense points, the organization of the defense of strongpoints, primarily against tanks, deployment of troops, laying out positions and a firepower system, actively cooperating and closely coordinating, but it is also to do the following:

a. Scientific Planning That Takes All Factors into Account with Emphasis on Rapid Carrying Out of Defense Preparations

Once fendui receive their mission, they should plan scientifically taking all factors into account all the preparatory work necessary for defensive combat on the basis of the intentions and the prescribed time limits of higher headquarters. Since the mission is of an emergency nature, the parallel work method should be used in preparing defenses. Most important is a firm attention to the deployment of troops, the firepower system, the building of defense works, the emplacement of obstacles and coordination among subordinate units.

b. Full Use of Terrain, Rapid Building of Defense Works, and Emplacement of Obstacles

1) Building of Defense Works

Defense works from which weapons are to be fired should be built in accordance with requirements of the firepower system and the terrain so that firepower can be readily brought to bear from concealed locations. Usually a protuberance from high ground, or both sides and the rear flank at the foot of mountains are selected to build defenses to lay down flanking fire, oblique fire and counterfire inflicting casualties on the enemy by surprise.

Trenches and Communications Trenches. These are usually gradually built up by improving individual shelters or squad positions. Two or three trenches are built at strategic point positions to permit movement. There should be one or two communications trenches connecting every defense work or position. Inside trenches and communications trenches, facilities for firing, observation, shelter, entry and exit and waiting should be built.

Shelters. These should be built in a location where terrain offers concealment and possibilities for defense are good, and they should allow entry into battle in good time. They should also be connected to combat defense via trenches and communications trenches to form a complex for hiding and fighting.

Anti-tank Network Positions. These should be built in front of frontline positions, behind the frontline and on the flanks as circumstances require in locations suited to the movement of tanks and armored combat vehicles. Within the network positions should be built firing positions, burrows, storage niches and living facilities.

Forward Exiting Positions. Depending on the enemy situation, these positions should be built in front of the frontline under control of friendly firepower so as to enable movement forward to and concealed withdrawal from favorable terrain.

Command (or Observation) Defense Works. These defense works should be built at points that permit observation as well as command and communications contact, but are well concealed and do not permit the approach of the enemy. Needed communications trenches are usually built to connect the command post with observation posts and shelters.

When building defense works, it is important to keep one's eyes on important matters, building primary defenses first and secondary ones later, working on frontline defenses first and defenses behind the lines second, first building weapons firing defenses and shelters and then building other fortifications, and first building rudimentary defenses, and then strengthening them. Furthermore, camouflaging should keep pace with construction. When in direct contact with the enemy, construction should be rushed even while combat is going on.

b. Emplacement of Obstacles

Emplacement at Key Points. The most important materials should be concentrated in the main direction, in the main sections and at strategic points.

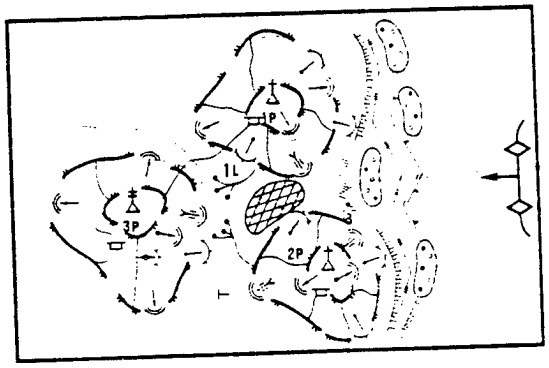
Suiting of General Methods to Specific Situations. The terrain should be used and improved, and wide use made of readily available materials to build anti-tank trenches, ditches, traps, drop offs, escarpments, counterscarpes, pickets, and rock obstacles as well as use narrow roads and valleys to create landslides that block routes limiting enemy tank movements.

Combining All Kinds of Obstacles. The differing character of various kinds of obstacles may be used for an ingenious combination of the natural and the man-made, the explosive and the non-explosive, those directed against infantry and those directed against tanks, the controlled and the uncontrolled, and the real and the decoy to make a mixture of irregular emplacements and overlapping emplacements in order to increase the blocking and explosive effects of obstacles.

Use in Combination with Firepower. The front line of obstacles should be within the effective range of our frontline trench weapons and artillery. The

rear of obstacles should be within about 50 meters distant from our frontline trenches.

A Combination of Prepared and Expedient Emplacements. Prepared emplacements should be the foundation, but a certain number of land mines should be kept on hand at strategic points for use nearby as required as the battle progresses.



No Hampering of the Movement of Our Own Units. When emplacing explosive obstacles along the front or behind the front line, a route must be left open for the return of combat outpost detachments and the movement forward of small detachments.

3. Requirements for Hasty Defense*

Hasty defenses are those that were not prepared in advance or for which preparation time was too short. Usually they are built under emergency conditions of enemy threat. They are characterized by too short a preparation time, usually being organized while fighting is in progress, fighting and preparation of the defenses going on at the same time. The enemy's situation is not very well known; the terrain is unfamiliar; troops deployments are not complete; and the firepower system has not yet been strictly developed. Defense work obstacles are weak; there are numerous gaps in defenses and flanks are exposed making it easy for the enemy to make a deep penetration to cut up defenses and envelop them.

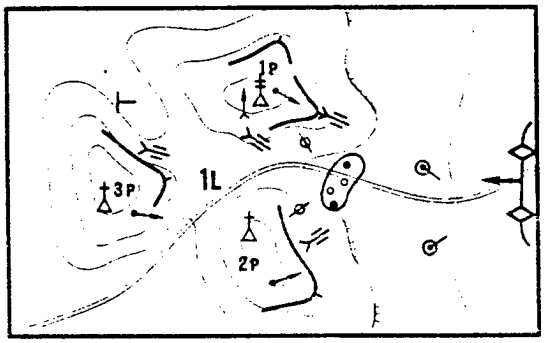
a. Occupation of Favorable Terrain

Swift occupation of favorable terrain is a prerequisite for seizing the initiative and for doing everything to avoid passivity in hasty defenses. Units must swiftly occupy favorable terrain or strengthen already occupied positions on the basis of combat intentions, the unit's mission and the enemy situation to make them bulwarks against enemy attack. Every effort should be made to have natural tank obstacles in front of positions, to be able to observe and bring firepower to bear, and to be able to organize circular defense lines. Defenses should be suitable for the concealed deployment of troops, for the disposition of firearms, for the movement of troops and weapons, and permit entrenchment to match the threat and insure the solidity of defense.

2. Rapid Deployment of Troops and Weapons

Once fendui have received orders, they should rapidly deploy troops and weapons on the occupied terrain, make rush repairs of defenses and be prepared to counterattack enemy assaults at any time. Fendui usually deploy as an echelon while building a fairly strong reserve as well. Main troop strength and weapons disperse in concealed deployment in the main direction of defense and strategic points. Some troops and weapons deploy in the secondary direction to resist enemy assaults, to hold fast to positions, to send forward troops to attack tanks, and to use the terrain to ambush enemy tanks and armored combat vehicles. Reserve forces should deploy behind the lines in places that afford concealed movement so as to be ready at any time to move in the direction of an enemy threat. Weapons assigned to the fendui should be deployed as far forward as possible in order to provide support to frontline combat. Command positions should be located at points that permit observation and command.

After the fendui has deployed its troops, it should immediately organize a firepower system. Organizing of firepower should be based on the kind of firepower, the terrain, possible enemy movement and particularly the movement of enemy tanks and armored combat vehicles in accordance with the principle of firearms dispersal and firepower concentration. First to be organized is firepower ahead of the front line in the main direction of defense, on the flanks and at juncture points, followed by the formation as quickly as possible of an intersecting firing network, primarily for hitting tanks consisting of point blank fire, flanking fire and oblique fire.



3. Organizing Even While Fighting, Preparing Even While Fighting

Makeshift defense is made under emergency conditions when the method of organizing preparations is different from defense of field positions. Usually it is not possible to prepare first and then fight; instead, one has to seize the time that the situation at the time allows and work under cover of firepower and smokescreens provided by higher headquarters to make fullest use of favorable terrain, fighting and organizing at the same time, and fighting and preparing at the same time. First to be completed is troop deployments, the firepower system and major defense works and obstacles in the main direction of defense. Next comes completion of preparations for the secondary

direction of defense, their improvement being done during combat. During the preparation process, special attention should be given to enhancement of observation and security and commanding the fendui to enter combat in good time as enemy movements dictate.

4. Full Knowledge of Battlefield Events and Calm and Decisive Command

During makeshift defense when the battlefield situation is changing dramatically and fendui commanders are in combat, not only is it necessary to organize observation and security, but one must personally observe to gain full knowledge of changes taking place on the battlefield, to decide at once the intention of enemy movements, and to make firm decisions. The multiple methods of radio communications, on-foot communications and simple signals should be used to provide continuous commands and coordinate the movements of all fendui at all times. In addition, attention should be given to maintaining contact with higher headquarters and adjacent units at all times so as to be able to obtain prompt support from higher headquarters and adjacent units.

4. Requirements for Nighttime Defensive Warfare*

Nighttime defense is defensive combat that entails reliance on prepared positions or on temporary positions built during darkness to resist enemy attacks. Darkness favors our concealed deployment of troops and weapons, the building of defense works, the emplacement of obstacles and camouflaging. It favors our use of trenches, communications trenches and favorable terrain for concealed movement of troops and weapons, or the organization of small teams for action in front of positions to kill, wound and wear down the enemy. It helps weaken the dominance of the enemy's technical equipment, decrease the speed of his attack and reduce damage resulting from his firepower. It is unfavorable for observation, firing, command, coordination and communications; and it opens us to surprise attack.

When fendui are defending at night, not only should they follow the general principles that apply to daytime defense, but they should also do the following:

a. Enhance Observation and Detection and Strictly Guard Against Enemy Surprise Attacks

In nighttime defense, fendui should send out observers to frontline positions or to forward positions that permit easy observation, and they should send out hidden sentries to detect the concealed approach of the enemy. They should send out patrols to positions ahead of the front, in gaps in the terrain and on the flanks. They must strictly control lights and flames and improve camouflage. When they make direct contact with the enemy, small combat teams may be dispatched to conduct raids or to monitor the enemy to determine the disposition of his forces and the possible intentions of enemy nighttime movements, and to guard against surprise attacks.

b. Buttressing the Defensive Strength of Strategic Points Along the Front and Strictly Controlling the Rear Flanks and Gaps in the Terrain

Fendui nighttime defense troops and weapons should be deployed forward to narrow gaps in the terrain and to increase the concentration of firepower ahead of the front and in gaps in the terrain. As daytime defense turns into nighttime defense, some weapons, particularly anti-tank weapons, may be moved forward, and the second echelon troops may be transferred to bolster the first echelon's defensive strength. At the same time, firepower and obstacles can strictly control the flanks, the rear flanks and gaps in the terrain to buttress the solidity of the defense.

c. Active Combat Against Enemy Night Sighting and Illumination Devices

1) Organization of a combination of reconnaissance, visual reconnaissance and reconnaissance using devices for prompt discovery of the location of enemy night sighting devices and illumination posts.

2) Strict camouflaging. Positions, defense works, weapons and personnel must be strictly camouflaged and reflecting objects must be covered so they fit into the surrounding terrain. Yellowish white camouflage should be used under moonlight to distort readings on enemy night sighting devices.

3) Elimination of inflammables from within defense positions to prevent the enemy from igniting them.

4) Smokescreen to Confuse. Smokescreen shells should be fired as needed to confuse enemy observation.

5) Deception and Confusion. Use of decoy defense works, decoy targets, simulated sources of infra-red and light emitting sites to deceive the enemy.

6) Light Jamming. Use of counter illumination to blind enemy observation through night sighting device.

7) Destruction of Firepower. Prompt discovery of the location of enemy night sighting devices and the concentration of firepower or reporting to higher headquarters for their destruction.

d. Carrying Forward of a Spirit of Independent Combat by Small Teams for Active Attacks Against the Enemy

During nighttime defense, fendui should fully carry forward a spirit of independent combat by small teams using all manner of means to lure, confuse or deceive the enemy, and they should use point-blank firepower and small team raids, ambushes, thrusts ahead of positions, counterattacks and such combat actions in active attacks against the enemy.

Forward Command and a Good Job of Communicating

Fendui commanders should be located as far forward as possible to insure that the fendui receives commands promptly and goes into battle in good time. Deputies can go to the first echelon to bolster organization of command. Communications should be made as simple, as workable and as reliable as possible. Before fighting breaks out, on-foot and simple signaling should predominate, but once fighting has begun, radio communications should become

paramount and be used in conjunction with other forms of communications. Platoons and below should use on-foot communications and simple signals.

5. Requirements for Urban Defensive Warfare

Urban Defense means defense to hold fast to or use cities. It is characterized by ease in making use of total military and civilian power, ease in building strong defense positions, ease in organizing a multi-level firing network using many lanes of fire and the deployment of troops and weapons in dispersed concealment, and ease in the wideranging movement of small teams. Urban defense does not permit ease of observation, firing, coordination and command, and it is prone to attacks by enemy firepower.

a. Use of solid structures for the building of strongpoint style defensive positions.

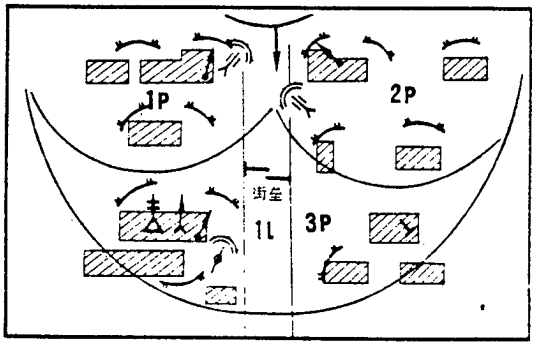
Strongpoints are the primary form of unit organization of urban defense. Consequently, units should act with the requirements of the enemy situation, their mission, the city streets and the status of previously built urban defense fortifications in mind to build strategic points within the defense perimeter into circles of strongpoint-style defense positions that use sturdy structures and roads as their backbone and that are used in close combination with defense obstacles. Strategic points for urban defense are usually selected along the main direction of enemy attack and are able to cover the whole defense area and be close to crucial sturdy structures or favorable terrain. Fendui may establish front line strongpoints and strongpoints behind the frontline. Each strongpoint should form a circular defense perimeter, and gaps in between should be connected by all kinds of obstacles and controlled by firepower.

b. Assigning Few and Holding Back Many in the Deployment of Troops to Key Points

In the deployment of troops for urban defense, troops must be concentrated to hold key points, few being assigned and many held back to keep control of a certain number of reserves. For this reason, fendui should act on the basis of higher headquarters' intentions, the mission they have received, the enemy situation and urban buildings to concentrate their troops and weapons for use in the main direction from which the enemy is likely to attack to hold strategic points. In making dispositions, some troops should be assigned to hold buildings, but most of the troops should be held in streets or in cellars. Fendui assigned to hold buildings should concentrate on holding the bottom floors with a small number of troops controlling the middle and top floors.

When a fendui defends a neighborhood or part of a neighborhood, it may be deployed in two echelons. If several buildings are being defended, it may deploy in a single echelon or in a group. When it forms two echelons, the first echelon is deployed in the main buildings and street defenses in the front line, and the second echelon is deployed behind the line to control major streets. In buildings on plazas and in streets, reserves may be deployed behind the main line in underground facilities where they can move. Command (or observation) posts are deployed in main position areas that are connected

by tunnels permitting observation and command. Small numbers of troops may be dispatched as needed for deployment on favorable terrain at the front where the enemy may approach in concealment to control enemy approach areas to conduct harassing and blocking attacks on the enemy. Ambush teams may also be organized in the defense area for use on the two sides of streets suited to enemy deployment and envelopment, or for the ambush in plazas of enemy tanks and motorized infantry.



Mortars are usually deployed in depth in courtyards, plazas, or public parks suited to concealed firing and movement. Sometimes, some mortars may be deployed on the roofs of sturdy buildings. Recoilless guns are usually deployed on both sides of streets and lanes or at intersections, in street barricades and at the corners of buildings in the direction that faces the greater threat from tanks and armored combat vehicles. Anti-tank missiles are usually arrayed at major street corners ahead of the frontline, on the ground floor of sturdy buildings, behind street barricades or in locations that have a broad field of vision or where concealed movement is possible. When necessary, some may be deployed behind the line on favorable terrain for longitudinal firing. Anti-aircraft machine guns are arrayed close to command (or observation) posts on the terraces of high buildings or in plazas. Heavy machine guns are usually deployed on the middle or lower floors of buildings, in street barricade defenses, or at the moths of tunnels. A small number of machine guns may also be deployed or the top floors of buildings or at anti-aircraft defenses on rooftops. Light flamethrowers are usually deployed at the frontline or at street intersections within the defense perimeter, behind compound walls or on the bottom floors of buildings.

When militia are attached, they may be mixed in with infantry fendui or be organized separately. Usually they may be used to guard fendui flank positions, or they may have responsibility for conducting ambushes and raids, for attacking airborne troops or for supply tasks.

c. Organization of a Multi-ring Circular Firepower System

Fendui should organize multi-ring circular firepower systems to meet the possible movements of the enemy, the nature of structures and the capabilities of weapons. They should achieve a dispersal of weapons and a concentration of firepower that combines firepower to attack tanks and firepower to attack

infantry, a combination of firepower from above and below, the overt and the covert. and a combination of combat at close quarters and street longitudinal firepower to make most use of the power of curved trajectory weapons. They should organize an intersecting firepower network consisting of point-blank fire, flanking fire and oblique fire against sections through which the enemy may score breakthroughs, and along streets and alleys, plazas, gaps in the terrain and intersections through which the enemy may fan out after having scored a breakthrough.

Firepower against tanks should be arrayed within 3,000 meters in front of the frontline where the firepower of anti-tank missiles may be brought to bear on areas of approach by enemy armored targets. Within 500 meters in front of the front, in the direction in which the enemy tank threat is greater, recoilless gun firepower should be planned. Within 300 meters, rocket launcher firepower should be planned. At strongpoints along the front, all kinds of anti-tank weapons and equipment should produce a fire zone to attack and blow up enemy tanks. Within the defense position perimeter in the streets and plazas where enemy tanks can roam easily, rocket launchers and anti-tank teams should form many fields of fire for ambush.

Firepower for attacks on infantry should be located within 400 meters out in front of the frontline where sub-machine guns (or infantry rifles) and machine guns make up a firepower network to attack infantry. Mortars should be charged with interdictory fire and the massing of firepower to attack places that the enemy may assault or break through. Firing zones against infantry should be set up for major road junctions, important buildings and gaps that can be used for approach. Heavy machine gun flanking fire and oblique fire as well as mortars should control dead angles and concealed places usable for approach. Hidden firing points may be set up at street corners at the bottoms of projecting walls, and at the mouths of roads. Bunkers and middle-of-the-street firepower emplacements may be set up at road intersections.

Anti-aircraft machine guns and some light and heavy machine guns should be designated firepower for attacks against aircraft and against airborne landings, and they should be deployed along the front and behind the front on the terraces of high buidings or on plazas with the mission of firing on aircraft. They should be used in combination with sub-machine guns (or infantry rifles) occupying the top floors of buildings to form an intersecting fire network within a certain area.

In the organization of a firepower system, provision must be made for both primary firing positions for main weapons and for alternate and temporary firing positions as well so as to be able to move firepower.

d. Building of Defense Works That Can Be Used Both for Fighting and Hiding, and Emplacement of Many Kinds of Obstacles

Every effort should be made to make fendui urban defense works strong, concealed and dispersed to serve as places for fighting, for hiding, for moving, and for living. Buildings being defended should be strong and able to take fire and have usable underground facilities. Flammable buildings or buildings likely to collapse as well as structures that stand alone should be avoided. When buildings are used for defense, sandbags may be used to block

doors and windows and to alter staircase openings, halls and cellars. Observation and firing ports may be made in them to form weapons firing positions. Passageways may be opened between floors and between rooms, and passages may be cleared through basement rooms or tunnels. Flammable materials should be removed and both electric power and gas supply cut off. Connecting covered passageways or overpasses should be built between all buildings and between all basement rooms (or tunnels). All buildings that cannot be readily defended or that get in the way of buildings to be defended should be razed. If circumstances warrant, decoy positions may be set up.

Construction of street barricade defenses. Street barricades with multiple fields of fire that either completely block or intersect should be built at the intersections of major roads. The length of these barricades will depend on the width of the roads, and they will be connected by passageways to nearby buildings. While building barricades, rifle and gun firing ports should be built. In addition, permanent firepower points should be set up at major road intersections and street corners.

Obstacles should be emplaced in key areas so that firepower and obstacles may be used in combination. Anti-tank and anti-personnel obstacles should be used in combination; explosive and non-explosive obstacles should be used in combination; fixed and movable obstacles should be used in combination; and prepared emplacements and temporary emplacements should be used in combination. Frontline obstacles should be set up in an in-depth, multiple row obstacle system. fendui should be sure to build moats around them and to make full use of natural streams. Within the defense perimeter, emphasis should be on the emplacement of controlled and explosive obstacles. In places suited to the approach of tanks or infantry, anti-tank and anti-personnel land mines should be buried and other non-explosive obstacles should also be implanted. In addition, preparations should be made for the dynamiting of buildings in neighboring streets, of bridges and of major streets. Within the obstacle zone a route must be left open for our own forces, but it must be under control of our firepower. In order to deceive and confuse the enemy while concealing ourselves, various actions have to be taken for the strict camouflaging of defenses and obstacles in order to conceal the real and reveal the decoys.

e. Independent Combat, Seesaw Struggles, Annihilation of the Enemy at Close Quarters

When organizing for battle, fendui must thoroughly and painstakingly make combat preparations by making full use of the role of militia and the mass of people to form a total force. They must establish the idea of people fighting for themselves, teams fighting for themselves and squads fighting for themselves. In the course of battle, they must carry forward a combat style of daring to fight and fighting wildly, of resourcefulness and flexibility. Even under most daunting circumstances, one must be adept at independently and autonomously organizing and using his own strength to hold fast to strategic points and important buildings and tunnels. Should the enemy effect a penetration, he should rely on tunnels and strong buildings to hold fast tenaciously and seize battle opportunities to launch counterattacks by small groups over many routes, fighting the enemy back and forth on every floor of every building to hold the position.

f. Strengthening Control of Tunnels and of Daily Life (See control section)

g. Full Reliance on the Masses in the Conduct of Joint Military and Civilian Defense

During battle to defend cities, fendui should carry out collective unified command in conjunction with militia within the defense zone, analyzing the enemy situation and working out battle tactics together for joint fulfillment of the defense mission. When militia have been assigned, they should be given whatever mission they are able to carry out as circumstances require. Usually they may be used to hold positions on the fendui's flanks, or they may be used in ambushes, in raids, or to attack airborne landings. Initiative should be taken to establish contact with militia and the mass of people in plants and mines and in business enterprises, organizing them to move ammunition to the front, to rescue the wounded and to be responsible for fire protection and maintenance of social order.

6. Requirements For Coastal Islet Defensive Warfare

Coastal islet defense means use of islets to defend coastal areas. China's seacoast has a complex topography that very adversely affects fendui's defensive combat. Mountainous seacoasts: Mountainous seacoasts favor selection of strategic points for defense, for the building of strong positions and for digging defenses in inaccessible areas. They do not favor enemy deployments, landings or the development of in-depth offensives. Hilly seacoasts favor our building of strong defense works; however, they also favor marine movements, deployments and landings by the enemy. The building along the coast of sea walls or of flooded paddy fields, and coastal streams and ditches hamper the movements of enemy tanks and armored combat vehicles while benefiting our steady counterattacks against the enemy. However, the ground water table is high and the soil is loose causing great difficulties in the building of defenses. Islets permit major deployments of our troops, the building of tunnels and of strong positions in which permanent fortifications are the mainstay, and entrenchment in places that are difficult to reach to enable holding out for a long time. However, space for combat is small and is prone to enemy blockade and encirclement. Reinforcement from higher headquarters, supply of materials, and storing of supplies is difficult making it necessary to go it alone for the most part.

In addition, the sea coast and islets have much rain and fog; the air is wet, the weather changeable and ocean waves frequent. This plus the different tidal patterns between one place and another adversely affects both the enemy's and our own combat actions.

a. Selection of Strategic Defense Points

Strategic defense points are usually designated by higher headquarters. When fendui make the selection, they should do so bearing in mind the intentions of higher headquarters, the fendui's mission and the topography, selecting high ground, villages or coastal promontories of tactical importance facing in the direction suited to enemy landings. The number of strategic points from which enemy landings can be controlled, from which tanks, armored combat vehicles and hovercraft can be hit, from which the enemy can be blocked from expanding in depth, from which observation, firing and command can be done, from which

positions can be held independently and in which concealed movement can be carried out that are needed by a battalion is usually two or three, and by a company usually one or two.

b. Troop Deployment

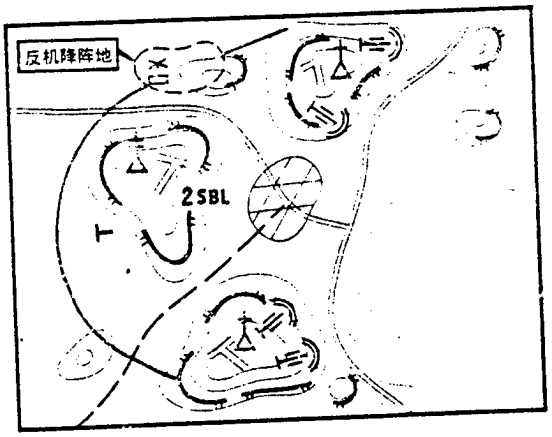
When deploying troops, fendui should emphasize the placement of troops and weapons on the basis of the intentions of higher headquarters, the fendui's mission, the enemy situation, the terrain and the pattern of the tides. They should put into effect the principle of committing few and keeping large numbers in reserve, concentrate most troops and weapons in the direction of the primary defense and use some troops to defend in the secondary direction, making in-depth, dispersed and concealed dispositions. The first echelon (reserve fendui) should hold frontline strongpoints, killing, wounding and wearing down the enemy, wiping out the enemy at water's edge beachheads and in front of defense positions. The second echelon should hold strongpoints behind the frontline to block the enemy from expanding in depth and should assist or replace the first echelon in combat, employing counterattacks to wipe out intruding enemies and working with adjacent units to wipe out enemies who have landed by air.

Anti-tank units (or teams) using anti-tank weapons as their main reliance should be arrayed in the direction most likely to be threatened by enemy tanks, where they rely on defensive positions and use defense works and favorable terrain to destroy enemy tanks and armored combat vehicles. Militia may be made a part of reserves; alternatively, they may defend in the secondary direction independently and coordinate with fendui in resisting enemy landings, in wiping out airborne enemies and in taking over logistical duties. Usually 85mm cannons are under battalion or company control and deployed in front of coastal promontories or not very deeply in the rear on favorable terrain suited to observation and firing from which an intersecting field of fire can be created against beachheads to destroy enemy landings and landing craft, destroy close-in enemy craft and minesweepers, control the enemy's opening of water and beach routes, and wipe out tanks and armored combat vehicles that are assaulting the land. Usually battalion recoilless guns are assigned to companies (or platoons) and made a part of anti-tank units (or teams). They are deployed in the frontlines or behind them on terrain suited to hitting tanks and armored combat vehicles, to destroying enemies storming the beaches to make landings, landing craft and tanks and armored combat vehicles assaulting the land. Battalion mortars are usually assigned to companies and are concentrated for use behind the lines on concealed terrain from which they can control dead angles on beaches and can support combat by the whole company to wipe out enemy infantry wading through the water and storming the beaches to land, to wipe out enemies who have intruded into positions and those landed by air, or to carry out confusion firing. Anti-aircraft machine guns may be assigned to companies for concentrated use. They are deployed on favorable terrain suited to attacking low flying enemy aircraft and controlling beachheads. Sometimes they may be given dispersed deployment at separate strongpoints to form aerial and beachhead intersecting firepower that supports the safety from aerial attack of artillery positions and command (or observation) posts. Attacks against helicopters and enemy landings from aircraft uses point-blank firepower to attach hovercraft and landing troops. Most heavy machine guns may be arrayed

along the front, with some of them behind the front, and they may set up hidden firepower points. Firing locations should be sited on terrain where firing networks may be formed against beachheads, positions, flanks and gaps in the terrain to wipe out wading enemy infantry that is storming the beaches and intruding into positions and to attack low flying aircraft and enemies making airborne landings. Light flamethrowers may be assigned to squads for deployment at the front or in network style positions to wipe out assaulting groups of enemy infantry. When anti-tank missile platoon or squad reinforcement is received, it is usually assigned to favorable terrain that can be concealed and from which firepower can be brought to bear to wipe out enemy landings and landing craft.

Organization of Positions

Reserve fendui should organize rings of defense positions in which tunnels and permanent defense works are the main components used in combination with field fortifications that are suited to the fendui's mission, the enemy's situation and the terrain. Fendui defense positions are usually made up of front line strongpoints, behind the lines strongpoints, artillery positions and command and observation posts. When necessary, a network of positions and positions against airborne landings are built. All positions must be able to provide support to each other as well as to fight independently and have complete facilities for the three defenses. They must also be suitable for observation and for bringing firepower to bear, making them useful for firing, for hiding, for maneuvering, and for living.



Frontline strong points are the main positions for resisting enemy landings and for the killing of large numbers of the enemy on the beachhead at the water's edge. They are usually built on promontories or on coastal heights suitable for enemy landings. The defense front should be near the high tide line and both permit observation and bringing firepower to bear. From them, it should be possible to direct both flat trajectory and level fire against landing craft approaching the shore and enemies landing on the island, and to control favorable terrain at the beachhead. When the defense front is fairly far from the high tide line, favorable terrain for the building of auxiliary fortifications should be selected at places where the enemy is likely to land.

Behind the line strongpoints are important positions for preventing the enemy from expanding in depth and for wiping out intruding enemies. Usually they are built on main routes that are easily blocked, or on terrain from which support to frontline combat can be provided to form in-depth strategic defense points.

Artillery positions usually occupied by 85mm cannon and mortars organic to fendui.

Position networks are usually built in front of or behind defense positions on terrain suitable for enemy tank movements.

Anti-airborne positions are usually selected on the flanks or behind the flanks of behind-the-line strongpoints at places where the enemy may make airborne landings. Depending on circumstances, defense works may be built and anti-airborne landing obstacles emplaced.

Command and observation posts are usually built on terrain behind the line that is favorable for observation and command.

4. Firepower System

Fendui should follow the principles of weapons dispersal and firepower concentration and suitability for command and maneuver, thoroughly organizing their firepower. They should concentrate their main firepower in the main direction suitable for the approach of enemy ships, hovercraft, tanks and armored combat vehicles and on places where landings may be made. They should achieve a combination of artillery fire and infantry firepower, of flat trajectory and indirect fire, of behind-the-lines fire and frontline firepower, of frontal fire and flanking fire, oblique fire, counter fire, higher headquarters fire and their own fendui's firepower and obstacles, organizing multiple fire networks extending from far away to nearby and planning the concentration of firing on enemy landing stretches and in areas between adjacent strategic points and strongpoints.

a. Firepower at the Water's Edge, On Beachheads and In Front of Positions

Fendui may organize three fields of firepower against the inshore water's edge, beachheads and in front of its own positions. The first field of fire should be made up of anti-tank missile and 85mm cannon fire to attack enemy landing ships and hovercraft at a distance from the shore ranging from 3,000 to 1,000 meters. The second of field of fire should be made up of 85mm cannon, mortars and anti-aircraft machine gun fire to hit enemy landing vehicles, hovercraft and infantry at distances ranging from 1,000 to 300 meters. The third field of fire should be made up of 85mm cannot, mortar, recoilless gun, rocket launcher, anti-aircraft machine gun and heavy machine gun fire plus all kinds of infantry weapons deployed along the front to hit enemy tanks, armored combat vehicles, hovercraft and infantry storming the beaches through the water and attacking the land. fendui should additionally organize firepower to hit hovercraft on terrain that is flat but not suitable for landings by enemy tanks and armored combat vehicles.

b. Firepower Inside Positions, on Flanks and in Terrain Gaps

Mortar, recoilless gun, rocket launcher, rifle and machine gun firepower should be organized against stretches along the front where the enemy may score breakthroughs in order to wall off the breach. Recoilless gun and rocket launcher fire for the destruction of armored targets should be organized against stretches between strongpoints (or strategic points) and within network positions that are suitable for enemy movement. On stretches not suited to enemy tank and armored combat vehicle movement, mortar, infantry and machine gun firepower should be organized to hit infantry.

Mortars, anti-tank weapons, rifles and machine guns should be assembled to prevent an enemy envelopment on the flanks of positions and through gaps in the terrain on stretches suited to concealed approach by enemy tanks, armored combat vehicles, hovercraft and infantry.

Mortars, anti-aircraft machine guns and anti-tank weapons should be assembled in the prescribed direction for counterattack to support the actions of counterattacking fendui. Mortars, anti-tank weapons, anti-aircraft machine guns and heavy machine guns should be assembled close to tunnels to halt the approach of enemy tanks, armored combat vehicles and infantry and to support fendui fighting to hold the tunnels.

c. Firepower for Attacks Against Helicopters and To Wipe Out Airborne Landings

Organization of anti-aircraft machine guns, infantry and machine guns to attack low flying helicopters: Anti-aircraft machine guns, rifles, and machine guns should be assembled at points where the enemy may make airborne landings to attack hovering and landing helicopters. Mortars, some anti-tank weapons, rifles and machine guns should be assembled to wipe out the landing enemy.

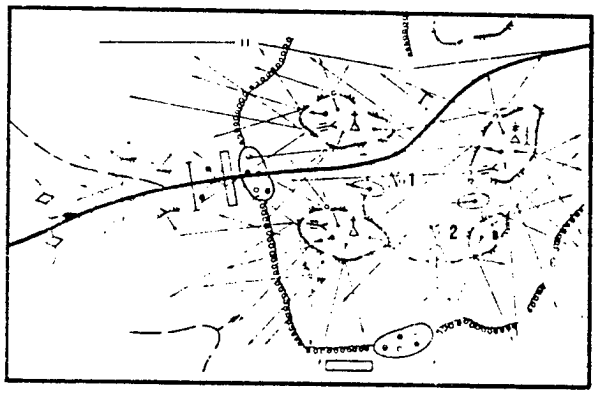
7. Requirements for Defensive Warfare on Deserts, the Gobi and Grasslands

Defensive combat on deserts, the Gobi and grasslands is combat under special conditions of the same character as field warfare position defense. These three kinds of terrain have a definite influence on fendui' defensive combat. Under ordinary circumstances, the field of vision is wide and observation distances are greater than under usual conditions. This makes possible the early detection of enemy movements. However, because of intense sunlight, in certain places mirages may occur sometimes making the observation of targets indistinct. When the wind blows, dust and sand fill the air decreasing visibility. Light weapons, particularly company fired weapons, jam easily; optical instruments are prone to damage; radio signals are weakened and communications distances shortened with adverse consequences for communications. Fortifications collapse easily and may frequently be filled with sand. It is extremely difficult to build fortifications in shifting sand dune areas. Finding materials for obstacles is difficult in deserts and the Gobi; it is difficult to anchor wooden stakes; and explosive obstacles such as buried land mines tend to sink and lose their function. Camouflage is difficult and easily detected by aerial and ground reconnaissance. Resupply is difficult and water problems are especially prominent. The serious water shortage and the abominable climatic conditions make personnel become ill easily and impair their health. The wide swings in temperature between day and night make personnel prone to the common cold.

a. Organization of In-depth Ring Defenses

Fendui should focus on resistance to attacks coming from different directions when organizing their defenses, making full use of the terrain to organize in-depth rings of defense that are able to fight independently.

In order to increase toughness of defense, fendui defense positions should have a certain amount of depth and avoid deployments in a single line insofar as possible. Rings should be used for the deployment of troops, for firepower support systems, in the building of defenses, and in the emplacement of obstacles. The division of forces equally around the total circumference of defenses is to be avoided. Instead, there should be key points and troops should be deployed at points that the enemy may outflank and envelop. The building of in-depth defenses should not be solely toward the front; frequently, it is even more important for them to face threatened rear flanks. In planning firepower and the emplacement of obstacles, it is likewise necessary to concentrate on carrying out a circumferential defense so as to foil attacks coming from any direction.



b. Strict Organization of Defense Against Tanks

Fendui should make full use of the terrain and they should improve it by emplacing all sorts of obstacles that force the enemy to detour through unfavorable terrain containing bushes, rippling sand and salt patches, or that lengthens exposure of the enemy's flanks to our positions. Favorable terrain containing grass clumps, sand dunes or gullies and ridges should be used for the dispatch of anti-tank teams to ambush enemy tanks approaching or spreading our toward our positions. Anti-tank weapons should be deployed in depth mostly in the direction best suited to tank movements, and priorities for the movement of anti-tank weapons should be set to enable defense positions to bring to bear fairly powerful anti-tank firepower in any direction.

c. Buttressing Support to the Flanks and Toward Gaps in the Terrain

When selecting defense positions, full use should be made of natural obstacles on the flanks of positions or of favorable terrain as a screen. Insofar as possible, terrain gaps should be in areas that the enemy cannot traverse easily and should be controlled by required troops and firepower, with obstacles added to afford protection. Some temporary anti-tank positions should be built on the flanks and in terrain gaps as circumstances warrant. Small fendui may be sent out at night to occupy the flanks and terrain gaps.

d. Adroit Movement of Troops and Firepower

Adroit movement of troops and firepower is an important link in maintenance of a strong defense. Second echelons should be sited to permit movement and used to counterattack and wipe out the enemy, to retake positions or to occupy positions temporarily and resist enemy attacks in the direction threatened by the enemy. The deployment of all kinds of weapons has to be done so that they can bring to bear the maximum amount of firepower and mobility. It is important to spell out the priorities for movement of firepower when assigning missions to mortar fendui. Troop deployments should be made with considerable adroitness to enable their mutual support and coordinated action so as to be able to carry out all forms of troop and firepower movements, the defense thereby becoming a tightly linked organic whole.

e. Improved Water and Medical Support

Fendui should set strict standards and discipline as the water supply requires and use all manufactured or readily available vessels for the large scale storage of water. The defense of water sources within the defense perimeter should be a major goal, and they should be regularly checked and sterilized. When the defense perimeter lacks sources of water or when streams stop flowing, fendui should devise ways to find water and to control the use of water.

Medical support should be linked to local circumstances, and education in the prevention of illness should be given to all personnel. A mass program of self care and mutual care should be launched, a good job done in food and water sanitation, and sick people found and treated promptly. Prevention and control of epidemic and communicable diseases should be particularly watched.

f. Strengthening Camouflage and the Covering of Defenses

Fendui should make wide use of both manufactured materials and those at hand for good camouflage, and they should strictly enforce camouflage discipline. By way of concealing defensive deployments and positions, they can build decoy positions and set up decoy targets to deceive the enemy along the frontline, on the flanks and behind the frontline of defenses or in gaps in the terrain. At night, they should be particularly on the alert to combat enemy night sighting devices. When building, they should cover bunkers, trenches, communications trenches and shelters as circumstances warrant, and they should particularly cover the tops of shelters.

g. Firm and Skillful Command

During combat in the desert, the Gobi and in grasslands, commanders must possess indomitable determination and conviction about winning. They must dare to fight alone and not waver in the slightest no matter how complex and serious the situation they face remaining composed, courageous and resolute. Before battle begins, they should draw up several plans, and during battle, they should judge the hour and size up the situation, take firm grip on key matters, accurately judge situations, and adroitly and ingeniously make use of troops and firepower in active attack on the enemy in an effort to seize the initiative and avoid being placed in a passive situation. They should use to the full the power of political work in China's armed forces to insure fulfillment of the defense mission.

8. Requirements of Defensive Warfare Under Frigid Conditions

Defensive combat under frigid conditions means defensive combat that is sustained for a fairly long period of time when the average daily temperature is -15 degrees Centigrade or below and has marked effect on combat actions. During frigid conditions, personnel are prone to develop frostbite and the number of non-combat casualties increases. Performance of weapons and materials declines and observation and firing are impaired. Building of fortifications is difficult and work efficiency is low. Performance of communications devices declines and communications effectiveness is rather poor. The destructiveness and ability to inflict casualties of nuclear and chemical weapons increases. Logistical support tasks are numerous.

a. Correct Choice of the Major Direction of Defense and Strategic Points

When selecting the major direction of defense and strategic points, fendui commanders should bear in mind the nature of severe cold and act in accordance with the enemy situation, the terrain, the intention of higher headquarters and the fendui's mission to select as the direction of primary defense the roads, the gentle slopes and the shallow snow suited to the enemy in carrying out an attack. Strategic defense points should be selected at major points where defensive security considerations intersect and that play a primary role in successful defense. Places to be selected include narrow roads that can be easily blocked, slopes that can be controlled and shallow snow areas; those that favor attacks on tanks and guard against envelopment by enemy ski fendui, those that can control a whole area from a single point for the building of rings of defenses to be held alone, and those that permit mutual support and close coordination.

When selecting the primary defense direction and strategic points, the possibility of the enemy's temporary change in the main direction of attack should be completely foreseen and plans changed, making sure to change as the enemy changes to insure the viability of defense.

b. Taking of Effective Actions To Increase the Speed of Construction Work

When fendui are organizing construction work, they must carefully reconnoiter and thoroughly plan. Reconnoitering for construction has to be done first for the frontline and later for in-depth defenses, the main direction first and

secondary directions next; defenses and obstacles against tanks first and defenses and obstacles against infantry second, the work planned sequentially. Next project operations plans should be drawn up. These should include the kinds, numbers, locations and priority for construction of defenses and obstacles, work organization, methods and requirements, kinds and amounts of materials and equipment required, and the time limit for completion of construction work. Various techniques should be employed to hasten construction work. Fendui should work night and day, and should they have to interrupt work, they should use straw, ashes and dry earth to cover the work site to prevent it from refreezing. In order to speed up work, everything possible should be done to use and transform the terrain through the use of various methods such as dynamiting, digging, and heating. They should use ice, snow and frozen earth to build defenses that can both bring firepower to bear and can conceal strongholds. In an emergency, water can be poured over piled snow to build defenses. When time is pressing, snow, ice and frozen earth may be used to build half mound style defenses, the parapets of which should be thickened with snow to no less than 2 meters. If ice is used, it should be no less than 1.5 meters thick. If frozen earth is used, it should be no less than 1 meter thick. When obstacles are emplaced in frigid conditions, all possible should be done to use and transform natural obstacles. Wire entanglement posts and pickets should be emplaced following the sequence of digging holes, putting in the poles or stakes, filling in with dirt, pouring water on the dirt, and allowing it to freeze. In snow drift areas, more concertina wire should be put up. In order to stop the movement of ski fendui, string can be put on barbed wire to trigger land mines. A combination of anti-personnel and anti-tank mines may be laid on frozen ground and ice. When anti-tank mines are laid on snowy ground, they should be placed on top of the ground. If the snow is more than 50 centimeters deep, the mines may be placed on snow that has been pounded hard and covered with 2 or 3 centimeters of snow to camouflage them. In addition, every effort should be made to use the severe cold and the natural terrain to set up snow and ice obstacles such as making ice slopes and laying up ice dams and walls of ice.

c. Precautions Against Cold To Prevent Non-combat Casualties

When on the defense, fendui must do a good job of taking precautions against cold and keeping personnel warm. They should provide intensive education in how to guard against the cold, increase toughening to endure cold and increase ability to guard against the cold. They should set rules about clothing suitable for winter weather and take all kinds of actions to prevent frostbite and snow blindness such as coating exposed part of the body with ointment to protect against the cold and frequent rubbing "using movement to control cold." Shelters should have facilities for providing heat and for keeping warm. Guard personnel should increase the frequency of guard changes, shortening duty time. Insofar as possible, hot food, hot water and high calorie food should be supplied.

d. Protection Against Cold and Keeping Warm, and Maintenance of Weapons and Equipment in Fine Condition

Fendui commanders should conscientiously do a good job of protecting weapons and equipment from cold and keeping it warm. Weapons and equipment has to be cleaned and coated with the right amount of frost protection oil. When stored

inside or in defenses, they should not touch the floor, the walls, doors or windows. When light weapons are used, they should not be operated too roughly. The bolt should be worked a few times before the piece is fired. When radio transmitters and telephones are used in the field, they should be kept in cotton insulating cases and located in places sheltered from the wind. In addition, the bottom of instruments should be cushioned on canvas, straw or twigs to avoid direct contact between the equipment and the ice or snow. Microphones should be wrapped in silk, cotton cloth or in a rubber or plastic wrapper to prevent damage caused by frozen breath. The principal way of taking care of optical devices is to control ambient temperature, not allowing it to change sharply. When entering a cold or a warm place, the equipment should be pre-chilled or pre-heated at an intermediate temperature. It should be kept away from heat sources and when conditions permit, cotton covers should be made to protect infrequently used parts. When devices are operated when it is snowing, means should be devised to cover them and snowflakes should be removed from lenses regularly. When finished using them, the frost, snow, dust or sand should be wiped away immediately, and special care should be taken to remove completely frost and snow from seams between parts and to put the equipment in cases. When weapons and equipment are moved from low temperature to high temperature areas, frost forms and they "sweat." After they "sweat," the moisture should be immediately wiped away. An absorbent cloth or paper should be used to wipe away beads of moisture remaining in crevices. Next, the equipment should be wiped with frost prevention oil to prevent rust and corrosion. Lulls in battle should be used for regular cleaning of weapons and equipment to put them in good condition, and a fair number of spare parts should be kept on hand for use during combat.

e. Complete Camouflaging and Good Performance of Position Control (See Control section.)

9. General Principles for Hasty Defensive Warfare by Mechanized Infantry Companies (or Platoons)

When mechanized infantry companies (or platoons) prepare makeshift defenses, not only must they meet requirements for infantry fendui makeshift defensive combat, but they must also observe the following principles as the nature of the mechanized infantry fendui dictates.

a. Timing of a Shift to Defense

The timing for mechanized infantry companies (or platoons) to shift hurriedly to the defense is usually as follows: for the purpose of consolidating positions (or strategic points) that have been taken; to cover follow-on units going into battle or to gain time while waiting for main forces to arrive; blocking attacks on enemy reinforcement and efforts to break out of encirclement; resisting a counterattack from superior enemy forces; meeting defeat in battle; covering the redeployment or shift of main forces and plugging an enemy nuclear breach.

b. Combat Deployments

Mechanized infantry companies (or platoons) should hold strategic points with their main forces. They should make in-depth, dispersed, concealed

deployments, build rings of defense, and control areas from single points. Companies (or platoons) usually form up into a V formation. When the center of the defense front protrudes, they may form up into an A formation. Platoons sometimes deploy in a straight line. Company defense positions are made up of the defense positions of each platoon (and squad), each reinforced weapons firing position, infantry combat vehicle (and armored personnel carrier) deployed positions and the company command and observation post. During battle, infantry combat vehicles usually act as firing points. They are usually deployed behind the center or on one flank of infantry squads and between 50 and 100 meters away from the squad. They may alternatively be deployed within the squad's combat formation, their firing positions being located either behind a surface feature or on the reverse side of a slope where they can maneuver and bring their firepower to bear. During battle, drivers and gunners remain in the vehicles and at the ready to move or fire at any time.

The disposition of armored personnel carriers is decided by the nature of the mission received, the enemy situation and the terrain. For example, if they are to be used to strengthen the firepower of frontline positions in resisting the enemy, they should be deployed inside strongpoints in positions from which they can readily bring their firepower to bear toward the front of the positions. If armored personnel carriers are used to avert the fire of enemy directly laid weapons and to strengthen support to the flanks and to the rear, they should be deployed on the reverse slopes of positions in locations from which they can readily fire toward the flanks and the rear. If they are to be ready at any time to move infantry troops, they should be placed behind the company's defense positions in locations that permit movement and concealment. During battle, drivers and machine guns remain in the vehicles at the ready to move or fire at any time.

No matter how deployed, infantry combat vehicles (or armored personnel carriers) should use favorable terrain to build shelters and to camouflage in order to avoid enemy anti-tank fire insofar as possible. They should also select one or two alternate firing positions. Infantry and combat vehicles keep a distance of between 150 and 200 meters between each other, and 100 meters distance from armored personnel carriers. When reinforced with a tank fendui, mechanized infantry usually deploys ahead of the tanks.

Company command and observation posts are usually located in or nearby infantry combat vehicles (or armored personnel carrier) blindage. Their position is frequently inside a strongpoint or at a point behind it that permits observation and command.

c. Firepower Support System

The firepower support system depends on the enemy situation, the mission and capabilities of weapons (and combat vehicles) and the terrain and must be in accordance with the principles of dispersed weapons, concentrated firepower, ease in maneuvering and ease in coordination to achieve both centralized command and concentrated use, with ability to bring firepower to bear and to maneuver to form a tight intersecting fire network. The company's firepower support system is usually made up of firepower to hit infantry to hit tanks and to protect against aircraft.

1) Firepower Against Infantry

Firepower against infantry consists of sub-machine guns, machine guns and the machine guns carried by infantry combat vehicles (and armored personnel carriers). It is used primarily to wipe out enemy effectives and cut off contact between enemy infantry and tanks. Firepower used against infantry in combination with other firepower forming an intersecting firepower network made up of point-blank fire, flanking fire and oblique fire is located to a depth of 400 meters ahead of frontline positions, on the flanks and in gaps at points adjoining neighboring units. Along sections that the enemy must traverse in making an attack, companies (and platoons) direct concentrated fire. Sections receiving concentrated fire may be between 600 and 800 meters ahead of the front line.

2) Firepower Against Tanks

Firepower against tanks is made up of the anti-tank missiles and 73mm smoothbore guns carried by tank reinforcements and infantry combat vehicles, plus rocket launchers and attached recoilless guns. This firepower is used to wipe out deploying and attacking tanks and other armored targets. Attached tanks use mostly directly laid fire to wipe out targets within the point-blank firing distance. Vehicle-carried anti-tank missiles fire under protection of tanks at targets they can see within range. Usually, they fire only one or two rounds from each firing position. Attached and supporting artillery (or mortars) control dead angles that cannot be reached by infantry weapons and anti-tank weapons.

3) Firepower Against Aircraft

Firepower against aircraft is made up of anti-air missiles, machine guns (and machine guns carried by armored personnel carriers) and is used against low flying enemy aircraft.

Basic Requirements for Company (and Platoon) Commander Organization of Firepower Support Systems

First is the organization of firepower in the direction of greatest enemy threat and along the defense front for use in conjunction with obstacles to form an firepower network against tanks.

Light weapons and anti-tank weapons are deployed as far forward as possible to form maximum firepower density.

Infantry combat vehicles should be deployed along the front and in-depth. Their positions should be able to insure that vehicle-mounted anti-tank missiles will be able to fire within their effective range (at least within 2,000 meters), and will enable the movement of smoothbore gun firepower toward the flanks of strongpoints. Armored personnel carriers are usually deployed on favorable terrain in concealment behind the lines to form an anti-air and flat trajectory firepower network to protect the flanks and the rear of positions and to support infantry combat as necessary.

Firepower in the company depth should be able to control the greater portion of the entire company's defensive area, and should be able to easily mobilize firepower toward the flanks and gaps to annihilate the outflanking and penetrating enemy.

Chapter IV. Organization and Command of Infantry Fendui Offensive and Defensive Combat

I. Essential Elements of Organization and Command

1. Basic Mission and Requirements of Organization and Command

The basic mission of combat command is as follows: timely determination of the situation, correct use of troops and firepower and flexible application of tactics in order to use to the full subjective activity that is founded on objective matter to translate the possibility of victory in battle into reality.

The basic requirement of combat command is: firm, dynamic, flexible, rapid and constant efforts to make subjective command be compatible with objective realities. Fendui commanders mostly issue commands personally either face-to-face or via communications apparatus, using verbal commands and signals to direct combat directly. They use the stimulation of propaganda and their own model behavior to influence and urge along their subordinates. During crucial times and circumstances, they set an example, personally leading their units to attack (or counterattack).

2. Dynamic, Flexible and Constant Command of Combat

During the course of battle, commanders must personally observe the battlefield and continuously keep abreast of changes in the enemy's situation, understand the progress that individual fenduis are making in combat, the results obtained from higher headquarters firepower support and the progress being made in battle by adjacent units. They must maintain contact with higher headquarters and adjacent units; accurately understand and carry out instructions, verbal commands (or communications) from higher headquarters; actively cooperate and support adjacent units and provide additional missions to individual fenduis from time to time. They must check on how well orders are executed, constantly coordinate the combat actions of individual fenduis, and seek to link together firepower, assaults and movements into an organic whole, dynamically, flexibly and constantly commanding their units and deciding the outcome of battle through combat with the enemy at close quarters.

In the course of battle, commanders must exhibit a high degree of courage and a resolute and indomitable spirit and will. They must resolutely execute orders from higher authority and carry out decisions that have been made. So long as there has been no fundamental change in the situation, even if a serious situation takes place in battle, there positively can be no wavering about decisions. At such times, it is even more necessary that one summon one's own staunch decisions and convictions, and one's valiant and indomitable will and model actions to lead the fendui in courageous combat and go on to complete the mission. In addition, commanders should also be adept at judging the hour and sizing up the situation, dynamically and flexibly commanding combat. When a dramatic change occurs in the situation and it is impossible to wait for orders, or when contact with higher authority has been broken, commanders should dare to take responsibility and act promptly at their own discretion. At such times, they should take action flexibly to lead their fenduis in accordance with the changed situation so long as they do not

contravene the overall intentions of higher authority. They should actively engage in combat while devising means as quickly as possible to obtain instructions from higher authority.

3. Accurate Execution of Firing Commands

Fendui commanders should be adept at commanding firing during battle, taking into account the capabilities of the various kinds of firearms and the battlefield situation, using the organization of concentrated and accurate firepower to suppress, wipe out or destroy different targets, and supporting and assisting attacks (or counterattacks) and movements to win victory in battle. In order to be able to do this, commanders must keep constant watch on the battlefield to find and evaluate targets, to estimate target distances, to decide which weapons will be effective against which targets, to assign firing missions, to set the times and the signals for firing to begin, to direct the forms for coordination with fenduis (or personnel) with whom actions are coordinated, to issue signals (or verbal commands) for starting to fire, for halting fire, or for shifting (or extending) fire, and to observe and revise firing results. They must also move firepower and weapons at proper times to make fullest use of the force of their firepower.

When commanders assign firepower missions on the basis of firing results, they may make the following distinctions: annihilating, suppression, and destructive firing. By annihilating fire is meant the infliction of serious casualties on the enemy so that all or a large part of his forces lose their ability to fight. By suppression fire is meant the infliction of substantial casualties on the enemy so that his firing is restricted and his movements limited. Destructive fire means smashing the enemy's armored targets, defense works, obstacles and structures so that he cannot use them.

In order to wipe out and suppress targets, usually infantry weapons and artillery fenduis carry out concentrated fire or barrage fire. Concentrated fire is the use of various weapons to fire simultaneously against a target or massed targets in a limited area (or stretch). Barrage fire means to use artillery firepower to create a barrage across a certain width of an area in order to block an attacking, counterattacking or maneuvering enemy. Barrage fire is divided into moving barrage fire and non- moving barrage fire.

II. Offensive Combat

I. Organization and Command for Offensive Combat Against Enemy Defended Field Warfare Positions

a. Organization of Combat

Once a fendui has received advance orders from higher authority, it should pass on as quickly as possible pertinent instructions from higher authority. After commanders receive their combat mission, they should acquaint themselves with the mission, assess the situation and make preliminary decisions. They should plan their time correctly and rationally plan and organize the component parts and the progression of combat. They should quickly complete all combat preparations within the time set by higher authority. When time is pressing, they should devote attention to key points, simplify procedures and make preparations by using parallel methods.

Organization of major battle components: passing along of mission and mobilization for combat; on the ground survey and making of decisions; passing along of oral statements on battle orders and organization of coordination; and organization of various kinds of support.

1) Understanding the Mission and Assessing the Situation

a) Understanding the Mission. Understanding the mission is a thought process whereby commanders become acquainted with and comprehend the combat intentions of higher authority and the mission they have received. It has the following ingredients:

The mission and decisions of higher authority and means for putting decisions into effect: the fendui's combat mission and the goals that combat actions are to achieve; time limits on completion of combat preparations, and position and role in combat; methods for increasing the fendui's numbers and support to it; the dividing line between the mission of neighboring units and combat by one's own fendui, and support at junction points. When there is cooperation with local troops and militia, understanding of their troop strength and mission is also necessary.

b) Assessing the Situation. Assessing the situation is the mental activity that commanders go through before making a decision in which they make a full analysis and gain a full appreciation of the objective conditions relating to completion of the combat mission. This assessment is for the purpose of providing data to make correct decisions. The basic ingredients in assessing the situation are as follows:

The enemy situation, enemy troop deployments, firepower support system, construction of defenses, kinds and layout of obstacles; location of the front and of strongpoints, location of flanks, junction points, gaps in the terrain, armored targets and firepower points; location of command posts and observation posts; disposition of reserves (second echelon troops) and places and direction of possible counterattacks.

Terrain. First is an analysis and assessment of the general lay of the land, landforms, roads, the water system, bridges and inhabited areas as well as their effect on both the enemy's and one's own combat actions. Next comes a specific analysis of the terrain in terms of the enemy and oneself.

Enemy terrain: Terrain that favors enemy observation, firing, camouflage and strongly defended points; terrain that favors the deployment of armored combat vehicles and the setting up of ambushes; terrain that favors our approach, development, penetration, and expansion in depth.

Our terrain: Terrain that can accommodate initial positions for attack, for weapons firing positions and that favors concealment and maneuvering; terrain that favors concealed deployment of reserves as well as routes and deployment areas for tanks to approach the enemy.

Our situation: Equipment and strength of one's own fendui. Fendui commanders' military and political quality and ability to organize and command; strengths;

combat ability of each fendui and extent of support in weapons, ammunition and materiel.

Friendly adjacent units. Mission, location and role of friendly adjacent units, battle dividing lines and support at juncture points.

Weather. Analysis in terms of the season of meteorological conditions and times of sunrise and sunset, and their effects on both the enemy's and our own combat actions.

Analysis and assessment of the foregoing problems should yield the following overall conclusions: the enemy's defense intentions, his main direction of defense and its weak points; points that can be strongly defended; main actions that can be taken in the course of battle; the most favorable direction and points of attack for one's own units in carrying out the main attack; combat deployments that should be made; the mission for which each fendui should be responsible; and the location of favorable routes of advance and initial positions from which to launch an attack.

Any assessment of the situation should go through the whole battle process. Once commanders receive their missions, they should assess it as they acquaint themselves with it. When conducting an on-the-ground survey, they should make an assessment as they make the survey; and once battle begins, they should still continue to make a constant assessment of the situation, make prompt decisions, and firmly but flexibly command combat.

2) Passing Along of Mission and Mobilizing for Combat.

a) Passing along the mission. Once fendui commanders have received the mission, they should communicate it rapidly to all subordinate and attached unit commanders (and personnel). The main points to be imparted are as follows: the enemy situation, the intentions of higher headquarters, the mission of one's own fendui, the mission of friendly adjacent units, the time by which attack preparations are to be completed, and matters that should be given attention. The method of transmission will depend on circumstances at the time. If time permits, a meeting may be held to pass along the information. If time does not permit the holding of a meeting, the information may be passed along piecemeal. If a mission is received while on the march, it may be passed along while movement continues so that all battle preparation work can be done promptly and quickly. No matter the method of transmission adopted, it should be brief and to the point and stress results.

b) Laying out of tasks. In order to organize for battle in a planned, step-by-step manner, after having passed along the mission, fendui commanders should immediately lay out the work and spell out what is involved in each individual task. In laying out work, it is necessary, first of all, to figure out the amount of time that will be required between receipt of the mission and completion of preparations for the attack. Then, a scientific division of tasks should be done in accordance with the time needed for commanders to do their work and the time needed by the fendui to prepare for combat, a time limit being set for the completion of each task. In figuring out the amount of time required, a substantial amount of time should be set aside for commanders at lower levels and for component and attached units in order to insure full completion of each and every task preparatory to combat.

In addition, in laying out tasks, battalion commanders should send out reconnaissance teams at the right time as the situation and instructions from higher headquarters requires. (If regiment is going to send out reconnaissance teams in the direction of battalion movement, battalion can contact regiment directly to obviate the need to send out a reconnaissance team of its own.) Otherwise, plans should be made concerning which companies will send out how many troops in a reconnaissance team, what reconnaissance methods will be used at what times and in which places to check what situations, and what methods will be used at what times and what places to report to battalion. Plans should also be made for communication to subordinate units of orders that have been decided on and readying of materials and equipment.

c) Mobilization for battle. Mobilization for battle means doing ideological arousal work to assure victory in battle. Once commanders have received their mission, they should carry out a pervasive and painstaking mobilization that links the combat mission and the ideological state of officers and men. When mobilizing, emphasis should be placed on spelling out the enemy's situation, the mission, goals, significance, favorable conditions for completing the combat mission, unfavorable conditions and means of overcoming difficulties and ways of winning victory over the enemy, coming up with vivid and forceful slogans, placing different requirements on different kinds of people, launching mass ideological and political work, building confidence in the inevitability of victory, and stirring mass fervor for vying to do meritorious deeds. In mobilizing for battle, the method may be used of mobilizing Party members first and those outside the Party second and of mobilizing cadres (backbone cadres) first and ordinary soldiers second. In an emergency, mobilization may be carried out while on the move. During battle, simple but powerful propaganda and agitation work should be carried out to stir fighting will, to boost morale, to wipe out the enemy heroically, and to complete the combat mission resolutely.

3) On-site survey and making decisions

a) On-the-ground survey. On-the-ground survey means the on site observation and collation of information about the terrain and the enemy situation in order to arrive at correct decisions. After a fendui arrives at (or sometimes reaches in the course of an advance) the position for kicking off an offensive, (the ready area) commanders should organize personnel to conduct an on-the-ground survey at the proper time following instructions from higher headquarters. Survey methods include the following: Single site or roving survey, simultaneous survey of separate points by separate teams, or single point and single team survey of sites in turn. These methods should be applied flexibly as terrain and the enemy situation dictate.

On-the-ground survey preparatory work. Commanders should designate the personnel who are to conduct the survey and organize them into teams. They should select the survey points and spell out the survey mission, times, methods, routes, camouflage methods and guard measures. Participants usually include the commander of the unit at the next echelon down who is assigned as fendui commander (of the weapons squad or as team leader) plus a guard fendui (or personnel). Battalion war service teams should be made up of personnel concerned such as those responsible for daily tasks and military medical

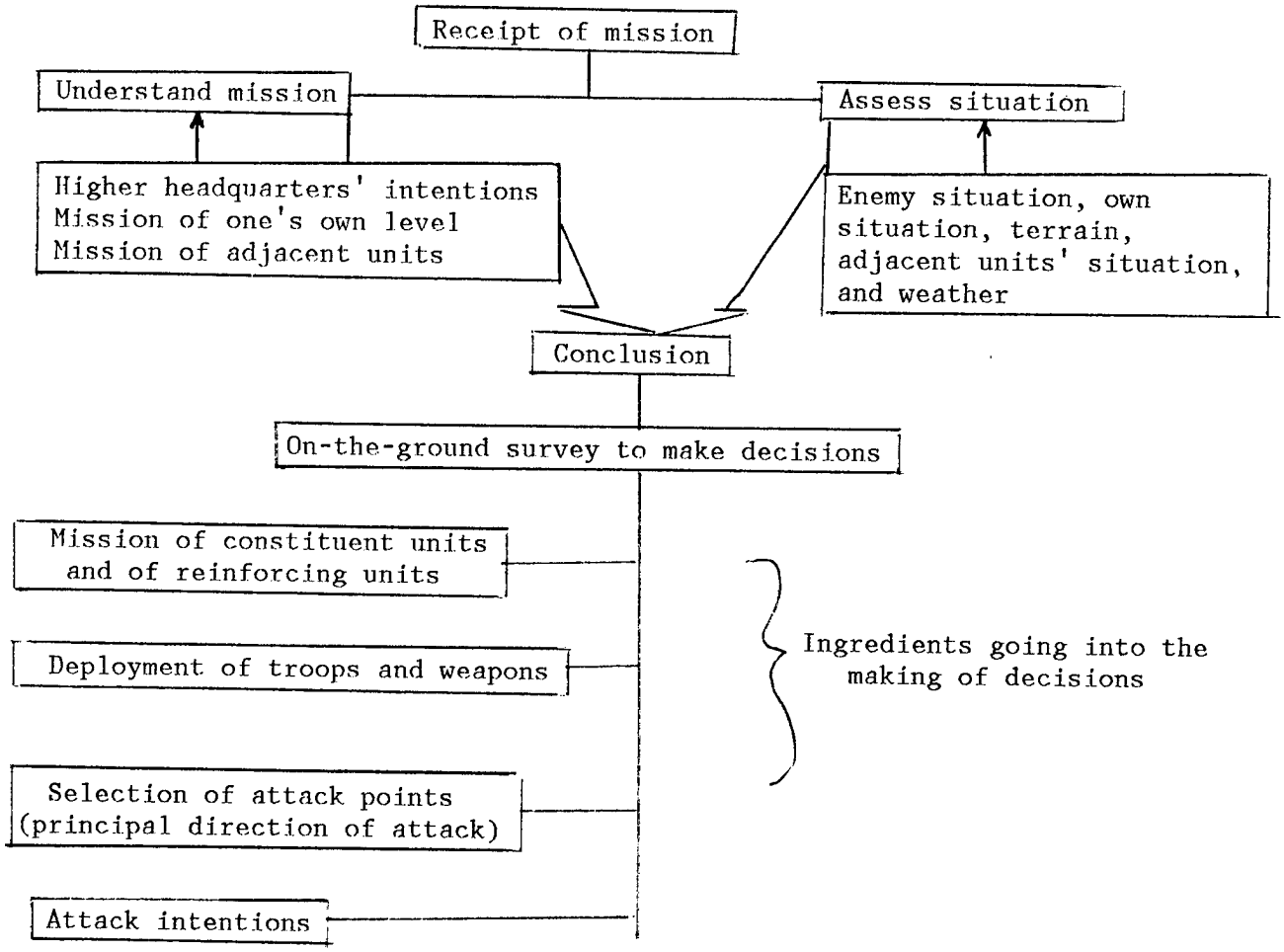
corpsmen led by the deputy political instructor. Survey sites should be selected where conditions for observation and concealment are very good and objects that stand alone in the open should be avoided. Insofar as possible, the sites should be located close to the enemy's frontlines.

Work During Surveys and Key Problems and Requirements To Be Looked Into

During surveys, commanders should first post guards and weapons, then assess their position, determine the points to be occupied, provide briefings on the terrain concerned, point out topographic markers and spell out the enemy situation, the intentions of higher headquarters and the mission of his fendui. Special emphasis should be placed on clarifying the following: enemy troop deployments, locations of gaps and junction points in the enemy's deployments, numbers and locations of enemy armored combat vehicles, the enemy's firepower support system, defense work construction, and the status of obstacle emplacement; terrain features of the enemy's frontlines, behind the lines, and on the flanks; specific selection of the direction of the main attack and attack points, positions from which assaults are to be made and attack routes, the number of open roads and their location, identification methods and protection measures; the main mission of infantry fenduis and all service arms, battle formations to be used, routes to be used in occupying kick off positions for the offensive and the lay out of troop dispositions; the location and direction of forward shifting of command (and observation) posts, ammunition points (or teams), emergency posts (or teams) and supply posts (or teams). Circumstances permitting, a democratic spirit should be displayed with free play given to full study and discussion and conscientious listening to the views of commanders of constituent units and of reinforcing units attached, the better to perfect decisions. On-the-ground surveys should be carried out quickly, thoroughly and secretly, with attention being paid to camouflage and security.

b) Decision Making. The decision making process is usually as shown in the figure (See figure below. After commanders have made decisions, time permitting they should convene a meeting of the Party CPC Committee (or branch committee) for discussion, the better to perfect decisions even more, and to insure that decisions will be carried out to the full. In emergencies, commanders should make resolute decisions that are straightforward and to the point, reporting them to higher headquarters for approval. In making decisions, commanders should focus on solving the problems of attack point selection and troop deployments.

Diagram Showing Commander Decision Making



d) Passing Down of Oral Combat Orders

After passing down decisions, the fendui commander should promptly give on-the-spot oral combat commands to each fendui. The usual method used is as follows: To survey and make explanations at the same time in the course of the on-the-ground survey. Alternatively, personnel concerned may be assembled in one place and an explanation given. No matter the method used, it should be timely, accurate, simple and easy to understand. All the problems that have been explained before the passing down of combat commands need not be gone over again. Oral commands that are handed down consist of the following:

Enemy troops and enemy troop dispositions, the location of the defense front, strongpoints, and the placement of obstacles, and the location of armored combat vehicles and firing points, the location of reserves (second echelon units) and the possible direction of counterattacks.

The mission of higher headquarters.

The positions from which the fendui assault is to begin; the targets for attack and the subsequent direction of attack.

The positions from which friendly adjacent units are to begin their assault and their targets for attack.

Weapons of subordinate units; positions from which attack is to be launched; targets for attack; routes of attack and subsequent direction of attack.

Mission of subordinate units; positions from which weapons will launch the attack; diversion opportunities; routes and means of assisting the infantry.

Methods of coordinating with high headquarters support units.

Organization of air defense and measures for protection against nuclear and chemical weapons.

Time limit for completion of offensive preparations, signals and signs.

Commander's location and deputies.

e) Organization of Coordination

Usually commanders organize coordination at the same time that they pass down oral commands. When there is sufficient time, they may organize it separately. Organization of coordination is to be done in accordance with coordination principles and the instructions of higher headquarters on coordination, emphasis being placed on the organization of coordinated actions at the time of attack so that fendui clearly understand their mission and the method of fighting. Combat times for in-depth operations may be roughed out. The progression and the component parts for organizing coordination are usually as follows:

The times, routes and sequence for each fendui's occupation of positions from which to make the attack, plus situations that may arise and methods for dealing with them.

Duration of fire preparation, and higher headquarters artillery fire suppression and annihilation of targets. Time, location and methods to be used for opening roads; fendui cover and support measures; times, locations and sequence in which fendui are to advance toward the enemy frontline.

Firing times, the order in which fendui traverse routes, formations, methods and cover to be used; targets for attack by tanks, location of leapfrogging infantry combat formations, and means of coordination with infantry units; movements of assault units after having traversed routes and means of coordination among infantry, artillery and tanks; mission of mortar and anti-aircraft machine gun units and methods for supporting infantry attacks.

Movements of all fendui and methods for coordination with friendly adjacent units when storming the enemy in strongpoints, when holding off enemy counterattacks, and when second echelon or reserve units are thrown into combat and deploy in depth.

Coordination of signals and signs.

When air support is available, means must be worked out for identifying the location of one's own units, and signals or signs worked for for recognizing our own aircraft.

f) Organizing of Various Kinds of Support

(1) Combat Support

Guarding and Observation. Guards and observers must be posted at the positions from which an offensive (or attack) is to begin and duty fendui and weapons must be designated to keep watch on the enemy's movements and to guard against an enemy surprise attack. When posted, troop strength, times, locations, mission, methods for reporting information, protection measures and times for withdrawal should be spelled out.

After a battalion receives its mission, if it is necessary to send out scouts, the scouting unit's organization, mission, communications and reporting times and methods should be spelled out.

Air Defense and Protection Against Nuclear and Chemical Weapons. Units should designate observation and warning duties, spell out signaling and reporting methods, establish air defense discipline and protection methods, movements of all fendui when attacked and actions to be taken in the aftermath. Depending on circumstances, air defense units and weapons may be designated.

Defense Works and Camouflage. After occupying positions from which an offensive (or attack) is to be launched, units should organize to make full use of the terrain to build the shelters needed for personnel and weapons. In organizing camouflage work, the tasks, measures, time limits for completion and requirements for camouflage should be made clear. Full use should be made of terrain, the weather, smoke clouds and sounds. Manufactured materials or those at hand should be used to camouflage personnel, weapons, and defense works so that units may deploy and move in concealment. Battalion commanders should also spell out support actions to be taken to open routes.

(2) Logistical Support. Materiel and medical support are extremely important in modern warfare, and have a very great deal to do with winning victory in battle. Fendui commanders can organize ammunition points (and teams), rescue posts (and teams) and supply points (and teams) as directed by higher headquarters and in accordance with combat needs and the availability of materiel. They should make full use of medical posts, managerial personnel, military doctors, mess officers, food supply personnel, ordnance personnel, medical personnel and mess squad leaders in overcoming difficulties with help from the masses and insure materiel and medical support so as to be able to fight smoothly and continuously. Doing this requires the carrying of prescribed amounts of ammunition, battle equipment, grain and combat rescue equipment (and medicines). During battle, ammunition points (and teams) should move forward bit by bit, providing supplies as fighting continues. Rescue posts (and teams) should organize fendui to carry out mass style rescue, medical and epidemic prevention work. Acquisition and distribution of medical equipment and rescue and registration of the wounded should be the

responsibility of medical posts and company medical corpsmen. Self help and mutual help should be organized quickly for the wounded and the sick. Once the seriously wounded have been rescued, they should be sent to a covered site as quickly as possible and tagged to await movement by higher headquarters. Under no circumstances may the wounded (and sick) be abandoned. Handling of martyrs should be strictly in accordance with regulations from higher headquarters.

Insofar as circumstances permit, fendui commanders should select, in accordance with instructions from higher headquarters, terrain that resembles the attack area or set up sandtables on which the enemy's situation may be duplicated to conduct training using combat plans.

g) Occupation of Positions from Which to Launch the Attack and Completion of Attack Preparations

The positions from which attack is to be launched is where attack preparations are made following unit deployment and from which the attack is to be launched. The positions for launching the attack must have superb conditions for observation and firing, and have the best approach to the enemy's defense front. Usually these positions are selected on favorable terrain approximately 2 kilometers distant from the enemy's frontlines. Fendui should act in accordance with instructions from higher headquarters to make use, insofar as possible, of nighttime, favorable terrain and bad weather or cover provided by aircraft or artillery to occupy the positions for the launching of an attack quickly and covertly. In order to avoid or reduce the possibility of enemy nuclear or chemical attack or casualties inflicted by its air force or artillery fire while movement is underway to close with the enemy, fendui commanders should thoroughly organize and execute plans.

Depending on the distance that has to be covered to approach the enemy, the terrain and the amount of threat from enemy artillery, fendui commanders should command fendui to spread out successively in dispersed formations or battle formations while moving forward. Under ordinary circumstances, battalions separate from regiment when they are between 8 and 12 kilometers from the enemy's frontlines to follow designated routes separately, advancing as columns on the march. When they are between 3 and 5 kilometers from the enemy's frontlines, each company increases its distance from other companies to advance in battalion dispersed formation. When between 2 and 3 kilometers from the enemy's frontlines, each company spreads out to move into its individual positions for launching an attack against the enemy. Before occupying attack positions, the fendui commander should send out small teams or anti-tank weapons to occupy positions in advance and to cover fendui movements. After the positions have been occupied, observation and scouting should be organized quickly and duty fendui (and weapons) designated, with measures for air defense, artillery defense, and defense against nuclear and chemical weapons attacks set. Each fendui should be directed to build defenses and to camouflage them. Each fendui should be guided in organizing for battle and good preparations should be made to resist possible enemy attacks. At the attack launch positions, troops should be deployed in dispersed wedge formations according to the order of each echelon's mission and targets to be attacked so as to reduce the amount of time required for fendui' horizontal movement. At the attack launch positions, fendui commanders should rigorously inspect the state of fendui combat readiness. The main things to be inspected are as follows:

Whether each fendui has occupied positions promptly.

The extent to which commanders (squad leaders) of subordinate units understand their mission, the prescribed signals and signs and coordination matters.

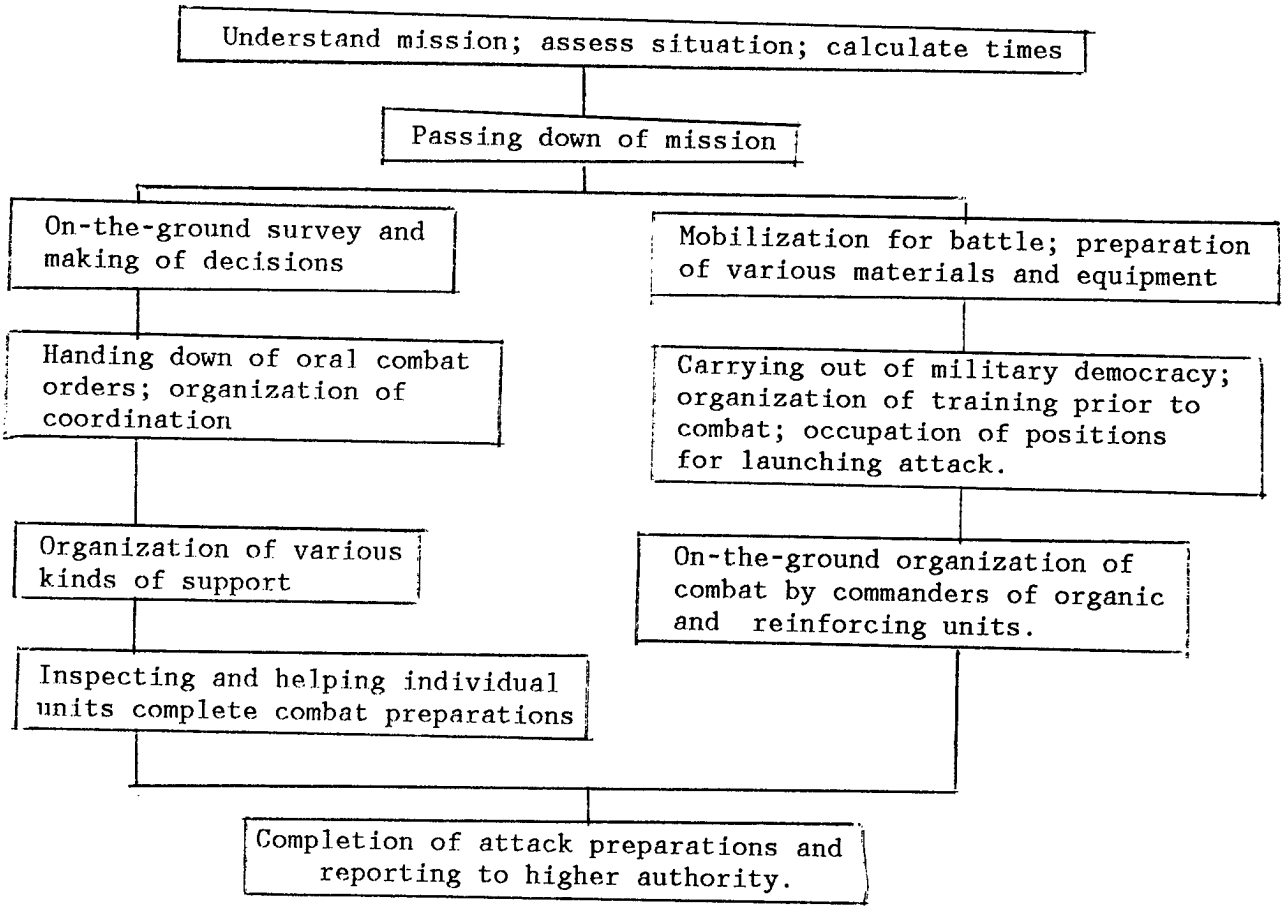
Status of support units (and weapons) completion of firing preparations.

Whether or not subordinate unit's supplies of ammunition, equipment and rescue medicine and materials are complete.

Status of communications preparations.

Fendui completion of attack preparations should be used as a basis for commanders to follow the instructions and times set by higher headquarters to announce "C" times [for "chongji," assault] to constituent and reinforcement units.

Diagram Showing Organization of Combat Precedence



Explanation: This table may be used in organizing combat when time permits. It should be applied flexibly as actual circumstances require.

b. Going into Battle

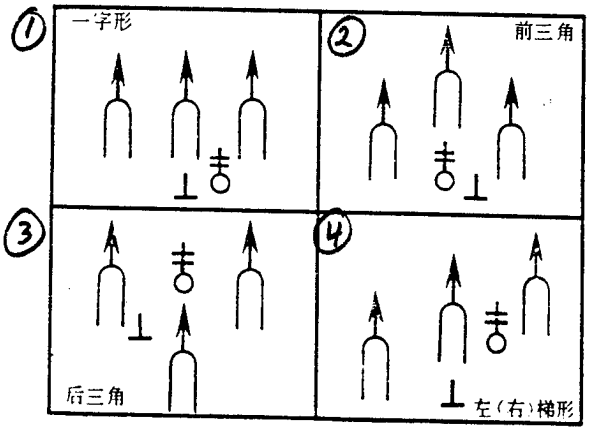
During battle, commanders must both steadfastly carry out already decided on combat plans and also be adept at making timely assessments and taking firm actions in view of changes in the situation and the relative positions of the enemy and their own forces, commanding forcefully, flexibly and constantly in order to win victory in battle.

1) Occupation of Attack Launch Positions and Good Preparations for Attack

a) Occupation of Attack Launch Positions. The positions from which the attack is to be launched are the positions from which the fendui makes attack preparations and launches the attack. Fendui must rapidly occupy the attack launch positions according to pre-set plans. Before approaching the enemy, commanders should be fully acquainted with the situation along the routes of approach to the enemy, should spell out support actions, and should check on the status of preparations. While approaching the enemy, fendui commanders should advance at the head of the fendui and constantly observe the enemy situation, the terrain and the movement of all fendui, exercise control of the direction and routes of advance and adjust the speed of movement, make ingenious use of terrain, dexterously employ formations, and correctly handle all kinds of situations. While moving, direction based on observation of the enemy, should be given to the firing positions temporarily occupied by mortar, recoilless gun and heavy machine gun fendui, and firepower should be used to protect the positions occupied by infantry units from which the attack will be launched.

Formations for Approaching the Enemy. Formations for approaching the enemy should be flexibly made up in accordance with the principles of rapid occupation of attack launch positions and combat mission while on the move. Dispersed formations are used when the terrain is fairly open or when crossing an area interdicted by enemy air or artillery firepower. As circumstances allow, a straight line, a forward or rear facing triangle or a right (or left) stepped dispersed formation may be employed. When passing through an area of concentrated firepower, units should use firepower and movement in combination and make skillful use of the terrain, covering each other and advancing alternately. (See following diagram).

Diagram Showing Company Dispersed Formation



Key:
1) Straight line
2) Forward facing triangle
3) Rear facing triangle
4) Right or left stepped formation

Handling of Various Situations

During enemy air raids or the firing of illumination shells, one should disperse and take cover at once or use the terrain to make a rapid advance. On orders or a signal from higher headquarters, commands should be given to anti-aircraft weapons (or fendui) to occupy firing positions and fire at low flying aircraft.

When an enemy air raid or artillery fire is blocking a section, efforts should be made to go around it. When this cannot be done, distance should be increased as the pattern of the enemy firepower blockade dictates and a rush made through the gaps.

When enemy guards are encountered, some troops and anti-tank weapons should be assigned to keep watch on the enemy while main forces make an effort to go around the guards. If they cannot be circumvented, they should be either wiped out or captured as circumstances allow so that the main force can continue to advance. When the enemy guards withdraw, the opportunity should be taken to press closer to the enemy and occupy the positions from which the attack is to be made.

When warning of an enemy nuclear or chemical weapons attack is received, troops should scatter and take cover at once and make full use of the terrain and protective equipment to protect themselves. After the attack, they should move as directed by higher headquarters.

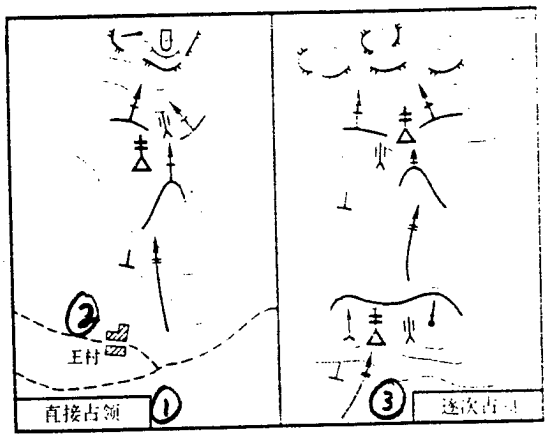
When an enemy contaminated area is encountered, all possible should be done to select a route that bypasses the area; alternatively equipment at hand should

be used to pass through as best one can. After passing through, advance should continue or, if circumstances permit, simple decontamination should be done.

When an enemy minefield or time bombs are encountered, they should be marked and fendui ordered either to go around them or clear them before passing through.

When attacking when there has been no direct contact with the enemy, fendui usually close with the enemy rapidly from concealed positions and under protection of firepower and outpost troops provided by higher headquarters to occupy positions from which to launch an attack. When terrain is favorable, they may move forward from assembly areas for direct occupation of the positions from which to make an attack. When direct occupation is not possible, units may occupy attack positions on favorable terrain approximately 2 kilometers from the enemy's frontline. Once preparations for attack have been made, positions to launch the attack may be occupied.

Diagram Showing Occupation of Positions from Which To Launch an Attack



Key:
1) Direct occupation
2) Wang Village
3) Successive occupation

As fendui approach the positions from which an attack is to be launched, they should send out a small number of scouts to protect occupation by the main force. When occupying the positions, care should be taken to coordinate the movements of all units. After occupation, guards should be posted, duty weapons assigned, and the unit spurred along in the building and camouflaging of defense works. Further observation of the enemy should be done and a familiarity with the terrain gained. When attacking when direct contact has been made with the enemy, attack positions should be occupied after having readjusted deployments or having changed the guard.

b) Good Preparations for Attack. When the threat of enemy firepower against attack positions is substantial, fendui should finish preparations for attack in the shortest possible time.

Passing Along Supplementary Orders. After occupying attack positions, commanders should promptly provide supplementary orders to fendui as circumstances require. These should include the following:

Newly discovered enemy developments.

Attack routes and targets for attack for all units, plus the direction of attack to be followed afterward.

Weapons firing positions, firing targets and methods of providing support to the infantry.

Location of routes to be traveled.

When passing along supplementary orders, commanders should be brief and to the point, and they should not repeat problems that have already been clarified. After having issued supplementary orders, they should make sure that units complete all preparations for attack quickly. When preparations for attack have been completed, commanders should notify higher headquarters.

Fire Preparation. Fire preparation sets the stage for attack by units, and consists of organized, planned, firepower attacks on the enemy. They have as their goal the use of sudden and intense firepower to smash the effectives and weapons inside enemy strongpoints, to destroy enemy defense works, and to confuse and wipe out enemy command (and observation) posts, and to cover units and open a way for them through enemy obstacles. Fire preparation usually lasts 20 to 40 minutes. During the course of fire preparation, commanders should constantly observe results of the preparation and changes in the enemy's situation as well as report to higher headquarters. They should give prompt commands to artillery to fire on targets that have revived or newly appeared, or they should directly command their unit's anti-tank weapons to suppress or wipe them out. Battalion should have direct knowledge of the situation regarding the opening of routes through enemy obstacles, and it should promptly organize the clearing and widening of these routes and well as identify and guard against enemy blockage. They should command tanks units to move forward and fan out in accordance with coordinated plans, and they should command first echelon infantry units at the proper time to push forward to positions for launching attack or to favorable terrain on the outer fringes of obstacle fields so as to shorten the attacking distance, increase the speed of attack. They should make further preparations to move through routes and to attack the enemy, and they should inspect the state of readiness for attack of all fendui, reporting to higher headquarters at once.

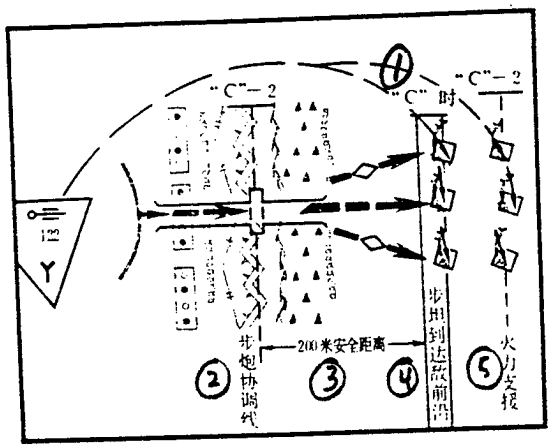
Opening of Routes Usually Carried Out During Fire Preparation. Routes for units responsible for carrying out the first echelon attack mission are usually opened by higher headquarters, but are sometimes opened by the units themselves. The number of routes to be opened is decided on the basis of the nature of obstacles, their density, their depth and our ability and methods of opening routes. Under ordinary circumstances, infantry battalions (main direction of attack) should be via two routes and infantry companies usually move along one or two routes. The width of passages for tanks is between 8 and 12 meters; for infantry, it is 5 to 7 meters. When higher headquarters

organizes the opening of routes, commanders of attacking units should intensify observation, organize firepower and smokescreen support, and provide some troop support as circumstances require. When routes are opened in coordination with higher headquarters artillery troops, commanders should observe at once, report results in opening routes and wait until after artillery fire has been lifted to remove remaining obstacles. Once routes have been opened, they should be controlled by firepower to prevent the enemy from closing them. When companies open routes themselves, they should organize rigorously and use several methods in combination to do the work. For details on the organization and mission of fendui that clear obstacles and the methods they employ to clear routes, please see "Infantry Company (and Platoon) Actions When Acting as Demolitions Teams."

Bold Attacks To Penetrate Enemy Positions

Attack is unflagging ferocious assaults by a fendui at close range using firepower and demolitions in combination to wipe out the enemy's combat movements. It is the most hectic, most intense, and most crucial stage of combat in offensive warfare. Fendui should act according to orders or a signal to attack the enemy suddenly and violently, making full use of our firepower and to penetrate resolutely into the enemy's frontline positions. Infantry and tank attack are carried out in coordination with all service arms. In order to achieve coordination of the combat actions of fendui of all service arms, the base time for simultaneous attacks by first echelon infantry and tank units to reach the enemy's frontline should be uniformly set in terms of "C." Usually "C - 2 minutes" is the infantry and artillery attack coordination time.

Diagram Showing Attack Coordination Time



Key:
1) "C" time [beginning of assault]
2) Infantry and artillery coordination line
3) 200 meter safe distance
4) Infantry and tank arrival at enemy frontline
5) Fire support

a) Movement Along Routes

Upon receipt of a command or signal from higher headquarters, unit commanders are to direct fendui to launch the attack at once through designated routes. In traversing the routes, commanders should issue commands flexibly in keeping with the enemy's firepower, the terrain, and the length of the routes traversed. They should both make use of tank fendui' attack capabilities and maintain coordination between infantry and tanks. Attacking units should both move quickly along the routes and maintain their stamina. Flexible methods and suitable formations, plus the organization of firepower and the laying of smokescreens should be done to cover the troops passing along the routes.

Order of Movement Over Routes

When there is just one route, passage should be according to the order in which units enter combat. When there are two routes, usually the precedence in moving over routes in the direction of main attack is tank units followed by main attacking forces, company (or battalion) command and observation post, weapons fendui and reserves. Holding units move over routes in the secondary direction of attack.

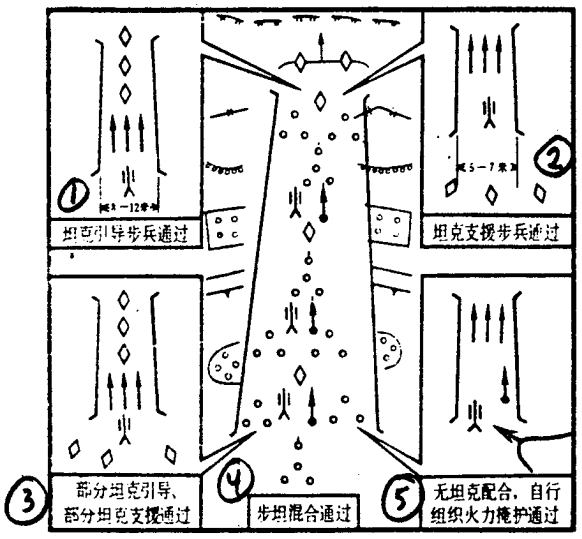
Formation and Methods for Moving Over Routes

Infantry moves along routes guided by tanks, the tanks forming column ahead of the attacking units and the attacking units advancing behind the tanks in several columns. As the tanks and infantry move along together, one infantry squad and one weapons squad advance behind tanks in columns. When the attacking units push to within approximately 200 meters of the enemy's frontline on favorable terrain along both sides of or close to a road junction, tank fendui may overtake the infantry's combat formations along the route or at the road junction, and then both attack the enemy simultaneously at "C - 2 minutes."

Infantry advances under tank firepower support, and when the infantry advances under tank support, the tanks should provide protection from favorable terrain within 1,000 meters of the enemy's frontline. The infantry fendui use leapfrog tactics, one group alternately firing as another rushes forward.

The infantry under guidance and protection of the tanks, traverses the route, and when the fendui obtain reinforcement from a substantial number of tanks, some of the tanks can lead the infantry along the route while another group of tanks can render firepower support. Then, they move along the route rapidly supporting the infantry in combat.

Diagram Showing Company Movement Along a Route



Key:
1) Tanks lead infantry along route
2) Tanks supporting infantry moving along
3) Some tanks lead while others provide support
4) Mixture of tanks and infantry move along the route
5) Self-organized firepower protection for movement in absence of tank support

b) Attack Toward Enemy's Frontline

When the attacking unit is within 150 to 200 meters of the enemy's frontline, the unit should suddenly rush forward when signaled by the lifting of artillery fire, taking advantage of the shift in artillery fire to penetrate the enemy's positions.

Methods of Attack

When tanks lead an infantry attack, the infantry attacks closely along with the tanks, pointing out at once targets for the tanks to attack and acting to wipe out enemy tank weapons and anti-tank gunners. If forward movement of the tanks is blocked, the infantry should vault ahead of the tanks while continuing to fire at designated targets. Depending on circumstances, a small number of reserves may be sent to help the tanks surmount the obstacles.

When infantry attacks with support from tank firepower, the tank fendui takes up firing positions behind the infantry battle formations from which it uses its firepower to support the attack of the attacking fendui. Infantry fendui should point out targets to tanks at once and rush ahead swiftly with support from the tank's firepower. Whenever possible, tank fendui should move ahead of the infantry line to lead the infantry in attack.

When infantry fendui have no tank support in their attack, they should make full use of the firepower in their own units to suppress and wipe out enemy remnants or newly discovered tank firing points and firepower points, wipe out the enemy's effectives, and support the infantry attack. Attacking units should use firepower, demolitions and assaults in combination under protection of firepower to wipe out the frontline enemy and steadfastly penetrate the enemy's positions.

Dealing with Several Situations During Attack

When a breakthrough is proceeding well, the attacking fendui should be directed to extend to the enemy's rear and around both flanks in order to expand the breakthrough point rapidly, and follow-up echelons should be sent in at the right times to strength the attacking force and take advantage of successes to develop the attack.

When the attack is foiled, commanders should quickly size up the situation and deal with it as their judgment dictates. If a revival of enemy firepower suppression is encountered, they should direct the firepower of their own units or ask, when necessary, for firepower suppression on annihilation from higher headquarters. If use of firepower is not synchronized with the attack, they should rapidly coordinate the movements of all fendui. If casualties are not great in the first echelon, they should order a second attack under firepower protection. If casualties in the first echelon have been fairly large, they should decisively direct the second echelon (or reserves) to go into battle and direct the first echelon to support the second echelon (or the reserves) in battle.

When a portion of troops has entered the enemy positions and the access route is blocked by the enemy thereby cutting off follow-up forces and making continuation of the attack impossible, commanders should direct the units that have already penetrated to use their firepower actively to wipe out and contain the enemy and to take stock of the situation quickly. If firepower from the enemy's flank is doing the blocking, weapons or tanks should be commanded to take it out. If it is enemy artillery that is doing the blocking, firepower from artillery under higher authority should be requested to suppress it so that the follow-up units can go into battle.

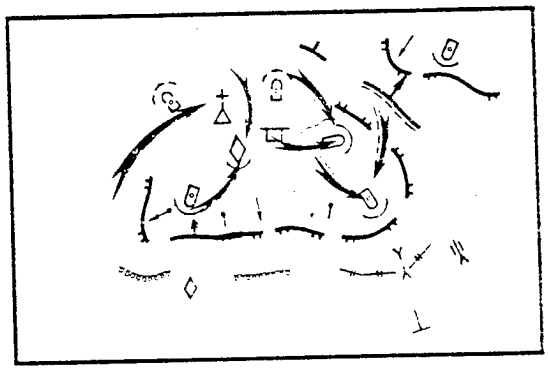
3) Deep Thrusting and Cutting Up, and Attacking and Wiping Out the Enemy in Strongpoints

After fendui have penetrated the enemy's positions, they should make full use of small numbers of soldiers moving over may routes and of the power of close quarters combat to make deep penetrations courageously to cut up the enemy's combat formations with the emphasis of attacks over many routes and in many directions, fighting and encircling the enemy. Basic combat techniques are as follows:

a) When attacking the enemy's rear flanks, some troops should attack frontally and along the flanks to cover movements by main forces. Mortars should conduct suppression and confusion firing against targets on the enemy's rear flanks, and recoilless guns and heavy machine guns should be the main firepower used to support movements by main forces. Main forces should fight to penetrate the

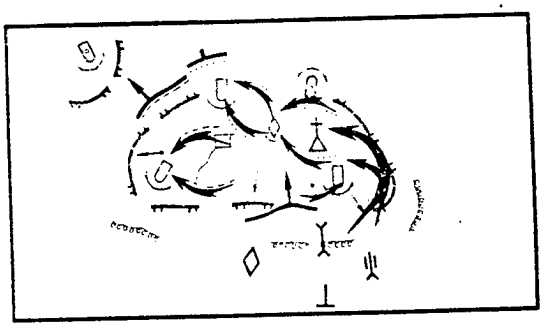
enemy's rear quickly, and then a small number of troops should occupy favorable terrain to cut off the enemy's withdrawal routes and block reinforcements while the main force of troops should attack from the rear toward the front using many routes, acting in coordination with units attacking the front and the flanks to wipe out the surrounded enemy. (See diagram below.)

Diagram Showing Rear Flank Attack



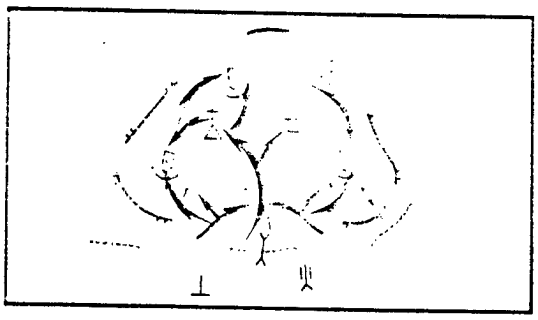
b) When attacking the enemy's flank, some troop strength should attack the enemy frontally; mortars should engage in suppression and blocking fire against the enemy's rear and the other flank; recoilless guns and heavy machine guns should use their firepower to support the infantry, limiting the enemy's movements; main forces should advance rapidly toward the enemy's flank, a small number of troops circling around to the enemy's rear flank to cut off the enemy's avenues of retreat while a large number of troops should wipe out the enemy on the flank and then attack the enemy in depth via many routes and directions, the frontal attacking and the encircling units operating jointly to encircle and wipe out the enemy.

Diagram Showing Flank Attack



c) When attacking the enemy frontally, a portion of troops strength should actively consolidate and expand the breakthrough point and cover movements of the main force. Mortars, recoilless guns and heavy machine guns should use their firepower to suppress the enemy in depth, while some of the main force should concentrate on curling around to attack one or both flanks and while the main force effects a deep thrust and drives straight to the enemy's rear to seize strategic points and to wipe out the enemy in strongpoints. (Please see diagram below.)

Diagram Showing Frontal Attack



Dealing with Several Different Kinds of Situations

When the enemy infantry keeps close to armored targets, ferocious firepower and courageous assaults should be launched to kill and wound the enemy infantry and smash the enemy's armor, thereby stopping the infantry from keeping close to the armor and using the chaos among the enemy to wipe him out.

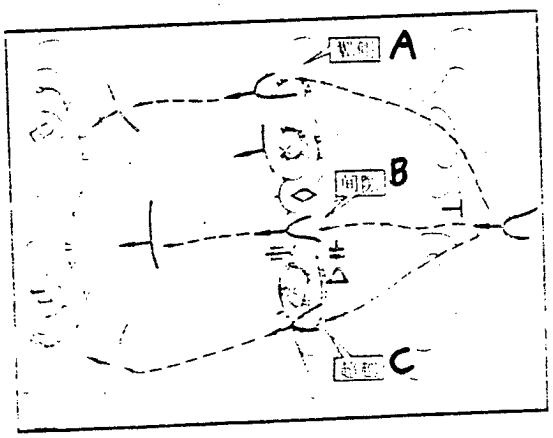
When the enemy is moving away from the front to the right and left. Units should be commanded to occupy favorable terrain on both sides of the roads over which the movement is taking place and to use tanks and anti-tank weapons to pursue and attack. Nearby units should be commanded to seize favorable terrain quickly to smash the enemy's armor, to tear up his battle formations and wipe him out.

d) Use of Reserves (Second Echelon) At Proper Time

Opportune Time for Use of Reserves (Second Echelon). Reserves are usually used as reinforcements in attack, to develop the fruits of victory, and to accelerate the speed of attack. They may also be used when the attacking unit has suffered large casualties or has been worn down, requiring replacements for the attack. They are also used to resist enemy counterattacks, when a battle opportunity is spotted, to pursue and attack a fleeing enemy, to surround and annihilate a stubbornly resisting enemy and to deal with unforeseen circumstances.

Means Whereby Reserves (Second Echelon Units) Enter Battle. Usually reserves enter battle on the flanks or in terrain gaps of the first echelon units (the attacking fendui) where there is favorable terrain for closing with the enemy, spreading out and attacking. Only under special circumstances when reserves must be used to replace a unit will they vault ahead of the first echelon units' (the attacking units') battle formations to enter battle. However, they should not remain inside the first echelon units; otherwise confusion will occur. When necessary, when higher headquarters agrees and after coordination with friendly adjacent units, they may enter battle by smoothly blending into the direction of adjacent friendly units. (See diagram below.)

Sketch Showing Company Reserves Entering Combat



Key:
1) Flank
2) Terrain gap
3) Vaulting ahead

When reserve units (second echelon units) are used, higher headquarters must be notified and approval requested. After they have been used, new reserve units must be established, and the new reserve units' location, the direction of movement forward and the mission they may undertook have to be spelled out. In addition, time limits must be set for the completion of reorganization and replenishment of material and equipment.

The area in which reserve units (second echelon units) enter battle should best be located in a conceal place nearby that is suited for spreading out, launching surprise attacks and covering the attacking units, as well as afford good observation and favor coordination of movements.

Organization of Reserve Units (Second Echelon Units) Going Into Battle. After fendui commanders have decided to use reserve units (second echelon units), they should begin organizing them at once. If they are to go into battle according to already agreed upon plans, all that is required is a brief statement of the mission and organization of coordination before going into

battle. If there have been substantial changes in the situation, the following must be spelled out for the reserve units (second echelon units) as well as for the commanders of individual fendui: situation of the enemy being faced and location of his armor, targets for attack, places for entering battle, mission and method of moving, time and signals to be used for launching attack, transferred subordination for weapons and firepower support methods, movements in coordination with the first echelon and various support measures.

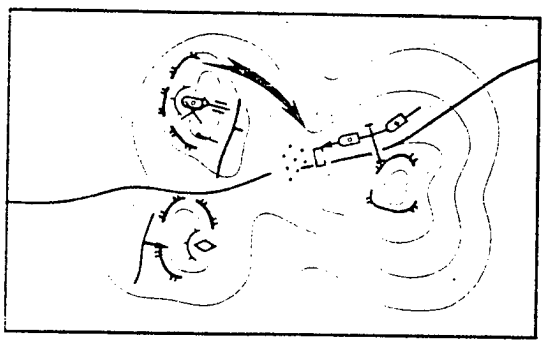
Reserve Unit (Second Echelon Unit) Formations for Entering Combat. Before entering battle, units are formed up into columns to move forward. Upon approaching the first echelon, the column goes into dispersed formation and quickly enters battle at the pre-set location (or direction). After entering battle, it immediately deploys into battle formation, attacking in the direction of designated targets under cover of artillery fire and a smokescreen.

e) Holding Off Enemy Counterattacks

Holding off enemy counterattacks is an important combat action for consolidation and expansion of the fruits of victory. Under modern conditions, to hold off an enemy counterattack amounts mostly to battling enemy armor. During battle, fendui commanders must figure out on time the enemy's plans for counterattack, his troop strength and direction of counterattack, reach firm decisions, and then prepare to resist the enemy's counterattack.

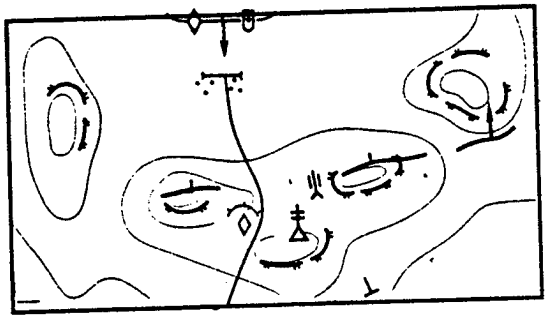
1) When the enemy uses small forces in a counterattack, fendui should use tanks and anti-tank weapons to occupy favorable terrain on the enemy's flanks to wipe out enemy armor. Artillery (or mortars) should be directed to lay down blocking and suppression fire against the enemy to delay his movements. Some of the troops in the units being counterattacked should occupy favorable terrain to launch attacks against the enemy's defenses using reserves to move quickly to the flanks and rear of the attacking enemy and coordinate with units resisting the counterattack in wiping out the enemy. Units that have not been counterattacked should quickly occupy favorable terrain on the attacking enemy's flanks and work in coordination with or support reserves in wiping out the enemy. (See diagram below.)

Diagram Showing the Smashing of an Enemy Counterattack Using Small Forces



2) When the enemy counterattacks using superior forces, commanders should command (or request) artillery troops to lay down blocking and suppression fire against the counterattacking enemy, and they should direct their fendui to seize favorable terrain at once, deploy troops and weapons irregularly to insure that positions have a certain amount of depth, do everything possible to organize flanking and oblique fire and, if circumstances permit, they should also send out small numbers of troops to lay ambushes along the routes that the counterattacking enemy must traverse. They should prepare resistance well and lay mines quickly along sections (or roads) that enemy tanks and armor must traverse. While awaiting the approach of the enemy, they should direct prepositioned units to make surprise attacks to slow the enemy. While waiting for the enemy to come into the effective firing range of weapons, fierce firepower attacks should be launched to wipe out the enemy's armor and infantry, Coordination with the main forces of higher headquarters should be done to smash the enemy's counterattack (Please see diagram below.)

Diagram Showing Resistance to an Enemy Counterattack Using Fairly Large Forces



3) When a counterattacking enemy flees, forces should be assembled at once for pursuit, with main forces either working in cooperation with tanks or with tanks carrying infantry, as circumstances dictate, to pursue and attack the enemy. Victory should be used to develop an in-depth attack against the enemy. Circumstances permitting, a shortcut thrust to the flank of a route that the enemy must traverse may be made to interdict the enemy.

4) When the Enemy Attacks Friendly Neighboring Units. Fendui should actively expand their attack, and they may, circumstances permitting, coordinate with friendly adjacent forces either firepower or small numbers of troops to wipe out a counterattacking enemy.

f) Surrounding and Annihilating a Stubbornly Resisting Enemy.

When the enemy's main forces have been wiped out and remnants band together in rear area strategic points to carry on a stubborn resistance, fendui should quickly assemble troops and firepower or coordinate with friendly adjacent forces to wipe them out.

1) Before surrounding and wiping out the enemy, commanders should painstakingly take stock of the enemy situation, particularly the numbers of the enemy's armor and firepower points, locations, gaps in defenses and weak points as well as terrain that favors concealed approach, deployment and attack by our own forces. They should assemble troops and firepower, effect coordination to form deployments directed toward surrounding and attacking the enemy. Depending on circumstances, a portion of the troops may work on a frontal containment while the main force attacks the flanks or the rear and a small number of troops interferes with enemy reinforcement.

When on the offensive, commanders should request higher headquarters artillery support and organize the firepower in their own fendui to carry out brief but ferocious firepower attacks using recoilless guns and tanks to attack and destroy enemy armor, plus mortars and heavy machine guns to inflict casualties on enemy infantry. When obstacles are encountered, they should be cleared at once and the enemy's positions penetrated under cover of artillery fire to cut up, surround and annihilate the enemy.

When the enemy flees, firepower should be used to kill and wound. Infantry or tanks carrying infantry should be assembled to pursue and attack the enemy. When pursuing, troops should forge ahead courageously without fear of isolation or of standing out. The enemy should have no opportunity to catch his breath. It is necessary to use a few to win much, concentrating artillery to strike ahead of the enemy to cut off his escape route and strive to annihilate the enemy on the move.

2) Coordination with Friendly Adjacent Forces To Surround and Wipe Out the Enemy

Commanders should act in accordance with instructions from higher headquarters to coordinate closely with friendly adjacent forces and to advance under artillery support provided by higher headquarters to surround and wipe out a stubbornly resisting enemy. Some troops should be used to seize favorable terrain, consolidate their positions and support the entry into battle of second echelon troops or reserves from higher headquarters.

g) Actions Following Mission Completion

After a fendui has completed its combat mission, it may, depending on the battle situation and instructions from headquarters, continue to develop the offensive, consolidate the area it has occupied and cover the entry into battle of second echelon units from higher headquarters. Alternatively, it may retired from the combat zone to a new area to assemble and await orders. No matter which mission it is to perform, it should organize quickly to carry it out so as to avoid an enemy retaliatory firepower attack.

1) When a fendui receives the mission of continue to develop the offensive, its commander should quickly take stock of the enemy's situation and the terrain, and acquaint himself with the extent of the fendui's casualties and attrition. He should quickly make a decision about new combat and immediately make redeployments, replenish ammunition, and spell out the mission to constituent and attached subordinate units. He should organize coordinate needed support and go into battle as quickly as possible. If a favorable

combat opportunity presents itself, depending on instructions from higher headquarters, he may fight as he organizes and fight as he replenishes, unflaggingly developing the attack deep into the enemy's lines.

2) Upon receipt of an order to consolidate occupied territory and cover the entry into battle of second echelon units, a commander should quickly organize all units to police up the battlefield, to search for killed and remaining enemies and to readjust deployments, quickly organizing for defensive combat. If it is necessary to protect the entry into battle of second echelon units from higher headquarters, favorable terrain should be occupied on the flanks of the higher headquarters second echelon units going into battle, and active offensive movements should be used to tie down enemy troops and firepower, using the firepower of organic artillery to suppress the enemy's firepower and insure that second echelon units enter battle smoothly.

3) When a fendui goes into reserve, it must be drawn together and rapidly redeployed, its ammunition and equipment replenished, and attention given to the movements of friendly adjacent units in order to be ready to go back into combat at any time.

4) When orders are received to retire from the combat zone, commanders should act in accordance with instructions from higher headquarters to tell all fendui the time, sequence, routes and methods of withdrawal as well as the assembly location, the time of arrival and cover measures. In addition, he should give instructions on the methods for sending wounded to the rear and for dealing with prisoners of war and material and equipment. When leaving, close attention must be given to organizing and strengthening all support measures, and fendui should be directed to make full use of favorable terrain and to adopt dispersed formations and leave quickly. On the way out, command should be strengthened; the route of march should be fully understood, order should be maintained, and all matters should be dealt with flexibly. Upon arriving at a designated location, haste should be made in building necessary defenses, in organizing security, in camouflaging well, in reorganizing, in replenishing arms, ammunition, materiel and equipment, in organizing combat critiques, in publicizing valorous deeds, in carrying out mobilization and in actively preparing for future battle.

2. Organization and Command Against Airborne Landings*

a. Organization for Combat

1) On-the-ground Reconnaissance and Formulation of Battle Plans

a) On-the-ground Reconnaissance. Fendui commanders should use understanding of their mission and assessment of the situation as a basis for leading all organic and attached commanders in a careful reconnaissance of anti-airborne landing zones.

Order of On-the-ground Reconnaissance

Dispatch of observers and designation of duty weapons.

Determination of direction, briefings on the terrain involved and pointing out of landmarks.

Briefings on the enemy situation, transmission of the mission and intentions from higher headquarters plus the mission of one's own fendui and of friendly adjacent forces.

Delineation of reconnaissance points, reconnaissance routes and problems to be looked into and solved at each point.

Clear statement of reconnaissance times, particulars to be noted and support actions to be taken.

Conduct of reconnaissance.

Problems To Be Solved Through On-the-ground Reconnaissance

Assessment of airdrop sites and troop strength that the enemy could airdrop at them; direction of possible movement following landings and strategic points that might be seized.

Analysis of fendui routes of advance and predetermination of terrain features, status of roads and their effect on the enemy's and one's own combat actions within the landing area; determination in advance of strategic points to be controlled and the location of defense works to be built and obstacles to be emplaced.

Determination of roads, deployment areas and targets for attack near area where the enemy might land.

Determination of deployment locations for subordinate units (and weapons), their mission, and changes in direction and routes in the course of battle.

Determination of points for aerial observation and command.

b) Drawing Up Battle Plans. Battle plans should contain the following: places where the enemy might land, times, troop strength, direction of advance and intentions. Mission and combat intentions of higher headquarters; battle organization of one's own fendui, routes of advance, order of advance, deployment area and mission; mission of friendly adjacent forces and of militia; battle organization of organic and attached subordinate units, order of advance, deployment area and mission. Coordination of operations: coordination within the fendui, coordination between the fendui and attached subordinate fendui; coordination between the fendui and friendly adjacent forces and militia; coordination between the fendui and supporting service arms (or fendui). Various support actions: air warning and communications support; actions to defend against nuclear and chemical weapons attacks, methods of replenishing ammunition, equipment and food, and medical rescue measures; rules on signals (and signs); and time limit for completion of combat preparations.

2) Quick and Concealed Advance

After receipt of an order or signal from higher headquarters to go into action against airborne landings, battalions should immediately relay action orders to individual fendui and send scout and advance party fendui to the landing zone. Depending on the situation, decisions should be revised, the mission further defined, and coordination organized.

After receipt of an order from higher headquarters to advance to a predetermined anti-airborne landing zone, companies (or platoons) should act in accordance with instructions from higher headquarters, possible changes in the enemy situation and the degree of urgency of the combat situation to seize key points, rapidly organize the fendui to make battle preparations and advance toward the enemy. In organizing for advance, the following should be emphasized and spelled out: Time, place and strength of enemy airborne landings; the fendui's mission; order of advance, routes and direction of advance within the organization set by higher headquarters; distance, designated points and times of departure and arrival; higher headquarters adjustment area and time when fendui will pass through it; order of march of organic and attached subordinate fendui and the organization and mission of aerial security fendui; situations that might be encountered while advancing and actions to be taken by each fendui; communications methods and setting of signals (and signs).

When boarding vehicles to advance, vehicles should be designated and debarkation points made clear. In the advance party fendui, the make-up and mission of the point squad and the scouting team should be designated.

If an pre-set plan of advance exists and the situation has not changed too much, all that is necessary is a clarification of points that differ from the plan. If an emergency situation exists, organizing will have to be done while on the move.

Fendui usually advance via a single route. Their order of advance should make for the rapid advance of each fendui, for its deployment and entry into battle, and for its defense against enemy air attacks. The precedence set by the commander is usually the chemical detection unit, engineers, directly controlled heavy machine gun and recoilless gun fendui, subordinate fendui (including weapons fendui attached to the fendui), mortar and logistics units. When a company (or platoon) serves as an advance party unit (or fendui) or is independently organized for advance, it should send out engineering troops and chemical detection troops that are attached to it in a point squad to proceed ahead of the fendui with responsibility for acting directly as guards and for scouting out the enemy situation and the terrain. When necessary, flank guards may also be sent out.

When advancing in motor vehicles, the distance between vehicles should be set on the basis of road conditions, speed of advance, the degree of threat from the air, and visibility. Usually it is set at between 50 to 100 meters. When the threat from the air is fairly great, on dirt roads, icy roads, steep roads and winding roads, the distance between vehicles may be suitably increased. When traveling at night, the distance should be shortened.

When advancing on tanks, usually assignment is by squad. Attached weapons squads and infantry squad leaders ride on the command tank in order to coordinate closely with the tank fendui while on the march.

When an air raid occurs while on the march, the order should be given to the fendui at once to use gaps in the terrain or spaces between enemy air attacks to increase distance and advance quickly. Depending on circumstances, weapons may be organized to fire at low-flying enemy aircraft to protect the fendui's advance. When enemy blocking artillery fire is encountered, the pattern of enemy fire and the area blocked must be determined; then, depending on the situation, request should be made to higher headquarters for artillery suppression of enemy artillery. Orders should also be given to increase the distance between vehicles and to pass along quickly in groups or to go around the blocking fire. When an enemy nuclear or chemical weapons attack occurs, chemical detection troops should be ordered to determine the situation at once, to mark the perimeters and to select detour roads or direct routes through by way of supporting the movement of all fendui. If the fendui is carrying protective equipment, whether to go through or detour around will be determined by the situation. Should the road be destroyed while advancing by vehicles, the fendui commander should rapidly organize rush repairs or organize fendui to dismount from vehicles and proceed on foot. When necessary, higher headquarters may be requested to change the route of march to go around the destroyed section. When vehicles break down or are damaged, affected personnel should change to other vehicles at once and continue to advance. When the route crosses bridges or goes along narrow roads and sections that are difficult to traverse, necessary reconnoitering should be done and vehicles directed to reduce speed; alternatively, personnel may dismount from vehicles and move along through such areas.

When approaching the enemy landing ground, the fendui should be directed to take up a dispersed formation and advance toward the enemy in concealment. When advancing by vehicle, it will be necessary to debark and travel on foot to close with the enemy. The debarkation area should be selected as far forward as is possible given the enemy situation, the terrain, the fendui's mission and instructions from higher headquarters. Usually this will be 3 to 5 kilometers away from the enemy landing site. The debarkation area should provide good concealment, should allow vehicles to stop and maneuver, and should have plentiful water available. Debarkation must be done quickly, and attention paid to dispersing vehicles in concealment.

3) Prompt Determination of the Situation and Passing Along of Oral Commands

When fendui approach the deployment area, commanders should proceed immediately under concealment into the deployment area protected by firepower provided by higher headquarters and by the guard fendui. They should size up the situation at once and quickly issue oral orders, the main thrust of which should be the following:

The nature and strength as well as the present posture of the enemy being faced.

The fendui's deployment area and mission.

Subordinate units' location, movement routes and targets to be attacked and methods of mutual coordination.

Firing positions and mission of attached weapons plus battle tactics of tanks providing support to the infantry.

Mission of supporting service arms (and fendui) and their methods of coordination.

Mission of friendly adjacent troops and militia and their methods of coordination.

Supplementary communications and signals and command location.

When the situation is urgent, fendui should be commanded to go into battle quickly, the situation being clarified as fighting progresses.

b. Conduct of Battle

1) Active Battle Against an Enemy with Air Superiority. Commanders should seize favorable opportunities for battle, commanding their own fendui and local militia to concentrate fire primarily against the aircraft that fly lowest and are closest to their forces, and then to shift firing to other targets. They should strive, with support from air defense firepower from higher headquarters, to wipe out some enemy aircraft in the air, to throw into disarray enemy airborne landing plans and to reduce the accuracy of enemy airdrops.

When the enemy is in the midst of landing and when some troops have landed, mortars should be ordered first to direct their firepower to suppress the enemy who have already landed; then anti-tank weapons and infantry machine gunners should be commanded to approach the enemy rapidly and concentrate their fire to wipe out enemy aircraft or parachute troop combat vehicles that have been landed, to eradicate paratroops that have landed and infantry disembarking from aircraft. At the same time, some infantry machine gun firepower and aerial explosive devices should be used to hit low-flying aircraft and paratroops in the process of landing, setting clear priorities and emphasizing the key ones.

2) When an airborne enemy just touches down, advantage should be taken of the favorable opportunities provided by his chaotic organizational system, his dispersed troops, infantry that has not yet left aircraft or are in process of leaving aircraft, and his as yet inoperative communications to direct mortars to suppress the landing enemy and prevent him from rallying and assembling. Anti-tank weapons should be directed to concentrate their fire to wipe out enemy aircraft and vehicles that have landed, and infantry fendui should be directed to use squads and teams as small groups traveling via many routes to unleash ferocious attacks against the enemy making full use of the maximum strength of our close combat weapons to wipe out the enemy swiftly.

When the enemy has rallied and assembled, commanders should first organize all firepower to inflict large numbers of casualties on him. Next, infantry fendui should be commanded to make deep thrusts into the enemy to cut his formations up into many pieces and wipe them out one by one. Reinforced tank fendui should use firepower to support infantry fendui in combat. During battle, some light and heavy machine guns should be directed to use their firepower to attack enemy armed helicopters and to cover infantry and tank movement.

3) Annihilation of an Enemy That Has Seized a Predetermined Objective

When an enemy maneuvers in the direction of a predetermined objective, commanders should make full use of weaknesses such as the enemy's isolation, exposure and inability to make full use of his firepower, first commanding artillery (and mortars) to direct blocking fire against the enemy to delay his movements. Commanders should also command tank weapons to to seize favorable terrain quickly to wipe out enemy paratroop combat vehicles and use infantry machine gun firepower to inflict casualties on the enemy infantry. Next, some troops should mount the tanks and move quickly to the head of the enemy's battle formations, seize favorable terrain and block the enemy. Other troops should cut off the enemy's retreat routes. The main force, led and supported by tanks, should make a ferocious attack on the flanks of the enemy's combat formations, first cutting up the enemy into several segments and then wiping them out one by one.

When the enemy attacks in the direction of a predetermined target, artillery (and mortars) should be directed to lay down a blocking attack against the enemy. Some troops should move directly to occupy favorable terrain in the rear of enemy formations and use their firepower to chop up the enemy's combat formations. The main force, tanks in the lead, should envelop both flanks of the enemy's combat formations. In coordination with holding units in front of the enemy, small groups traveling many routes should thrust and fight ferociously to wipe out the enemy quickly.

When a surprise attack by enemy air power is encountered during battle, commanders should remain calm and composed, commanding some light and heavy machine guns to fire at low-flying aircraft in coordination with air defense firepower from higher headquarters to protect the fendui's movements.

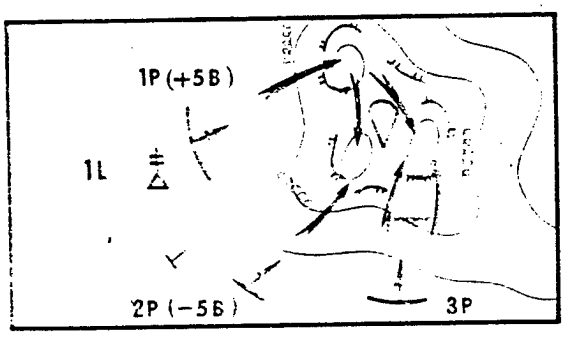
4) Cutting up and Surrounding an Enemy That Has Shifted to the Defensive

As soon as the enemy goes on the defensive, advantage should be taken of his disarray to command artillery (and mortars) to carry out brief but ferocious raiding fire against the enemy to kill and wound effectives. Anti-tank weapons should be commanded to concentrate fire on destroying enemy paratroop combat vehicles, and infantry fendui led and supported by tanks, should be commanded to divide up into small groups traveling by many routes to make violent thrusts and strike quickly in a pincer attack from inside and outside to wipe out the enemy in one blow.

When an enemy that has gone on the defensive and sets up a preliminary defense system, commanders should quickly size up the troop dispositions, firepower support system, and defense work obstacles, then promptly simply spell out the mission of each fendui. He should direct artillery (and mortars) to launch a sudden and accurate firepower attack to suppress the enemy's artillery troops and support his own infantry and tank fendui in battle. Anti-tank weapon firepower should smash the enemy's armor and firepower points. Some troops from the fendui should be organized for an active frontal (containment) attack against the enemy, but the main force led by tanks should carry out a ferocious attack against weak parts of the enemy's flanks or rear flanks in order to cut up his deployments first and then, in coordination with the

frontal attacking fendui, to make a pincer attack from the front and rear to wipe out the enemy one by one. The battalion commander should direct reserves to join battle at the proper time, using the tactics of envelopment and encirclement and of deep thrusting and cutting up to wipe out the enemy swiftly. (See the following diagram.)

Diagram Showing the Cutting Up, Surrounding and Annihilation of an Enemy That Has Gone on the Defensive



When the Enemy Breaks Out of Encirclement. Artillery (and mortars) should be commanded to concentrate their firepower to carry out a ferocious attack. At the same time, some troops should be sent on tanks to maneuver rapidly to the head of the enemy that has broken out of encirclement to take favorable terrain to block the enemy. The main force should move at maximum speed or take a short cut to one or both flanks of the enemy combat formation to carry out flank attacks (depending on the situation, battalion may carry out flat trajectory or following fire), and act in consort with the blocking attack (advance party) fendui to wipe out the enemy.

5) Rapid Withdrawal from the Combat Area

Once the airdropped enemy has been substantially annihilated, in order to prevent enemy firepower retaliation, fendui should act on the basis of pre-set plans or instructions from higher headquarters to withdraw rapidly from the battlefield in a planned step-by-step way as circumstances permit, except for small numbers of troops working with militia to search for and capture scattered enemy remnants and police up the battlefield.

Before withdrawing, fendui commanders should make clear to all subordinate organic and attached units the time, order, routes and concealed assembly areas as well as various support actions. If withdrawal is to be in vehicles (or riding on tanks), they should also make clear the methods for summoning vehicles and vehicle loading points. At the time of withdrawal, full use should be made of the terrain and of concealed roads, withdrawal being done quickly under cover of fendui and higher headquarters firepower. After reaching designated locations, observers and guards should be posted at once, and fendui should be directed to disperse in concealment, to camouflage

themselves thoroughly, to reorganize, and to replenish ammunition, equipment and stores. A battle critique should be conducted promptly and preparations made for future combat.

3. Organization and Command for Chance Encounter Warfare*

a. Organization for Combat

In anticipation of chance encounter warfare, thorough organization and preparation should be done before setting out on a march. When chance encounter combat is not anticipated, rough preparations may be made before starting out, and once battle is touched off, organization and preparation may be done while fighting is underway.

1) Deciding a Plan of Action

After receiving their mission, fendui commanders should correctly comprehend the intentions of higher headquarters and the mission of their fendui. (Battalion commanders should immediately pass down oral commands in advance either via telephone or by word of mouth to all subordinate organic and attached units.) If battalion is to carry out the mission alone, it should send out a reconnoitering fendui 3 to 5 kilometers ahead of the route of advance of the point company; it should pass down the mission at the right time; and it should study the enemy situation, the terrain and the status of roads in accordance with instructions and intelligence from higher headquarters; and it should assess the likely times and places in which an encounter with the enemy might occur, deciding on a combat plan and disposition of troops to be used while on the march.

a) Understanding the Mission

Fendui commanders should particularly understand the following: the intentions of higher headquarters, formations and organization while on the march, a basic advance plan for chance encounter combat; the fendui's mission, reinforcement, route of march, distance, speed of movement, time of departure and arrival at a designated area; and movements when contact with the enemy is made; mission of friendly adjacent forces, status of higher headquarters reconnaissance fendui and activities of local armed units; and means of maintaining contact with them.

b) Situation Assessment

The Enemy Situation. Commanders should study and fully understand intelligence data on the enemy; they should ascertain the intentions of enemy movements, the direction, routes and times of advance; troop organization; speed of movement, reconnaissance methods and support actions that may be used; and they should decide on the basis of the location, the distance, speed of movement and times of departure of the enemy and themselves the time and place of a chance encounter and what actions the enemy may be likely to take.

Our Own Situation. Commanders should study the organization of organic and attached subordinate units, their military and political quality, the status of material and equipment support, the movements of friendly adjacent forces,

and the effect of these things on the fendui march and on chance encounter combat.

Terrain, Routes and Weather. Commanders should study thoroughly terrain features, the status of roads, the weather situation along the route of march, and their effect on the movement, reconnaissance and combat actions of both the enemy and themselves.

Fendui commanders should make a complete analysis of the foregoing circumstances, make an assessment and reach a conclusion, the thrust of which will usually include the following: The time and place where a chance encounter with the enemy may occur and situations that may arise; the favorable terrain or strategic points that should be occupied, and the deployment of forces on the march that should be used.

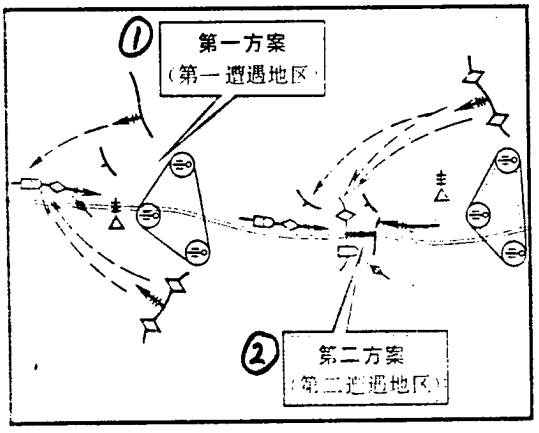
c) Deciding a Plan of Action

Usually a plan of action contains the following: Deployment of troops on the march and combat plans at the time of a chance encounter with the enemy.

Deployment of troops on the march has to be in keeping with combat intentions, and it should facilitate the rapid advance and spreading out of individual fendui. In addition, the decision must be based on a pre-set order of entry into battle. In organizing for battle, a distinction has to be made between point troops and other units, efforts made to maintain the organizational system so that there will be a capability to fight alone. At the time of boarding vehicles to begin to advance, there should be a division of vehicles.

Combat plans should set forth the fendui's combat intentions, should predict the place in which a chance encounter with the enemy may occur; and should set forth the mission, means of coordination and basic tactical methods to be used under various situation at the time of a chance encounter with the enemy. (Please see diagram below.)

Diagram Showing Plan for Chance Encounter Combat



Key:
1) Plan 1 (first encounter area)
2) Plan 2 (second encounter area)

Note: Infantry fendui usually select between one and three chance encounter areas. Combat plans should most emphasize preparations for the place where the possibility of a chance encounter is greatest. In selecting the chance

encounter areas, an assessment should be made on the basis of the intentions of enemy movements, the direction and routes of his advance, time of departure, deployments on the march and speed of march, mission of one's own fendui, the time of its departure and the speed of its advance, status of the terrain and roads, and the distance between the enemy and ourselves. Calculations should make it possible to ascertain the earliest and latest times and the locations of chance encounters with the enemy.

2. Handing Down of Oral Combat Commands

After fendui commanders have decided on a combat plan, they should immediately issue oral combat commands to subordinate organic and attached units. The method of doing this is usually to talk to fendui commanders either collectively or individually in advance of movement. Sometimes, the fendui commander may first decide the order of march and organize fendui to start out on time, explaining the mission and readjusting deployments as they go along. For chance encounter combat that is not anticipated, commanders usually direct the movements of individual fendui in the form of simple verbal commands, clarifying them and organizing as fighting moves along. When passing down oral combat commands, usually the following matters are spelled out:

Location and intentions of the enemy and the place in which a possible encounter with us is possible.

Intentions of higher headquarters.

Mission of the fendui, order of march (distribution of vehicles), and the organization and mission of the point squad and the reconnaissance team.

Combat organization for subordinate units and mission and means of coordination during a chance encounter with the enemy; location of artillery unit positions, their mission and methods of supporting combat.

Movements of our reconnaissance fendui and of local armed units, means of identifying them and of keeping in contact with them.

Signals and signs

Location of commander and identity of the deputy.

After handing down oral combat commands, attention should be turned to the nature of battle and to galvanizing cadre and soldier ideology, to the organizing of all support and to taking firm grip on the completion of all other preparations, reporting to higher headquarters.

When it is necessary to organize coordination independently, this should take into account the three links of the triggering of battle, entry into battle of main forces and support of higher headquarters' main forces entry into battle.

3) Command While On the March

Fendui should advance according to combat organization and the pre-set order for entering battle, and they should promptly send reconnaissance and guard

fendui forward and reconnaissance teams and pathfinder troops to flanks or the rear that are under threat. Commanders should order the main anti-tank weapons and heavy machine guns to advance ahead of the fendui and to pass through the initial point on time.

During the march, they should command directly the movements of pathfinder troops maintaining effective communications contact at all times with higher headquarters and the pathfinder troops. They should check as they move along, and do all possible to achieve contact with militia. They should promptly acquaint themselves with and both dexterously and decisively handle all situations. At the same time, they should be sure to observe and to assess all suspicious signs. Each fendui should be ready at all times to go into battle.

When approaching a place where chance contact with the enemy is possible, the length of the advancing column should be shortened and further preparations made for combat. Vigilance should be heightened to guard against an enemy air or ground attack. When advancing on foot, commanders should summon all commanders of subordinate fendui to move along together so as to be able to command units to go into battle quickly. Depending on circumstances, flank pathfinder troops might be dispatched to both flanks in important sections along the route of march. When traveling by vehicle, observation and communications contact should be bolstered. Radios silence should be observed, and units should be ready to dismount from vehicles at any time.

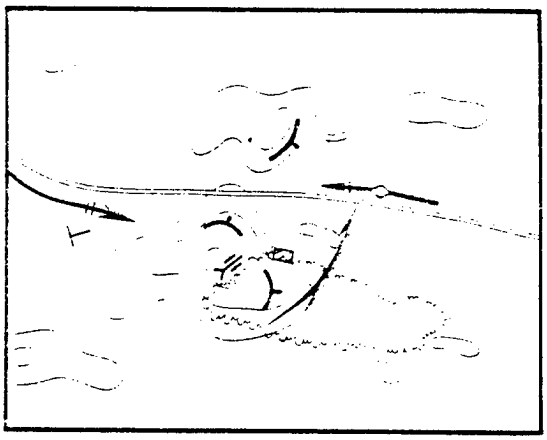
b. Engaging in Combat

When fendui happen upon the enemy, the crux lies in early discovery of the enemy, the making of firm decisions, further spelling out for subordinate organic and attached units the mission and particulars of coordination, immediately directing each fendui to go into battle according to advance plans or deployments that have been temporarily worked out, while giving attention to protecting the flanks. During battle, commanders should apply tactics dexterously in accordance with the intentions of higher headquarters, the situation of the enemy and one's own forces and changes in the situation, providing constant command, seizing and maintaining the initiative and seeking to wipe out the enemy during movement.

1) Actions When Deployment To Occupy a Strategic Point Is Made Ahead of the Enemy

When a fendui deploys to occupy a strategic point ahead of the enemy, it should make full us of our initiative and take the opportunity afforded by the enemy's not yet having spread out as he approaches to try to open fire before he does and attack before he does for a quick kill while the enemy is still in motion (See following figure.)

Diagram Showing Movement When We Deploy Ahead of the Enemy



When the enemy is in a position of inferior strength or when the terrain does not favor movement of the enemy's machines, fendui may use troops to occupy strategic points, their main forces using the terrain to press close in concealment toward the enemy's flanks or around the rear of his flanks to take the opportunity afforded by the enemy's approach or his not yet having spread out during his approach to take full advantage of the power of small groups fighting at close quarters for a courageous deep thrust to cut up the enemy and throw the enemy's march formations into confusion with a single blow, to attack and destroy his tanks and armored combat vehicles one by one, and to try to kill the enemy's infantry inside their armored combat vehicles. Should the enemy try to go around our positions and approach our main forces, the enemy's approach should be halted and higher headquarters informed at once.

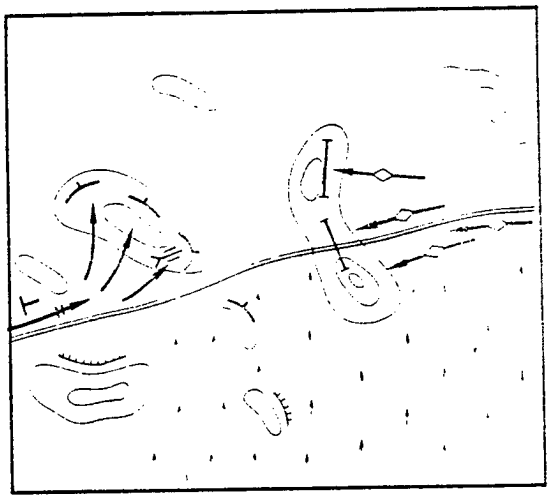
When the enemy uses superior strength to launch an attack against us, fendui should use their main forces and anti-tank weapons to hold fast to strategic points and nearby favorable terrain controlling the roads over which the enemy's armored combat vehicles pass and the areas suited to enemy deployment while some forces control terrain on the flanks to prevent the enemy from encircling us and to guarantee the security of our flanks and rear. Once the enemy gets close, all weapons should be directed to open fire suddenly to smash the enemy's armor, to wipe out the enemy's infantry, and to hold fast to favorable terrain to support the smooth deployment and entry into battle of the main forces of higher headquarters.

When the enemy has not yet discovered our occupation of strategic points, we should try ambush to wipe out the enemy completely or to wipe out his advance fendui, forcing the enemy into an unfavorable posture and wiping him out entirely in conjunction with main forces.

2) Actions When We and the Enemy Deploy Simultaneously

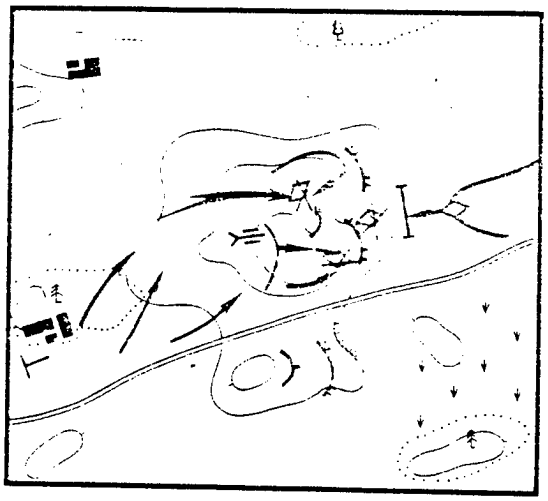
When the enemy and we deploy simultaneously, fendui commanders should immediately command pathfinder troops to take favorable terrain on both sides of the road and in the direction suited to the approach of enemy armored combat vehicles. Anti-tank weapons should occupy positions suited to our exercise of firepower, and mortars should occupy firing positions nearby to open fire ahead of the enemy to wipe out the enemy's armor, inflict casualties on the enemy's infantry, and prevent the enemy from deploying and maneuvering. At the same time, all fendui should be directed to move swiftly and violently to take strategic points in order to bring under control areas that the enemy's armored combat vehicles can use for attack. Some troops should also control routes that the enemy would have to use in an envelopment in order to secure our rear flanks.

Diagram Showing Movements When the Enemy and Ourselves Deploy Simultaneously



When the enemy and we occupy the same strategic point simultaneously, commanders should organize firepower to inflict casualties on the enemy and delay his movements in an effort to occupy the strategic point ahead of the enemy. If the enemy reaches a strategic point at the same time as ourselves, all fendui should use a heroic spirit of overwhelming all enemies to make a courageous thrust into the enemy's battle formations, attacking via many avenues and using fighting and demolitions together to wipe out the enemy in a single stroke. After seizing the strategic point, they should rapidly extend the victory, or they should immediately readjust their deployments, organize their firepower, build defense works, prepare to resist enemy attacks and support the main forces deployment and entry into battle.

Movements When We and the Enemy and Occupy a Strategic Point Simultaneously

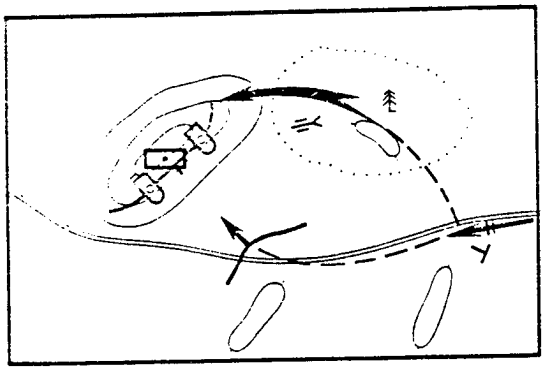


When the enemy and we have simultaneously occupied a portion of a strategic point, depending on circumstances, we should hold fast to the strategic point that we have already occupied and cover the deployment and entry into battle of main forces. Alternatively, our main forces should attack the enemy's flanks to wipe out the enemy in coordination with fendui attacking frontally.

3) Actions To Be Taken When the Enemy Occupies a Strategic Point First

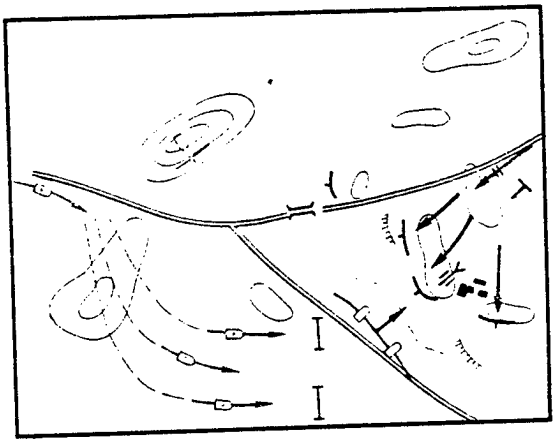
When the enemy occupies a strategic point first, commanders should assess the situation quickly. If the enemy force is not large, mortar fendui should be directed at once to take up nearby firing positions and use concentrated and ferocious firepower to suppress the enemy's effectives and weapons. Anti- tank weapons should be commanded to attack the enemy armor that most threatens our position. The opportunity afforded by the enemy's having been unable to consolidate his position should be used to direct all fendui to make a valiant and ferocious attack under cover of our firepower to carry out a courageous envelopment by going through gaps in the enemy's formations and around his flanks to wipe out the enemy swiftly and take the strategic point.

Diagram Showing Our Movements When the Enemy Occupies a Strategic Point First



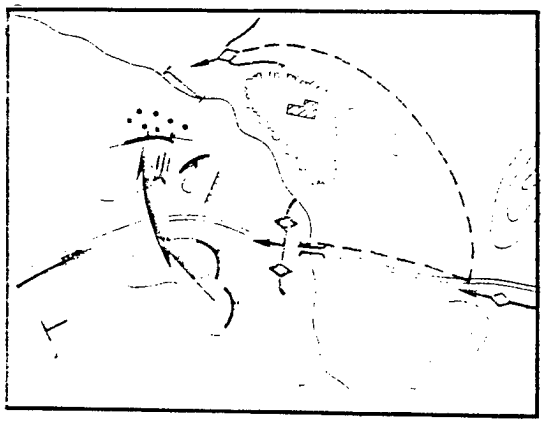
When the enemy attacks us with fairly large forces, commanders should remain calm and give firm direction to their fendui to occupy favorable terrain nearby rapidly to knock out enemy armor and to use mortars, rifles and machine guns to rupture contact between the enemy infantry and tanks, to kill and wound large numbers of infantry and to repulse enemy assaults. When the enemy attacks us simultaneously frontally and on the flanks, fendui should concentrate main forces to deal with the place of greatest threat.

Diagram Showing Movements To Resist Enemy Attacks



When the enemy's main forces envelop our flanks, troops and weapons should maneuver rapidly to occupy favorable terrain and to lay mines quickly in sectors (or roads) over which enemy armor must travel, using fighting and demolitions to smash decisively the enemy's encirclement and to hold fast to positions and set the stage for the main forces to annihilate the enemy.

Diagram Showing Movements To Halt Enemy Main Force Encirclement of Our Flanks

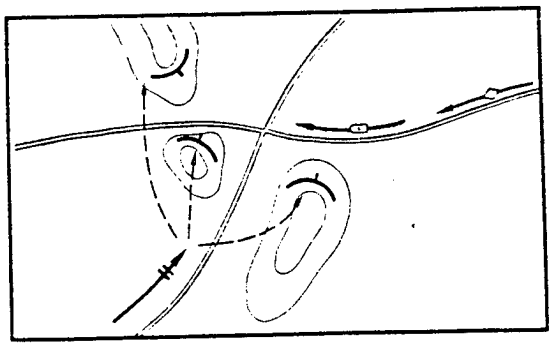


When an enemy moving along several roads is encountered, efforts should be made to concentrate the main force to wipe out the enemy on one road or part of a road, while required troop strength is used to contain the enemy on other roads in order to set the stage for main forces to wipe out the enemy.

4) Actions To Be Taken When Encountering an Enemy Moving Perpendicularly and an Enemy Who Has Halted.

When a fendui encounters an enemy moving perpendicularly, commanders should firmly command the fendui to take up their original march formation and rapidly deploy from march to occupy strategic points and force the enemy to unfavorable positions to cover the entry into battle of main forces. Depending on circumstances, fendui may also be commanded to launch a sudden attack against the enemy in an effort to turn the main direction of attack toward the enemy's command organization and artillery fendui causing the enemy to lose command firepower support and set the stage for higher headquarters annihilation of the enemy.

Diagram Showing Movements When Encountering an Enemy Moving Perpendicularly



When coming upon an enemy who has halted movement, or when the enemy has suffered reverses and has shifted to the defensive, fendui should following the principle of attacking an enemy that has not consolidated his position.

When the enemy collapses and withdraws, commanders should promptly command fendui to use ferocious firepower to kill and wound the enemy. Depending on circumstances, determined, bold and powerful actions should be taken to pursue and attack in an effort to wipe out the enemy in motion.

4. Organization and Command for Ambush Warfare*

a. Organization of Combat

After receiving their mission, fendui commanders should thoroughly plan the organization of combat and rapidly complete combat preparations within the time limits set for completion of preparations to ambush. In making preparations, they should proceed from their specific circumstances, pay attention to key points, simplify procedures, make sensible plans and stress results.

1) Understanding the Mission and Assessing the Situation

a) Understanding the Mission

The main components in understanding the mission are as follows: intentions of higher headquarters; the mission of one's own fendui; targets for attack, location of the ambush area, status of attached units and support, time limits for completion of ambush preparations; and routes, methods and locations to which a shift should be made following completion of the mission. When laying an ambush as higher headquarters desires, the mission of friendly adjacent units, the area they occupy and means of coordination with one's own fendui should be understood. When local forces and militia are to operate in cooperation, it is also necessary to know about their strength, their ability to fight and their skills.

b) Assessing the Situation

The primary components of an assessment of the situation are as follows:

The enemy's situation. The enemy's troop strength, and the enemy's intentions; the enemy's fighting ability; possible actions the enemy will take when ambushed; possibility that the enemy may be reinforced, the number of troops, the direction from which they will come, and their time of arrival; and enemy aerial reconnaissance and cover.

Terrain. Ability of the enemy to traverse roads of approach, features of the terrain along the way and its effect on the speed of enemy movement; areas suitable for ambush by our forces and the effects of the topography on the concealment and deployment of our forces, on observation, on firing, and on the launching of an attack by fendui; routes that favor our movement in and out and the extent of concealment they provide.

Our own situation. Military and political quality of the fendui and of attached units, status of personnel, weapons, and equipment; certainty of supply of ammunition; mass base in the ambush area and whether it is favorable for stopping the leakage of information out of the ambush area; movements of militia and local forces and ability to provide support to the fendui.

Weather. Weather conditions, possibility of change in meteorological conditions in the ambush area as well as its effect on the combat movements of both the enemy and ourselves.

In judging situations, commanders should make an overall analysis, weigh the merits and demerits, and reach a correct judgment and conclusion. He should simultaneously consider and make a decision about the enemy's intentions, routes of movement and possible movements, and the time of the enemy's arrival in our ambush area; places suitable for laying an ambush; battle deployments that should be used; and means of keeping information from leaking out of the ambush area. The major ingredients in the judgment are battle intentions, the ambush area, deployment of forces and the division of duties.

2) On-the-ground Reconnaissance, Selection of Positions for Launching Attack (Ambush), and Determination of Deployments for Ambush

On-the-ground reconnaissance methods. When considerable time is available, usually a full reconnaissance of the ambush area is conducted to check out terrain features, roads, human labor available for use, and natural obstacles in the ambush area. When conditions permit, a counterspying reconnaissance may be conducted on the enemy's approach routes and a study made of possible enemy movements so as to be able to work up countermeasures. When time is pressing, separate groups may do these things at different places at the same time. The main purpose of the reconnaissance is to figure out positions for blocking fire, flanking fire and tail fire, the disposition of each fendui and routes for launching the attack; firing positions for weapons and firing sectors; strategic points, roads and bridges that must be controlled as well as locations suitable for command and observation. During the on-the-ground reconnaissance, security should be strengthened and attention given to camouflage and concealment.

a) Selection of Positions to Launch an Attack (Ambush). Fendui should select positions from which to launch an attack that are within the area designated by higher headquarters and that are consistent with the characteristics of the object to be ambushed and terrain conditions. The positions for launching an attack (ambush) should include positions to deliver blocking, flanking and tail fire). Blocking fire positions should be selected on favorable terrain suited to blocking the enemy and to coordination with main forces to wipe out the enemy. Flanking fire positions should be selected on one or both sides of the enemy's road of approach on terrain that is suited to surprise attack and that is not prone to discovery by the enemy. Tail fire positions should be selected on favorable terrain suited to cutting off the enemy's escape routes, to halting enemy reinforcement and to the delivery of fire into the rear of the enemy column.

b) Deciding Troop Dispositions for Ambush. The fendui should organize flexibly for combat on the basis of the terrain features in the ambush area, the nature of the target to be ambushed and the mission of the fendui, carrying out dispositions correctly. When carrying out a mission thought up by higher headquarters, the ambush team must be made up in accordance with the specific mission to be performed and the instructions of higher headquarters. When carrying out a mission independently, usually a unit is composed of a flanking fire team, a blocking fire team, a tail fire team and an observation team. When necessary company may also organize a reserve unit and an engineering support team. When battalion is to independently ambush and wipe out enemy transport vehicle units or small units behind enemy lines, it should also set up a fendui to prevent reinforcement as circumstances require.

The flanking fire fendui is made up of 5/9-6/9 of the troop strength (battalion usually uses two-thirds or one-half) and also receives substantial reinforcement. The fendui is deployed in concealment in flanking fire positions and is responsible for the main surprise attack. When the flanking fire fendui is deployed on both sides of a route, main forces should be deployed on the main side to produce a surprise attack from a key point.

The blocking fire fendui is composed of 2/9 troops (battalion one ninth) deployed in concealment in blocking fire positions in order to block at once the route of enemy march and act in coordination with the flanking fire fendui to wipe out the enemy.

The tail fire fendui is made up of 2/9-1/9 troop strength. It is deployed in tai positions on one or two sides of the route and is responsible for cutting off the enemy's retreat route and for firing into the tail of the enemy.

Reserves are made up of 1/9 troop strength deployed in positions suited to concealment and maneuver and used to assist battle by all of the fendui or to deal with unexpected situations.

The fendui that blocks reinforcement is set up as requirements dictate, the number of troops depending on circumstances. It occupies favorable terrain in the direction from which the enemy might be reinforced in order to halt and delay reinforcement and to support battalion main forces in surrounding and wiping out the enemy.

Mortar Fendui. When battalion has mortars attached to it from regiment and they are under battalion control, they are concentrated on the main flank in the ambush zone between 2 and 3 kilometers from the enemy route of march in a favorable position for providing assistance to the main flanking fire fendui. The battalion mortar platoon is usually attached to a company and controlled by the company. It is deployed in concealed terrain from which it can provide assistance to infantry fendui in battle and can also control dead spots in firing.

Recoilless Guns. Recoilless guns are usually assigned to a company (or a platoon) and are deployed in concealed terrain from which they can readily attack and destroy enemy armor. Recoilless guns are used mostly in battle against enemy tanks and armored combat vehicles.

Anti-tank Missile Platoon. The anti-tank missile platoon is usually under direct control of battalion, or it may be assigned to the blocking fire and the tail fire fendui. It is deployed on favorable terrain from which it can attack and destroy enemy armor and support infantry and tank fendui in battle.

Machine Gun Company Subordinate to Battalion. Heavy machine guns are mostly assigned to the flanking fire and the tail fire fendui and are deployed on favorable terrain from which they can make use of their firepower and cover attacks by the infantry. They may also be given an aerial firing mission. Anti-aircraft machine guns are usually under battalion's direct control and used mostly to cover aerial security for the battalion command post.

Tank Fendui. The tank fendui is usually incorporated into the flanking fire fendui, or it may be used independently. It is deployed in cover on the rear flank of the flanking fire fendui in a position from which it can maneuver and attack. Its main mission is to launch a surprise attack against the enemy's marching columns and act in coordination with the infantry to surround and annihilate the enemy.

Observation Team. The observation team is made up of 2 or 3 men who have been transferred from companies (or platoons). It is deployed in concealed terrain near the route of enemy approach where it is responsible for observation and for advance reporting on the enemy situation.

Engineering Support Team. This team is usually composed of assigned engineering troops and is deployed on favorable terrain suited to its work and movement. It is responsible for emplacing obstacles and for demolitions.

A combat logistics team, rescue depot (or team), ammunition depot (or team) and provisions depot (or team) are deployed to the rear or on the rear flank of the flanking fire fendui in positions from which they can provide support.

Command and Observation Post. Command and observation posts should be located on concealed terrain from which they can observe and command.

Following consultations, local forces cooperating directly in battle may be made responsible for security or for direct cooperation in the actions of the blocking fire and tail fire fendui. Militia engaged in battle may be given missions of observing the enemy situation, transportation to and from the

front and coordinating with engineering fendui to blow up roads and bridges, to emplace obstacles, to harass the enemy and to lure the enemy.

3) Handing Down of Oral Combat Orders and Organizing Coordination

The primary ingredients of orally handed down commands and the organization of coordination are as follows:

Enemy troop strength, possible direction and routes of movement, and time of arrival at our ambush site.

Intentions of higher headquarters and mission of the fendui.

Each fendui's organization for combat, deployment location, mission, route for launching attack, and coordination methods.

Situations that might arise and plans of action.

Times for entering waiting areas and occupying positions to launch attack (ambush), routes and methods.

Order of withdrawal from combat, routes, methods and positions to proceed to.

Time limits for completing ambush preparations and signals (or signs)

Location of command identity of alternates.

4) Organization of Support Functions

In order to insure that the ambush goes off well, fendui should concentrate on the characteristics of ambush combat and thoroughly organize various support functions for it.

a) Combat Support

Reconnaissance. Fendui should usually organize observation teams to observe and secretly monitor to determine the enemy's whereabouts as early as possible. Sometimes fendui may also transfer crack troops upon instructions from higher headquarters to form reconnaissance teams and use various reconnaissance methods to gain further knowledge of the enemy situation. When organizing reconnaissance, the make-up, mission, reconnaissance sites, routes for going out and returning, and reporting (or liaison) methods and requirements of the reconnaissance team should be spelled out, with necessary communications gear issued to the reconnaissance team.

Security. In order to guard against enemy reconnaissance and raids, fendui should send out direct guards when starting out and after entering the ambush zone. When sending out guards, their location, mission, methods of reporting and for dealing with situations and the signals (or signs) to be used should be spelled out. Conditions permitting, a concealment team should be set up in advance in the area where the enemy is to be attacked.

Engineer Support and Camouflage. When organizing engineer support and camouflage, mission, methods, time limits for completion and requirements should be made clear. Engineer support should focus on attacks against enemy armor. Controlled minefields and satchel charges may be set up in areas that the enemy must traverse within the ambush area. Obstacles should be emplaced along the enemy's route of march and roads along which he might flee; alternatively, demolition work should be done in preparation. One-man shelters, trench shelters and weapon firing positions such be dug at positions for launching an attack (or ambush); full use should be made of the terrain, and manufactured materials or those readily available at hand should be used to camouflage weapons and defense works. Camouflage has to be thorough, every effort should be made to make it the same as the natural color of the landscape, and attention should be given to the eradication and covering of traces left behind of entry into the positions.

b) Communications Support

Units should use various methods to keep communications open. They should work out signals to be used for the approach of the enemy, our initiation of firing, and attack and departure from the ambush site. Everyone involved in the ambush should memorize these signals. Before fighting begins, mostly motioning and simple signals should be used. Motioning must be concealed and simple signal communications must be kept secret. In order to insure that the attack is centrally launched, all of the communications equipment in use should simultaneously issue the attack signal. Once the attack has been launched, radio communications and other communications techniques should be used to insure command.

c) Logistics Support

In organizing material and medical support, fendui should make clear methods to be used in distributing and carrying ammunition and equipment, the make-up of provisions teams, ammunition teams and rescue teams, their mission, and actions they are to take in providing support and rescue. Fendui should be checked for compliance with regulations on the carrying of ammunition, equipment, dry grain rations and drinking water, and, depending on the season, on preparedness against poisonous insect bites, and preparations to protect against the heat or cold.

5) Organization of Fendui for Concealed Entry into Ambush Areas

a) Opportunity For Entry Into Ambush Area

Fendui should ascertain the right time for entering the combat zone taking into account instructions from higher headquarters, the time of enemy movements, enemy distance from the ambush zone, the fendui's movement capabilities and road and weather conditions. Insofar as possible, they should use the cover of darkness, bad weather, and concealed terrain to assemble the fendui to travel along a predetermined route to enter the ambush area secretly at the proper time.

b) Actions Upon Entering the Ambush Area

When assembling fendui to enter the ambush area, usually on-the-march formation is used for clandestine and rapid advance under protection of the search team. Commanders move at the head of their fendui, always keeping abreast of the enemy's situation, and constantly observing the terrain and watching over the direction of advance. While moving forward, they should intensify scouting, guarding and camouflage, maintain silence and strictly control lights and fires. As they approach the ambush area, commanders should direct the scouting team to conduct a rigorous search of the ambush area in order to insure the fendui's safe entry into it.

c) Activities After Entering the Ambush Area

When the fendui does not take over attack (ambush) positions in the ambush area at once, but rather waits the proper time in concealment in a holding area, commanders usually do the following things: Send out guards to control the attack (ambush) positions and send out observation teams in the direction of the enemy and at a proper distance to monitor the enemy's movements; designate the routes by which the fendui and weapons enter positions; assemble needed personnel as circumstances require to build firing positions for some weapons at the attack (ambush) positions, and send out various crack anti-tank teams to occupy favorable terrain at the attack (ambush) positions to wait to block the enemy in order to gain time for the main forces to enter battle; make accurate calculations based on the approach of the enemy toward the ambush positions of the time to send the fendui along predetermined routes to occupy attack (ambush) positions.

When the fendui occupies attack (ambush) positions at once, commanders should take advantage of the time to complete the following tasks quickly: send out observers and guards to check on whether the fendui is entering the correct attack (ambush) location; organize the fendui to build necessary defenses, thoroughly camouflage, plant mines and satchel charges, mark and put in condition the road out of the ambush area; spell out further the mission, fighting methods and signals and signs for the fendui; spur the fendui to do a good job in preparing for combat.

Coordination between crack teams and militia may be organized in accordance with circumstances or instructions from higher headquarters to use various tactics to confuse the enemy, make the enemy misconstrue the situation and lure the enemy into the ambush area in order to wipe him out.

d) Strict Position Control

Fendui must strictly adhere to ambush discipline and pertinent regulations. All personnel at positions with the exception of observers and guards must remain in concealment. It is forbidden for personnel to move at will; lights and flames must be strictly controlled; the flow of information out of the area has to be strictly controlled; the enemy's movements must be strictly watched; the fendui should not be misled by enemy firepower reconnaissance and deceptive movements but should act strictly in accordance with orders and guard against firing prematurely.

b. Doing Battle

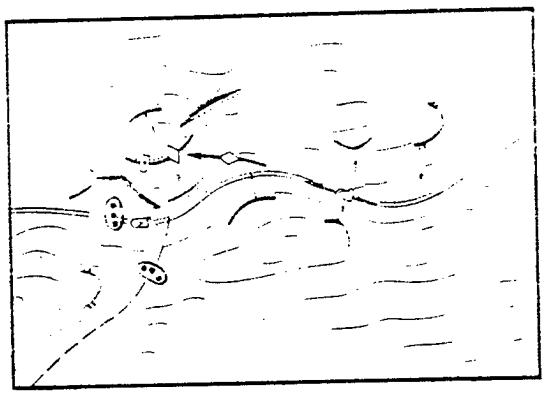
1. Our Actions When the Enemy Enters the Annihilation Area

When the target of the ambush enters our annihilation area, commanders should courageously and resolutely seize hold of the opportunity for battle and use the tactics of blocking the head, cutting off at the waist and interdicting the rear, benefiting to the full from using firepower first by commanding the fendui to launch a surprise attack against the enemy at once for a quick decision from a quick battle that wipes out the enemy while he is on the move. Anti-tank weapons should concentrate fire in attacks on the enemy's armor, and mortar fendui should use accurate and ferocious firepower to throw the enemy's marching formations into confusion, to prevent the enemy from deploying, to inflict casualties on enemy effectives and to help the infantry attack. The blocking fendui should attack from favorable terrain to smash the head of the enemy's armor, blow up the road and set off the land mines and satchel charges, using tenacious action, resolute blocking of the enemy and coordination with the main force to wipe out the enemy. The tail attack fendui should attack and destroy the rear of the armor first, rapidly occupy strategic points, blow up roads and dynamite bridges, cut off the enemy's retreat routes and block reinforcements to the enemy. It may also attack the enemy's rear if circumstances permit and coordinate with the main force to encircle and wipe out the enemy. The flank fendui should concentrate its firepower to attack the enemy's armor, and should quickly launch a ferocious attack with support from our firepower and in coordination with the blocking and tail attack fendui. It should move via many routes to thrust into the enemy's marching formation, cutting it up and encircling it, and using fighting, demolitions and blocking to wipe out the enemy one by one.

When the enemy holds favorable terrain and conducts stubborn resistance, advantage should be taken of his not having consolidated his position to concentrate troops against him to carry out a concerted encirclement via many routes. Before attacking, firepower should be organized to smash the enemy's armor and inflict casualties on this effectives as circumstances permit. The attack fendui should carry out bold and powerful attacks against the enemy's flanks with artillery support, using its firepower and demolitions in combination to wipe out the enemy quickly.

When the enemy intends to break out of encirclement, a rapid assessment must be made of the direction in which the enemy may flee and not be confused by the enemy's feints. Firepower should be concentrated for a ferocious assault against the enemy to quickly destroy the roads and bridges in the direction that the enemy is going to take in breaking out of the encirclement. Obstacles should be put in place quickly to delay the enemy's movements. Fendui in the direction from which the enemy is trying to break out of encirclement should be directed to occupy favorable terrain to block the enemy, and the main force should attack the enemy's flanks rapidly to smash enemy plans to break out of encirclement.

Annihilation of a Fleeing Enemy Breaking Out of Encirclement



Once the enemy has broken out of encirclement, fendui should make a pursuit and blocking attack as circumstances permit, and they should notify friendly adjacent units, local forces and militia to interdict the enemy.

When the enemy is reinforced by ground, some troops should be directed to occupy favorable terrain for a determined attack to block enemy reinforcement and to prevent a linking up with the enemy that is being ambushed. The main force should be concentrated for rapid annihilation of the enemy in the enemy annihilation ground. When the enemy is reinforced by helicopters, firepower should be organized for a determined attack to cover the main force's encirclement and annihilation of the enemy that has been ambushed.

2) Actions When an Ambush Cannot Be Carried Out as Scheduled

When our ambush intention has been discerned by the enemy making it impossible to carry out an ambush as scheduled, the fendui commander should remain calm and exercise dexterous and firm command in accordance with instructions from higher headquarters, the nature of the target for ambush, the size of the enemy force, the enemy's distance from our positions, and terrain conditions. If some enemy forces have entered our annihilation area or if advanced units have come close to the annihilation area offering opportunity to wipe out part of the enemy force, the fendui should launch a phased attack ahead of schedule. Now anti-tank weapons should concentrate firepower to attack and destroy armor that has entered our effective range of fire, and mortars should use ferocious firepower in attacks on the enemy's combat formations to support all units in battle. The tail attacking fendui and the flanking fire fendui near the head of the enemy column should firmly block the enemy and cut up the enemy's marching formation. Other fendui should maneuver quickly to attack the enemy's flanks and resolutely annihilate part or all of the head of the enemy column. If the launching of an attack is not opportune, fierce firepower should be used to inflict heavy casualties on the enemy.

If the number of enemy troops is found to be overwhelming at the last moment, should terrain be favorable and deployments permit the annihilation of some of the enemy, a portion of the enemy should be selected for attack. Usually, the head of the enemy column is allowed to pass by and the rear is attacked. In this case, the blocking fendui should be commanded at once to cut up the enemy's marching formation to enable attacks from within and without to prevent the enemy from moving ahead and recouping. The flank attack and tail attack fendui should rapidly launch an attack against designated targets to wipe out or inflict casualties on a portion of the enemy.

3) Actions When Lying in Wait, Occupying Strategic Point Before the Enemy

Fendui usually receive their missions while in the assembly area. After receiving their mission, commanders should use their understanding of the mission and an assessment of the situation as the basis for assembling organic and attached unit commanders to carry out an on-the-ground reconnaissance to select ambush areas, to decide on troop dispositions and to study and formulate combat plans. While making the reconnaissance, commanders should issue combat orders. When conditions permit, they should send out units to the ambush area to build defenses secretly. They should also organize the fendui to complete all preparatory jobs.

Ambush areas are usually selected on the reverse slope of the strategic point that is to be occupied on favorable terrain where conditions favor both concealment and deployment of the fendui as well as permit rapid spreading out to occupy the strategic point, but where discovery by enemy aerial or ground reconnaissance is not likely.

Battle deployment is usually in a single echelon, usually a 6/9 - 7/9 troop strength constituting an echelon to occupy and defend a strategic point. A 3/9 - 2/9 troop strength is organized as a reserve to maneuver and deal with complex situations.

Fendui should move into an ambush area secretly at the time and via the routes set by higher headquarters. When entering, they should closely check the route of march and the ambush area. After entering, they should rigorously shut off the flow of information outside the area, should post guards to warn of aerial or ground attack, should maintain contact with higher headquarters, and should keep abreast of the enemy situation at all times. They should organize the fendui to camouflage completely and to patiently lie in wait.

Upon receiving orders from higher headquarters to launch an attack, the fendui should move out rapidly in accordance with previous plan to occupy strategic points ahead of the enemy, to dispose troops rapidly, to organize firepower, to build defenses and to make all combat preparations. If possible, it should lay mines or carry out demolition in the direction from which the enemy is expected to attack in order to delay the enemy's movements.

When the enemy launches a firepower attack on the strategic points, the fendui should be commanded to make quick use of favorable terrain and the concealment that defenses provide to intensify observation and be ready at any time to smash the enemy's ground attack or to wipe out enemies airdropped on the strategic position. When the enemy attacks the strategic points, firepower,

attacks from in front of positions and counterattacks should be used to smash the attack. When the enemy attempts an airdrop on the strategic point, main forces should hold fast to the strategic point while, depending on the situation, some troops may be organized to wipe out the airdropped enemy.

4) Ambush Attack on Enemy Helicopters in Flight

Ambush areas are usually selected on favorable terrain at places under enemy flight paths that facilitate concealment and deployment of troops and that facilitate aerial firing, but that do not facilitate a change of flight path by the enemy.

Deployment for combat should be done in accordance with the principle of small groups scattered at many points, with control of required reserves. Usually companies set up six or seven aerial firing teams of squad strength in dispersed deployment on one or both sides of enemy flight paths where they can bring their firepower to bear from high ground in an intersecting fire network. Heavy machine gun fendui assigned to the company should be distributed among squads in the main direction of attack. Anti-aircraft machine gun fendui are usually under direct control of the company.

When enemy transport helicopter flights approach ambush areas, commanders should quickly determine the number, the formation, elevation and speed of the enemy aircraft and revise their combat plans on the basis of the new situation. They should quickly assign targets and aerial firing sectors to each fendui, allow reconnaissance helicopters to pass without firing, issue timely firing signals, and direct anti-aircraft machine gun fendui to concentrate their firepower to knock down the first aircraft among transport helicopter flights and then to shift their firepower in turn to attack and knock down the other enemy aircraft. Every fendui should concentrate fire for combat at close quarters upon receipt of a centrally given firing signals, destroying one by one the targets for which they are responsible and the enemy aircraft in the air space for which they are responsible. When enemy aircraft are forced down, weapons fendui should be directed to fire ferociously against the enemy. Reserves should be quickly commanded to launch an attack against the enemy to wipe them out before they can establish a foothold.

When the enemy uses armed helicopters to protect flights, a portion of firepower should be designated to fire on the enemy armed helicopters to protect main forces in battle. After a number of enemy aircraft have been destroyed, further combat preparations should be made quickly to destroy follow-up sorties of enemy aircraft. Alternatively, the fendui should quickly withdraw from the ambush area on orders from higher headquarters.

5) Rapid Withdrawal from the Ambush Area

a) Opportune Time For Withdrawal

When a fendui carries out an ambush at the direction of higher headquarters, the time for withdrawal from the ambush area is also controlled by higher headquarters. When carrying out an ambush independently, commanders should act flexibly in deciding the withdrawal time using the intentions of higher headquarters, the enemy situation and development of the combat situation as a

basis for making the decision. Usually there are three times for withdrawing from the battlefield as follows: the first is when the battle ends or when only a small number of remnant enemies have not yet been mopped up; the second is when ambush intentions have been revealed and the initiative is taken to withdraw before contact is made with the enemy; and the third is when the size of enemy forces is overwhelming making it impossible to wipe out all of them or when one is forced to withdraw from battle in the face of superior enemy troop reinforcements.

b) Method of Withdrawal

The method of withdrawal has to be decided on the basis of intentions of higher headquarters and the extent of the enemy threat. Usually withdrawal is via several routes at the same time or by units alternately covering each other as they withdraw.

c) Organization of Command for Withdrawal

When a fendui is to withdraw from the battle zone, there should be strict organization and strengthening of command to insure that the fendui withdraws rapidly in an organized fashion. Commanders should further spell out for each fendui the time of withdrawal, the order of withdrawal, routes and methods to be used, the time limit and requirements for arriving at designated areas, the mission of covering fendui and fendui responsible for clearing the battlefield, methods and requirements for moving, and relevant support actions.

When withdrawal is carried out after having substantially completed the mission of wiping out the enemy, guards should be sent out in the direction of concern about the enemy; a small number of troops should be sent out to police the battlefield, to collect materials and equipment and to destroy enemy equipment and vehicles that cannot be carried away; personnel should be designated responsible for escorting prisoners and for sending the wounded to the rear, while the remainder of the personnel should proceed to designated assembly points.

When withdrawal is forced as a result of battle with the enemy, the method of alternatingly covering each other should be used, and some troops should be commanded to continue to put up resistance to the enemy or to use their positions to block enemy attacks in order to cover withdrawal of the main forces. Mortars should be directed to lay down interdictory fire against the enemy to cover the fendui, to break off contact with the enemy and to prevent the enemy form pursuing. When main forces have withdrawn a certain distance, they should occupy favorable terrain and use their firepower to cover the withdrawal of the fendui that are following or to ambush the enemy again. The fendui and the engineering troops in the final withdrawal may lay mines quickly and use demolitions on the withdrawal route to delay the enemy's pursuit.

When the enemy makes a retaliatory firepower attack before withdrawal from the ambush zone is complete, fendui should be commanded at once to use the terrain to disperse in concealment and to use gaps in enemy firing to withdraw quickly in succession.

During the course of withdrawal, contact must be maintained with each fendui, and after reaching a new assembly point deployments must be readjusted at once, ammunition and equipment replenished, and preparations for future battle made.

5. Organization and Command When a Company (or Platoon) Is Responsible for Destroying Obstacles

a. Organization of Obstacle Demolition Preparations

When an infantry company (or platoon) undertakes the mission of an obstacles demolition unit, its mission may be spelled out by higher headquarters at the assembly area or while on the march, or it may be received while making an on-the-ground reconnaissance with higher headquarters. After receiving the mission, commanders should make full use of available time to prepare in a planned way.

1) Drawing Up Obstacle Demolitions Plans

(a) The main points to be understood about the mission are as follows: matters pertaining to the enemy situation and to the intentions of our forces; location, numbers, width and methods of marking opened routes, troops deployed, supplies, means and locations at which to draw supplies; demolitions methods and actions after completion of the mission, units responsible for firepower protection, their methods, times and means of communicating with them; mission of fendui using the route; preparations for demolition of obstacles and time limits for beginning and completion.

(b) To make an assessment of the situation, the focus should be on ascertaining the following: enemy troop disposition in the direction of demolitions, firepower support system and particularly the circumstances under which the obstacles were emplaced, the weak points about them that might be capitalized on and actions that the enemy might take during their demolition. The military and political quality as well as the condition of equipment of organic and attached units, factors that are favorable and harmful to completion of the mission, and the effect of terrain, soil and weather conditions on obstacle demolition operations.

Analysis and assessment of the foregoing circumstances should yield conclusions on the following: locations favoring obstacle demolition, methods for blowing up the obstacles, and team organization and support measures.

(c) On-the-ground Reconnaissance. Usually the cover of darkness, twilight or bad weather are used to carry out on-the-ground surveys, or sometimes reconnaissance may be carried out in conjunction with a raid. Emphasis should be on finding out the following:

Enemy troop strength in strongpoints, location and numbers of weapons, types of obstacles, their location, their depth, their perimeter, terrain gaps and nature of minefields.

Positions from which obstacle demolition operations may begin, positions from which weapons, rocket demolition devices and "320" series charges may be thrown (or fired) and routes close to concealment.

Before organizing on-the-ground reconnaissance, commanders should send out engineering reconnaissance teams as circumstances require, to go into the enemy's obstacle area to find out how the obstacles are laid out. In carrying out the reconnaissance, approach should be concealed, reconnaissance should be thorough, good notes should be taken, and the reconnaissance should be done quickly and a rapid withdrawal made. Covering firepower should also be assembled.

(d) Drawing Up Obstacle Demolitions Plans. Obstacle demolition plans are usually drawn up on the ground, or they may be drawn up using a sand table or sketches. Such a plan includes the following: techniques and methods to be used to blow up the obstacles, organization of teams to blow up the obstacles, division of duties and assignment of equipment. Positions from which each team is to set out on the obstacle demolition operation and time limits for beginning and completing the operation; and situations that might arise and ways of dealing with them. Once plans have been drawn up, they should be submitted to higher headquarters for approval.

2) Handing Down Oral Combat Orders and Organization of Coordination

(a) Handing Down Oral Combat Orders. Usually oral combat orders are handed down on the ground. When the threat from enemy firepower is fairly great, either a sandtable or sketches may be used when handing down such orders. The main matters to be spelled out are as follows:

Enemy troop strength, weapons, location and numbers of night sighting devices in the direction of the route to be opened, and types and location of obstacles, depth and perimeter of the obstacle zone.

Intentions of higher headquarters, subordinate units attached to the fendui, positions from which obstacle demolition operations are to be mounted and the numbers, locations and widths of routes to be opened.

Mission of fendui and support units that are to use the routes.

Make-up of teams, attached equipment, positions from which obstacle demolition operations are to be mounted and sections in which demotion is to be done, marking methods and mission of protection team.

Time limits for completion of the obstacle demolition assignment.

Location of command and identity of deputies

(b) Organization of coordination. The method of organization is usually in terms of the three stages of occupying positions from which obstacle demolition is to be mounted, doing the demolition work and after the routes have been opened in conjunction with envisioned circumstances. It includes the following:

When occupying the positions from which obstacle demolition operations are to be mounted, the times when each unit will occupy the positions from which obstacle demolition operations are to be mounted, the routes to be used, the

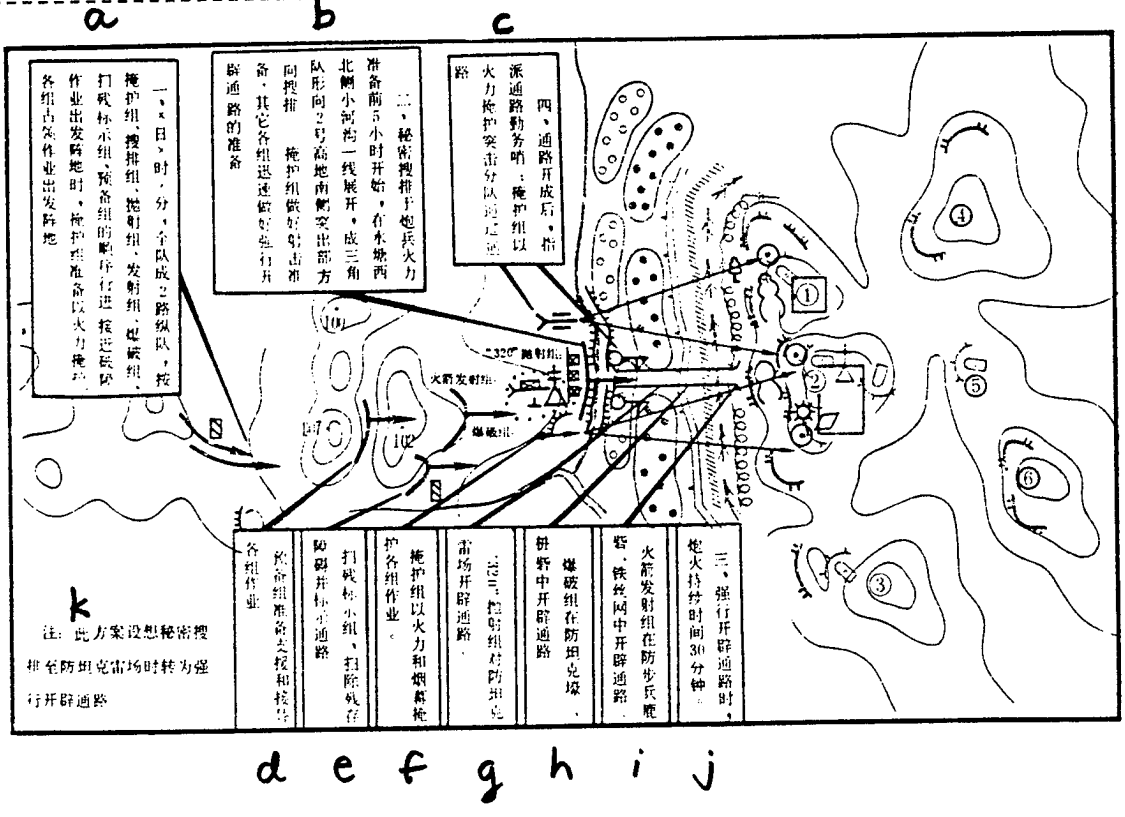
order of occupation, protection measures if the enemy is contacted, situations that might arise and how to deal with them.

When demolitions are being carried out, times for covert searching and removal, the start of operations, direction, formations to be used, times for shifting to forced demolitions and the order in which each team does its work.

When carrying out forced demolitions, times for higher headquarters firepower preparations, methods and targets for suppression; time limits for beginning and completion of operations; the order in which each unit is to work, situations that might arise and how to deal with them.

After the route has been opened, issuance of instructions to infantry and tanks on how to locate the routes and measures for covering the routes, contact methods and signals (or signs) to be used. See following diagram.

Diagram Showing Coordination for Infantry Company Opening of Routes



Key:

a) 1. At *xx* *hours on *xxx* day, the entire unit will form two columns and advance in the following order: cover unit, search and remove team, charge tossing team, firing team, demolitions team, debris removal and marking team, and reserve team. When approaching the positions from which demolition operations are to be launched, the protection team will prepare to use firepower to protect each team in occupying positions for launching operations.

b) 2. Covert search and removal is to begin 5 hours before artillery firepower preparation and is to spread out in a line from the brook on the northwest side of the pond to form a triangular shaped formation on the high ground at # 2, the projection portion on the south side of which is to search and remove. The cover team is to make ready to fire, and all other teams are to prepare for a rapid forced clearing of the route.

c) 4. After the route has been cleared, a route sentry is to be designated and the cover team is to use its firepower to cover movement over the route of the assault fendui.

d) Reserve team prepares to support and to replace teams.

e) Debris removal and marking team clears away obstacle debris and marks route.

f) Protection team uses firepower and smokescreen to cover all team operations.

g) "320" charge tossing team clears way through anti-tank minefield.

h) Demolitions team clears way through anti-tank trenches, pickets and walls.

i) Rocket firing team clears route through anti-personnel abatises and wire entanglements.

j) 3. When forcing open a route, artillery fire is maintained for 30 minutes.

k) Note: This plan assumes a shift to forces clearing of a route when the covert search and removal reaches the anti-tank minefield.

3) Organization of Various Forms of Support

(a) Organization of Equipment Supply. In order to insure smooth completion of the demolition mission, demolition units should make rough calculations of the demolitions equipment they will need based on the types of enemy obstacles, their number and the demolition techniques to be employed, and then organize requisitioning and preparation of the equipment. When making calculations, a certain amount of reserves should be provided for. When drawing equipment, care should be taken in inspecting and issuing it, and the packing of ammunition and the making of ammunition racks should be organized. During operations on overcast and rainy days, care should be taken to prevent dampness in order to assure reliability in ignition.

(b) Organization of Combat Support. In order to avoid an enemy surprise attack, the demolitions team should rigorously organize combat support, set forth measures to be taken and signals (and signs) to be used against enemy air raids and against attacks with nuclear and chemical weapons. They should designate weapons to be used for air defense and do a good job of camouflaging them. After occupying positions from which demolitions operations are to be launched, the protection team should send out observers and guards, and commanders should spell out their locations, mission, observation and guard areas, how to deal with situations, reporting methods and signals (or signs)

to be used. Depending on circumstances, a fendui should be organized to build personnel shelters and equipment storage sites.

(3) Organization of Route Orderlies. Route orderly duties may be performed by two or three infantry soldiers. Usually these orderlies are posted near intersections and at gaps between obstacles on both sides of the route. Their duty is to tell attacking teams the location of the route, to guard the route and approach roads, to set up and maintain road markers and guard rails along the route.

2. Carrying Out Demolition

When demolition work is being done, commanders should constantly observe the enemy situation and the actions of all teams, deal forthrightly with all situations, firmly and dexterously issue commands, and be sure to check on results achieved from demolition work. He usually maintains close contact with higher headquarters and with fendui that are to use the route. His specific tasks are as follows:

Commanders command all teams to occupy quickly and covertly the positions from which they will launch demolition operations and carry out demolitions operations at the appointed time. When covertly demolishing obstacles, they should make sure to keep informed about the direction of demolitions; when forced demolitions work is being done, they should organize firepower promptly to protect the demolitions operations, using reserve troops and equipment at the right times and resolutely complete the mission on time. After the route has been opened, they should quickly double check, appoint route orderlies, report the situation to higher headquarters and notify fendui that are to use the route.

a) Occupation of Positions from Which Demolitions Operations Are To Be Launched

Positions for the launching of demolitions operations are usually selected on terrain that is close to the enemy's obstacle area that is favorable for our concealed operations. After necessary preparations have been made at the positions from which the attack is to be launched, demolitions teams usually occupy positions from which demolitions operations are to be launched. When time is pressing, they may occupy them directly from the assembly area. They should move into them secretly under cover of darkness, at twilight or during inclement weather under protection of the guard fendui. Alternatively, they may occupy them forcibly under cover of an artillery barrage or a smokescreen provided by higher headquarters.

(1) Covert Occupation of Positions from Which To Launch Demolition Operations. Before occupying the positions, weapons and demolitions equipment should be inspected, carrying rigs adjusted, and movement discipline, communications methods, and identification signs provided. In approaching the enemy, usually a single or double column formation is used and the distance between soldiers is shortened for a covert approach. The cover teams should send a search team ahead to deal with surprise situations. Commanders should march at the head of their fendui, make sure of the direction, observe the enemy situation and terrain, and command individual teams to make flexible changes in their

formations and methods of movement to occupy positions rapidly and covertly. Should enemy illumination flares go up during movement, the terrain should be used in a rapid advance. Should there be no usable terrain, cover should be taken quickly and anything that reflects light should be covered. Enemy illumination should be used to observe the enemy situation and routes for movement. Once the illumination has passed, the advance can resume. Should an enemy guard post be encountered, every effort should be made to use the terrain to detour around it, but if this is not possible, it should be captured or wiped out. When approaching the positions from which demolition operations are to be launched, commanders should command the protection unit to take occupancy first and to ready their firepower to cover occupation by the other teams.

(2) Forcible Occupation of Positions from Which Demolition Operations Are To Be Launched. When occupying the positions, demolitions teams should make full use of the protection of our firepower and smokescreens and flexibly use various kinds of combat formations and methods of movement to occupy the positions quickly. Should they encounter an enemy artillery barrage while moving, they should ascertain the pattern of firing and use gaps in the firing as well as favorable terrain to move ahead in spurts to occupy the positions. When areas contaminated by the enemy are encountered, depending on circumstances, they should be detoured around or protective gear should be put on and they should be crossed rapidly.

After occupying the positions, commanders should further observe the enemy situation and the terrain. Depending on the situation, they should spell out additional missions for each team and urge the fendui along toward rapid completion of demolitions preparations and notify higher headquarters promptly of the situation.

b) Actions During Covert Demolition of Obstacles

When the search and remove team approaches the enemy's obstacle zone, commanders should quickly direct the team to begin operations. The search and remove team leader should lead the first team in searching for and removing obstacles at designated locations and directions. The second and third teams should search and remove obstacles from both sides to the rear of the first team, and they should mark the route. When the first land mine is found, the team leader should organize an analysis and study of the detonation method used on the enemy's land mines and the minelaying pattern, and then mines should be searched for and removed in the designated direction. The team leader is usually located in the middle of the team formation where he can keep watch on on situation, keep control over the route that is being opened and make sure that no mines are overlooked.

Should an enemy flare be sent up during operations, operations should be stopped at once, all light reflecting objects covered, cover found quickly and the light from the enemy's flares used to observe the enemy's situation, the direction of operations and the location of obstacles. After the flare goes out, operations continue. When the enemy fires, commanders should ascertain whether the enemy has discovered our destruction of the obstacles. Depending on his determination, he should direct the search and remove team to continue operations or to withdraw from the route. After withdrawing from the route,

either preparations should be made according to earlier made plans or the obstacles should be removed forcibly.

Actions When Removing Obstacles Forcibly

Forcible removal of obstacles is usually begun and ended during the period of softening up by our firepower. When an operation is carried out, various techniques must be used in combination and every effort made to reduce the number of personnel moving under enemy fire, to take effective actions, to shorten the time of the operation and to accelerate the destruction of obstacles.

1) Use of a "Two Stage Demolitions Method" To Demolish Obstacles. When a "two stage demolitions method" is used to demolish obstacles, first, a line charge (primacord) is lobbed into the enemy mine field to open a pathway; then either a mass of (line) charges or a primacord net is used to widen the route. Finally, continuous explosions are used to demolish other non-explosive type obstacles.

Method of Execution. After fire preparation has begun, commanders should promptly command the tossing team to head toward the enemy minefield to lob the line charge (primacord). After the charge explodes, the demolitions team leader should move into the pathway to observe results of the explosion and to mark the location for setting charges. The demolition crew should follow along behind the leader to place charges and connect each charge to primacord or to an electric ignitor circuit. After the charges have been placed, one or two operators are left to set off the explosion. The smoke and dust from the explosion should be used as cover to enter the roadway where blocks of explosives are used to demolish anti-tank trenches and pickets. Line charges or bangalore torpedoes are used to blow up anti-infantry abatises and wire entanglements. The debris removal and marking team follows the demolitions team to clear away debris from the obstacles and to mark the route.

2) Use of Rocket Demolition Device, the "320" Demolitions Method and the Manual Explosives Delivery Method of Demolishing Obstacles. The method of execution is as follows: Once fire preparation has begun, the signal to demolish the obstacles is sounded and the tossing team is ordered to lob "320" charges into the anti-tank minefield. After the charge has gone off, the rocket firing team adjusts the direction of its fire in accordance with the axis of the obstacle demolition and blows up enemy anti-personnel abatises and wire entanglements. The demolitions team then carries the line charges into the anti-personnel minefield to blow up obstacles, after which it uses blocks of charges to demolish anti-tank trenches and pickets. The debris removal and marking team follows the demolitions team to clean up debris from the obstacles and to mark the route.

3) Use of the "320" Demolition Method and the Explosives Manual Delivery Method of Demolishing Obstacles. The method of execution is as follows: After fire preparation up has commenced, the signal to blow up the obstacles is given at once and the tossing team is directed to blow up obstacles in the enemy's anti-tank minefield. The demolitions team quickly carries line charges and block charges and takes advantage of the smoke and dust created by the "320" explosion to blow up obstacles in the enemy anti-personnel minefield

such as anti-tank trenches and anti-personnel abatises as well as wire entanglements. The debris removal and marking team follows the demolitions team to remove debris remaining from the obstacles and to mark the route.

4) Explosives Manual Delivery Method and Forced Search and Removal Method of Destroying Obstacles. The method of execution is as follows: Once firepower softening up has begun, the demolitions team should be commanded at once to carry line charges into the enemy's anti-personnel minefield to blow up obstacles. The search and removal team then enters the anti-tank minefield to search and remove. When the operation has been completed, the demolitions team uses block (or line) charges or the anti-tank mines that it has searched out and removed to blow up the enemy's anti-tank trenches, abatises and anti-infantry wire entanglements. The debris removal and marking team rapidly clears away obstacle debris and marks the route.

5) Coordination with Higher Headquarters Artillery To Destroy Obstacles. When higher headquarters artillery troops carry out destructive fire against anti-personnel wire entanglements and abatises in front of the enemy positions, the tossing unit quickly lobs block charges into the enemy's anti-tank minefield to destroy obstacles. The demolitions team moves rapidly under cover of the smoke and dust created by the blast to destroy obstacles such as anti-tank trenches and abatises in the enemy's anti-personnel minefield.

6) Dealing with the Situation When Demolishing Obstacles. When demolition of obstacles is done even before a clear picture has been gained of the obstacles along the front edge of the enemy's minefield, commanders should decide, on the basis of the terrain, the outer limit of the minefield and, conditions permitting, should lob line charges at them and use power reconnaissance to find out the location of the enemy's anti-personnel and anti-tank minefield, blowing them up as it finds them to complete the mission on time.

When chemical mines have been exploded in the obstacle zone causing a contaminated area, the chemical detection team should quickly determine the area of contamination and the nature of the chemical obstacle, and should also mark it. If it is a persistant toxicant, the demolitions team should be directed to take precautions," burying" it or "covering" it. If the problem cannot be surmounted, higher headquarters and the fendui that are to use the route should be informed at once.

When results obtained from rocket demolition devices and the "320" demolition method vary greatly from plans made in advance, depending on the situation, commanders should command the demolitions team to use continuous demolitions to blast a way through or remove obstacles along another route. When rocket demolition devices and "320" demolition charges are blown up or caused to go off by the enemy, commanders should take firm action to change the demolition method and complete the mission on time.

When enemy mechanized minelaying blocks the route, the demolition team should forcibly search for and remove them or blow them up under cover of our artillery fire in order to get rid of them.

When demolition personnel encounter enemy suppression fire, the protection team should be commanded to lay down accurate fire and to use smokescreen

equipment to suppress and blind the enemy. When the protection team's firepower cannot effectively suppress the enemy's firepower, commanders should immediately request higher headquarters and fendui that are to use the route to provide firepower support so that demolition of obstacles can proceed smoothly.

When losses of obstacle demolition personnel and equipment is substantial, reserve troops and equipment should be called up at once and the situation reported to higher headquarters.

5) Actions Following Completion of the Obstacle Demolition Mission

Once the route has been opened, a report should be made at once to higher headquarters and to the fendui that are to use the route; route orderlies should be sent out; and and firepower should be assembled to cover the attack fendui using the route. Once the mission has been completed, provisions should be made at once for the wounded; equipment should be gathered up and a new mission undertaken as higher headquarters directs.

When a mission is received to blow up obstacles inside the enemy defense perimeter, the fendui should be organized and reinforced locally, weapons made ready and obstacle demolition personnel led quickly to follow the movement of the attacking unit. They should be ready at all times to blow up obstacles for the attacking fendui inside the enemy's defense perimeter.

When a mission is received to act as a reserve unit, personnel should be gathered together quickly, an inventory made of weapons, ammunition and equipment replenished, and the unit led off to arrive at a designated location on time to be ready at all times to join battle.

When an order is received to withdraw from battle or to regroup, commanders should quickly command their fendui to leave the battle via designated routes or to regroup.

6. Organization and Command of Mechanized Infantry Companies (or Platoons) in Attacks Against an Enemy in Positional Field Defense

a. Organization of Combat

Mechanized infantry companies (or platoons) that are to attack an enemy in positional field defense should strive to complete all preparatory work in the assembly area. No matter whether it is a stage-by-stage mission organized by higher headquarters or an offensive assigned to a tank battalion (or company), usually the mission is received during on-the-ground reconnaissance, and actual organization for battle is done on the ground.

1) Tasks When Entering the Assembly Area

When instructions to deploy are handed down and the mechanized infantry company (or platoon) reaches the assembly area, a brief halt is made at a concealed spot near the company deployment area. The company commander (or platoon leader) gets out of his vehicle and accompanies the battalion (or company) commander on a reconnaissance of the deployment area, receives

deployment instructions and then hands down deployment instructions at once to each platoon (or squad). These instructions include the following:

A summary of the enemy situation.

The deployment location and field of observation of the company (or platoon) and of each platoon (or squad).

The location of friendly adjacent forces.

The location of the battalion technical support team and location of the messhall.

Organization for observation and guarding.

Signals, defensive actions and movements against raids, nuclear, chemical and biological weapons, and against an enemy ground attack.

Spelling out the main thrust of tasks to be done at the present time as follows: Location and camouflaging of vehicles; erasing tracked vehicle tracks; inspection of vehicles; elimination of vehicle troubles, building of shelters for infantry combat vehicles (armored personnel carriers) and of personnel shelters, and times for completion of deployment and reporting.

After a company (or platoon) has handed down deployment instructions, the company should inspect and guide the work of each platoon (platoons should first command each vehicle to enter the deployment location, do camouflaging and post observers), become acquainted with the thinking of the personnel and the technical status of vehicles, reporting at the appointed times to battalion (or company).

At the assembly area, infantry combat vehicles (and armored personnel carriers) should disperse in concealment on the terrain and try to deploy in concentric rings with 100 meters between vehicles. The deployment location should accommodate observation, firing, maneuver and the carrying out of combat preparations. Companies should be adept at using manufactured or readily available materials to camouflage complete and follow camouflage discipline. During the day, personnel and vehicles should travel along designated stretches and routes; at night lights and fires should be strictly controlled.

Taking Preventative Actions. At the assembly area, companies (or platoons) should completely organize observation and security to guard against a surprise attack by the enemy. Platoons should post observation sentries, and companies should organize aerial observation sentries and designate weapons to be used against aerial attacks. Companies should act on instructions from battalion to send out guards in the direction of threat from the enemy.

When an air raid alert is sounded, company (or platoon) commanders should order personnel to enter concealment, and air defense missile launchers and armored personnel carrier anti-aircraft machine gunners should prepare for aerial firing. When the enemy attacks the fendui, commanders should immediately command air defense missile launchers and anti-aircraft machine

gunners to fire at low flying aircraft. After the enemy air raid, stock should be taken of the situation at once, rescue of the wounded organized, rush repairs made on vehicles, defense works repaired and preparations for aerial firing continued, and a report made to higher headquarters on the enemy air raid situation.

When an alert against an enemy nuclear attack is sounded, company (or platoon) commanders should immediately command all personnel to take protective action. Following nuclear attack, stock should be taken of the situation quickly. When contamination has occurred, decontamination should be organized; if there have been casualties, damage and serious contamination, rescue of the wounded and rush repairs to vehicles should be organized, and action should be taken in accordance with orders from higher headquarters for the fendui to enter designated places for contamination of personnel and vehicles.

When the alert is sounded for an enemy attack using chemical weapons, company (or platoon) commanders should command all personnel to board infantry combat vehicles (and armored personnel carriers) or to go into shelters to take preventive measures against toxicants. Following an enemy chemical attack, detoxification should be organized and the situation should be reported to higher headquarters.

Company (or platoon) commanders should report at designated times to battalion (or company) commanders the status of completion of their deployments. These reports usually include the following:

Time of arrival at the assembly area.

Status of personnel and vehicles on the march and following arrival at the assembly area.

Vehicle deployment and camouflage and status of the organization of observers and guards.

Work correctly in progress.

Problems requiring instructions for solution.

Handing Down of Advance Verbal Orders. After company commanders receive advance verbal orders from higher headquarters, they should relate them to the status of the company and issue advance verbal orders to each platoon leader. They may alternatively assemble the whole company to hand down the orders at the same time. The content of these verbal orders is usually as follows:

Summary of the enemy situation.

Successive missions to be carried out.

Combat preparations (such as inspection and repair of vehicles and weapons, replenishment of fuel, ammunition, provisions and protective equipment) and time limits for their completion.

Time of on-the-ground reconnaissance and personnel involved.

When company commanders hand down advance oral commands to all platoon leaders, platoon leaders should relate them to the situation in their platoons and issue specific tasks to be satisfied in preparing the whole platoon for battle.

After company (or platoon) commanders hand down advance verbal orders, fendui should be thoroughly organized to carry out combat preparations and participate in the on-the-ground reconnaissance at the specified time.

2) Work After Receipt of Mission

After company (or platoon commanders receive their mission, they should act according to battalion (or company) senior officer instructions to strengthen then and there coordination between the fendui's tanks and fendui from other branches of services and to make clear matters pertaining to coordination. Next, they should figure out times, assess the situation and make decisions in terms of their knowledge of the mission, conduct an on-the- ground reconnaissance, issue verbal combat commands, organize coordination, reconnoiter the deployment area and the order of advance along the route of march to organize combat.

(a) Understanding the Mission and Calculating Time

Understanding the Mission. The matters that company (or platoon) commanders should understand about the mission are as follows: combat intentions of higher headquarters, the mission of the fendui and of friendly adjacent fendui, the position and function of the fendui in fulfilling the combat mission of higher headquarters.

Calculating Time. When company (or platoon) commanders calculate time, they should figure how much total time will be required between receipt of the combat mission and completion of combat preparations. This should include the proportion of day time and of night time. Then they should correctly divide up the time required by their own level and lower levels to organize preparations for combat on the basis of the priority for individual combat preparations.

Assessing the Situation and Making Decisions

Assessing the Situation. When company (or platoon) commanders assess the situation, most important is a full analysis of the enemy situation, of the terrain, of our own situation, and of the situation pertaining to friendly adjacent forces and the weather. They should reach conclusions in keeping with objective realities.

Making Decisions. After a company (or a platoon) has assessed the situation, it should reach conclusions on the basis of the situation assessment, quickly and firmly making its own decisions. The main ingredients of such decisions are as follows: Combat intentions (troop strength to be employed, tactics to be used and objectives to be achieved); means of attack and combat formations; mission of each platoon (and squad) and of attached fendui; movements of infantry combat vehicles (and armored personnel carriers); major elements in coordination; and various support measures.

(c) On-the-ground Reconnaissance and Issuance of Verbal Combat Orders

The method of carrying out on-the-ground reconnaissance and the issuance of verbal orders should be decided on the basis of the enemy situation, the terrain and the time. Commanders should select one or two sites in the direction of the company's attack that permit concealment and observation for centralized organization. Alternatively, they may go to each and every platoon in the direction of attack to organize. Platoon leaders usually organize at a single sight that affords concealment and observation. Personnel involved in on-the-ground reconnaissance should camouflage and pay attention to security.

Ingredients of On-the-Ground Reconnaissance and Issuance of Verbal Combat Orders

Instructions on direction; briefing on terrain; identification of landmarks.

Briefing on enemy situation.

Passing along of the missions of higher headquarters, of one's own fendui and of friendly adjacent forces.

Mission of each platoon (or squad). Targets for attack, direction of attack, by individual platoons (or squads) should be pointed out together with the location of deployment areas and combat formations, routes to be taken to and from the attack, plus flank support tasks. When attacking on foot, the points at which mechanized infantry dismount from vehicles and the locations of positions from which to launch the attack should be pointed out together with routes and methods for occupying positions from which the attack is to be launched, the location of infantry combat vehicles (and armored personnel carriers) and routes and methods of movement.

The mission of attached fendui, their position in the combat formation, and means of assisting armored infantry combat.

Location and movement routes of the battalion technical support unit.

Particulars in the coordination of actions, communications methods and signals (or signs).

Times for completing combat preparations and reporting.

Command location and identity of deputies.

d) Organization of Coordinated Actions

Opportunities To Organize Coordinated Actions. Organization is usually done by commanders at the same time as the on-the-ground handing down of oral combat orders. If ample time is available, organization may be done separately following on-the-ground handing down of oral combat orders. After returning to the assembly area, a sandtable may be used for further organization. During combat, should coordination of movements be ruptured, it should be re-established at once. When the situation changes substantially, re-organization should be done immediately.

The method for organizing coordinated actions is as follows: Coordinated action between the mechanized infantry and tank troops, engineering troops, attached troops and support troops, supporting artillery troops and mechanized infantry troops of signals (or signs) for coordinated movements, methods of designating targets, precedence of reporting signals, and the organization of successive stages of combat in accordance with combat stages and landmarks uniformly set by higher headquarters for occupation of deployment areas or positions from which the attack is to be launched, the attack, the seizing of targets for attack and subsequent actions from the time that deployment area or positions for the launching of the attack are occupied.

Company (or platoon) commanders organization of coordinated actions includes the following: the precedence and methods by which each platoon (or squad) is to occupy the deployment area or the positions from which the attack is to be launched; methods of covering artillery troops and air units; targets for suppression and destruction during firepower softening up and movements of all fendui; location of routes opened in enemy anti-tank obstacle for the movement of tanks and infantry combat vehicles (or armored personnel carriers), the numbers of such routes and how they have been marked; points and methods of marking routes for tanks in platoon (and squad) combat formations; attack formations and methods by which fendui cover each other; the order and methods by which mechanized infantry and tanks traverse obstacles in front of the enemy positions; targets to be suppressed and firing methods of artillery troops when targets are being seized or attacked; mechanized infantry and tank mutual support and cover methods, and mutual support among platoons (and squads) as well as methods whereby they support the flanks of each other's formations; combat formations to capitalize on results from our nuclear attacks and movements of each platoon (and squad); resisting enemy counterattacks and pursuit of a retreating enemy as well as insuring coordinated action among all fendui when higher headquarters reserves go into battle; actions to defend against air attacks and attacks with nuclear or chemical weapons; signals (or signs) for coordinated actions.

e) Reconnaissance of Deployment Areas and Routes of Advance

After mechanized infantry companies (and platoons) have organized for combat on the ground and have returned to their assembly areas, personnel who are to conduct an on-the-ground reconnaissance should be assembled to conduct a detailed reconnaissance of the deployment area, points for dismounting from vehicles, vehicle deployment positions, dispersal areas and routes of march.

When reconnoitering the deployment area, the location of the deployment area and the locations and routes of march of each platoon (or vehicle) should be specifically indicated and marked carefully.

When reconnoitering the points for dismounting from vehicles and the vehicle deployment positions, the points at which all platoons will dismount from vehicles, vehicle deployment locations and routes of entry should be indicated as well as the exit routes for infantry combat vehicles (and armored personnel carriers) following the attack.

When reconnoitering the dispersal area, the dispersal locations and the routes of entry for all platoons (and vehicles) should be indicated and marked.

When reconnoitering the route of advance, reconnaissance of the route of advance should be done section by section. In areas through which movement is difficult and places that an air force might block, means of getting through and actions to be taken should be diligently studied and decided upon.

When an infantry company is attached to a tank battalion, the company commander should receive the mechanized infantry battalion commander's assigned orders before taking part in the on-the-ground reconnaissance organized by the tank battalion commander. After receiving the assigned orders, he should make sure he knows to what tank battalion the company is being assigned, when and where to report, the mission of other mechanized infantry companies, the troops that are to be attached and that are to provide support, methods of providing material and technical support; means of maintaining contact with higher headquarters and the location of the battalion commander; and actions to be taken following completion of mission. Then, he should report to the tank battalion commander at the time and place stipulated in the assigned orders, reporting to him the company's location, its organization, the military and political quality of its personnel, status of vehicles and weapons, and status of technical support.

When a mechanized infantry company commander takes part in an on-the-ground reconnaissance organized by a tank battalion commander, he should take the initiative or act as the tank battalion commander's adviser in offering suggestions for the use of the mechanized infantry based on the intentions of higher headquarters and his own assessment of the enemy situation and the terrain. Usually these suggestions will consist of the following: direction and methods of employing mechanized infantry; form of mechanized infantry attack; mechanized infantry deployment zone or places where they will dismount from vehicles and positions from which to launch the attack plus time for occupying the positions from which they will launch the attack; and methods that mechanized infantry will use to support the tanks.

When a mechanized infantry company that has been attached to a tank battalion is used separately, after receiving their combat mission, company commanders should issue assigned order to each platoon leader. Usually the assigned orders contain the following: the company to which each mechanized infantry platoon is attached, reporting times and places; troops and weapons to support combat by each platoon; methods of providing material and technical support; means of insuring contact; actions following mission completion; and own location. After handing down assigned orders, company commanders should assist the tank battalion commander guide the organization for combat of each mechanized infantry platoon. After mechanized infantry platoon leaders have received their assigned orders, they should report at the designated time to the tank company commander to receive their mission.

3) Work Following Return To the Assembly Area

After returning to the assembly area, company (and platoon) commanders should personally inspect combat readiness. They should pay particular attention to inspection of the technical state of vehicles, weapons and communications gear and to the replenishment of fuel and ammunition. When they discover a problem, they should take action at once to correct it. They should organize the handing down of the combat mission and mobilize for combat; they should

organize and study methods for completing the combat mission, and should especially organize drivers to study routes of advance and the terrain and obstacles inside the attack area. They should figure out ways of getting through difficult stretches and of getting through obstacles. Subject to higher headquarters approval, they should also organize drivers for a further reconnaissance of the routes of advance. They should assembly each platoon (and squad) to carry out a sandtable exercise based on combat plans. When conditions permit, they should also assemble the whole company (or platoon) to conduct an on-foot exercise on similar terrain. After combat preparations have been completed, they should report to higher headquarters at the designated time.

b) Going Into Battle

Advancing Toward and Occupation the Deployment Area

After receiving orders to advance, mechanized infantry company commanders should immediately issue orders to advance to the whole company. These orders should contain the following:

The enemy situation.

Order to fall into formation, times and places for falling in, routes and speed of advance, initial point, location of adjustment area and time when it will be traversed, and time of arrival at the deployment area.

Status of adjacent friendly forces.

Actions and movements when encountering an enemy air raid, artillery, nuclear or chemical warfare attack.

Organization of observers and guards.

Location of technical support unit.

Points to be given attention while on the march.

Location of company commander.

After the company commander issues the order to advance, platoon leaders should relate it to the situation in their own platoon and provide necessary instructions as to how their platoon is to carry out the order to advance. Next, company (and platoon) commanders should organize their own units to fall into formation quickly and they should lead their units into the battalion march column at the times, at the places and in the order designated by higher authority.

While on the march, company (and platoon) commanders should march at the head of their units, and political instructors should march at the rear of the company. Company (and platoon) commanders should be on the alert to hear or see signals from higher headquarters, to be aware at all times of the enemy situation and road conditions, to keep abreast of the route, the speed of movement and distances between vehicles, to watch the adherence of each

platoon (and squad) to march discipline (maintenance of radio silence while on the march, issuing the command permitting use of radios only after artillery softening up has begun), dexterously yet firmly handling all situations, and leading the fendui to arrive at the deployment area on time.

When an enemy air raid occurs, company (and platoon) commanders should order each platoon (and company) to increase observation and organize firepower to shoot at low-flying attacking aircraft, to increase distances between vehicles, and to accelerate movement or use favorable terrain for concealment. When in an area blocked by enemy artillery fire, company (and platoon) commanders should act in accordance with specific circumstances to order all platoons (and vehicles) to increase distances and to hurry through, or else to use gaps between rounds to cross through quickly or to go around the area.

When an enemy chemical attack occurs, company (and platoon) commanders should order all personnel to don protective gear and to either go around the area or to close all vehicle doors and windows and proceed through the contaminated section at low speed. Infantry combat vehicles should make full use of their NBC defense equipment inside to go through contaminated areas at high speed.

Mechanized infantry companies (and platoons) usually occupy deployment areas and positions from which to launch the attack during the period of air power and artillery softening up.

When companies enter the battalion dispersal area, company commanders should act in accordance with orders from the battalion commander or themselves direct that the companies leave the battalion column and advance toward the company dispersal area. When they reach the company dispersal area, the whole company should be commanded to disperse.

If scheduled to board vehicles to attack, after the whole company disperses each vehicle should occupy the pre-designated position in the dispersal area. After occupying the dispersal area, company commanders should enter their own command location behind the unit and use a radio to spell out further the mission of each platoon. The whole company should rapidly make attack preparations, observe results obtained from fire preparation and be on the alert to hear orders or signals from higher headquarters, and be prepared at all times to use the company's weapons to wipe out newly appearing or revived firepower points (or weapons) on the enemy's front. Usually anti- tank missiles mounted on infantry combat vehicles begin to fire when they are 2,000 meters in front of the enemy. Smooth bore cannons and machine guns mounted on armored personnel carriers begin to fire when they are 1,000 meters in front of the enemy.

When attack on foot is scheduled, companies should march from the dispersal area to the point where they dismount from vehicles. After reaching the dismounting point, the infantry dismounts quickly and infantry combat vehicles (and armored personnel carriers) quickly enter concealment in deployment positions.

After the mechanized infantry dismounts from vehicles, the method of occupying the positions from which the attack is to be launched should be decided on the basis of the enemy situation, the terrain, distances and visibility conditions.

When terrain concealment and visibility conditions are not good, they should form up into a company column or a column of platoons and proceed along the route previously selected to approach secretly and rapidly the positions from which the attack is to be launched.

When concealment conditions are not good and there is a threat of enemy fire, they should used the terrain and adopt dispersed formations and movement in dashes under cover of artillery fire to occupy quickly and in concealment the positions from which the attack is to be launched. If these positions are fairly far away from the enemy's defense front and the terrain is fairly well concealed, they should form up into a company column or a column of platoons to move forward. If the terrain is open, they should dash forward. If they enter the effective range of enemy rifle and machine gun fire, they should disperse to form quad columns to advance or dash ahead. When the threat of enemy fire is fairly great, they should disperse in squads into triangular or straight line formations, dash ahead in small groups, the groups alternatingly covering each other.

While moving forward to the positions from which the attack is to be launched, company (and platoon) commanders should constantly observe the enemy situation and the terrain, commanding their own units as appropriate to change formations and methods of movement. They should also assembly firepower to cover their unit's advance and its occupation of the positions from which the attack is to be launched. Mortar fendui should occupy firing positions first and use their firepower to protect the mechanized infantry in occupying the attack launch positions.

After occupying the positions from which the attack is to be launched, company (and platoon) commanders should immediately post observers and guards, designate weapons to be used, organize the building of defense works, further spell out the mission and quickly complete preparations to attack.

If results of a Chinese nuclear attack are to be used to launch the attack, companies should enter places designated by higher headquarters to set up dispersed formations and make attack and defense preparations.

The Attack

Before advancing to attack, mechanized company (and platoon) commanders should order the whole company (and platoons) to start the vehicles and make all preparations to move out to attack. After receiving the order (or signal) to move out to attack, they should immediately issue an order (or signal) to move out to attack, and they should direct their units to advance boldly and as quickly as the terrain allows under cover of artillery and air firepower, following along closely behind the tank reinforcements.

While advancing, mechanized infantry traveling in vehicles should intensify observation and be ready to fire. They should be prepared at any time to use their firepower to wipe out enemy armor and anti-tank gun, anti-tank missile and rocket launcher gunners and infantry in order to protect the tanks. As the tanks approach the path through obstacles in front of the enemy's positions, company (and platoon) commanders should direct each platoon (and vehicle) to

take up favorable terrain and use its firepower to protect the tanks rapid movement through the marked route. Once the tanks have gone through, infantry combat vehicles (and armored personnel carriers) should move through in the designated order and fan out rapidly in the pre-arranged direction of attack and follow along behind the tank reinforcements in a bold attack on the front line of the enemy's defenses to break through the enemy's defense positions and wipe out enemy remnants and to develop the offensive in the designated direction. Should the route through the obstacles be blocked and the tank attack be held up, mechanized infantry company (and platoon) commanders should command their troops to dismount and fight, and the obstacle clearing unit should be organized quickly to remove the obstacles swiftly under protection of firepower from the tanks and infantry combat vehicles (and armored personnel carriers) to support movement through the obstacles of the tanks and infantry combat vehicles (and armored personnel carriers). When obstacles cannot be cleared at once, but friendly adjacent forces have already gone through a route, vehicles may go through the route used by friendly adjacent forces. After the tanks have gone through, should enemy resistance be strong, company (and platoon) commanders should command their units to continue to fight on food in support of the tank attack, and should order infantry combat vehicles (and armored personnel carriers) to occupy favorable terrain from which to use their firepower in support of infantry combat. Should the enemy resistance weaken, the infantry should be ordered to get into their vehicles quickly and to continue to attack behind the tank reinforcements.

When a mechanized infantry company (or platoon) uses results from our nuclear assault in launching an attack, it should form a dispersed formation and advance as quickly as the terrain will allow along the route designated by higher authority to develop an in-depth attack on the enemy's defenses. Should it encounter obstacles, it should do all possible to go around them. If it encounters resistance from enemy remnants, it should wipe them out while on the march. Should it encounter organized enemy resistance, it should deploy in battle formation and launch a bold attack in coordination with tanks to wipe out the enemy and use the opportunity that victory affords to expand the attack.

(b) Attack on Foot

After mechanized infantry companies (or platoons) have occupied positions from which to launch the attack, they should complete all attack preparations. As tanks move forward to attack approach infantry combat formations, company (and platoon) commanders should order their units to mark the route for the tanks. When the tanks pass through the infantry combat formations and receive attack orders (or signals) from higher headquarters, fendui commanders should immediately issue attack orders (or signals) and command their units to follow the tanks to attack. During the attack, they should command their units to use all kinds of firepower to wipe out enemy armor and anti-tank weapon gunners and infantry in order to protect the tanks. When the tanks approach the route through obstacles in front of the enemy's frontline positions, infantry and infantry command vehicles (and armored personnel carriers) should be commanded to use their firepower to cover the tank's passage over the route. After the tanks have gone through, infantry should continue to go through closely behind the tanks, and to spread out quickly after going through to support the tanks in attacking the enemy's defense front, to wipe out dispersed enemy troops, to

penetrate enemy's positions, and to develop the attack in the designated direction. After the attack, the infantry combat vehicles (and armored personnel carriers) at deployment positions should be on the alert to observe the enemy situation and tanks, infantry attack movements and signals (or signs) sent out by them. They should be alert to listen for commands from higher headquarters, and platoons and vehicles should dash forward section by section behind the tanks and infantry to support a certain number of vehicles by firing during short pauses to support the infantry and tank attack (Infantry combat vehicles will usually be within 200 meters behind infantry combat formations, and armored personnel carriers will usually be between 300 and 400 meters behind infantry combat formations. Depending on circumstances, these distances may be increased appropriately.) After the tanks and the infantry have gone over the route, they should quickly approach the obstacles and follow the route that the tanks have traversed. After passing through, they should spread out quickly and dash forward behind the infantry, observing the battlefield, seeking out targets and using anti-aircraft machine guns (on armored personnel carriers) to fire at low flying aircraft and to wipe out pockets of the enemy, always being ready to to transport infantry soldiers at any time.

After a mechanized infantry company (or platoon) penetrates the enemy's frontline positions, it should relentlessly continue to develop the attack in depth into the enemy's defenses. Company (and platoon) commanders should constantly observe the battlefield, giving each platoon (and squad) additional missions on the basis of the intentions of higher headquarters and changes in the combat situation, coordinate the actions of all platoons (and squads) and command their units to develop the attack in the designated direction. It should maintain constant contact with higher headquarters and promptly, accurately and briefly report to higher headquarters on the enemy situation, the terrain, the actions of the fendui and new decisions made, and provide timely reports on the situation to friendly adjacent units. They should command combat by their own fendui from locations that permit observation and command. Platoon leaders located in the middle of their platoon and company commanders in the middle of the rear of their company and as close to the main attack platoon as possible should constantly direct the attack of their own units.

During battle, mechanized infantry companies (and platoons) should maintain constant coordination with friendly adjacent units. When adjacent friendly units develop their attack smoothly, they should make full use of their victories to attack boldly and expand the victory. When friendly adjacent units are stymied, they should act in accordance with the intentions of higher headquarters to provide active support and to continue to move ahead rapidly.

3) Coordination Between Mechanized Infantry and Tanks

During battle, mechanized infantry companies (and platoons) should maintain close coordination with tanks. They should go into battle in vehicles or on foot depending on the extent of enemy resistance and terrain conditions, and develop the attack in the designated direction.

When the enemy has given up all organized resistance and the terrain is suited to observation and the movement of tanks and infantry combat vehicles (and

armored personnel carriers), they should go into battle in or on vehicles. When they go into battle in or on vehicles, mechanized infantry companies (and platoons) should use the same battle formation as that used by tank companies (and platoons). Each infantry combat vehicle (or armored personnel carrier) advances behind the tank it is supporting at a distance of between 50 and 100 meters from the tank (the distance being increased depending on circumstances.) Personnel in or on the vehicles should intensify observation and wipe out the enemy while on the move or while firing during short pauses. They should be particularly alert to wipe out enemy anti-tank personnel who approach tanks and infantry combat vehicles (and armored personnel carriers), and they should promptly designate targets for the tanks so as to wipe them out quickly. Hand grenades should be thrown to wipe out enemies in trenches. When tanks change formation, mechanized infantry companies (and platoons) should also change to a corresponding battle formation. Mechanized infantry companies (and platoons) should make full use of the results of the tank attack to develop the offensive rapidly in the designated direction.

When organized enemy resistance is encountered and the terrain is not suitable for tanks, infantry combat vehicles (and armored personnel carriers) to operate, when observation is limited, when advance is stymied and enemy remnants are to be mopped out, mechanized infantry companies (and platoons) should dismount from their vehicles and fight on foot. When mechanized infantry companies fight on foot, they should coordinate battle with tanks as the enemy situation and the terrain dictate. When the terrain is not suitable for tank operation or when enemy anti-tank firepower is fairly strong, the infantry should be out in front guiding the tank attack. When the terrain is complex limiting observation and there is strong likelihood of encountering enemy anti-tank weapons, the infantry should attack from within the tank battle formations. When the terrain is suited to tank operations and to observation and when the enemy anti-tank firepower is relatively weak, tanks should be out in front leading the infantry in the attack. When the targets for attack stand alone or when they have an exposed flank, if the terrain is not suited to tank operations in one direction, the infantry can attack with tanks from another direction. During battle, the infantry should wipe out targets that pose a substantial threat to tanks such as enemy anti-tank guns, anti-tank missiles and rocket launchers; it should open a route for tanks to travel through anti-tank obstacles; and it should support tanks in battle. Tanks should wipe out targets that prevent infantry advance, should open routes through anti-personnel obstacles, and should support infantry in battle.

When infantry dismounts from vehicles and goes into battle, infantry combat vehicles (and armored personnel carriers) should use their radios and visible signals (or signs) to maintain close contact with mechanized infantry to move as the enemy situation, the terrain and orders from higher headquarters dictate. When the terrain is suited to the movement of infantry combat vehicles (and armored personnel carriers) and to observation, and when the threat from enemy anti-tank firepower is not great, weapons on the vehicles should be used in active support of tanks and infantry. When the terrain is flat, in order to avoid unnecessary infantry casualties, gaps between enemy rounds or enemy squad battle formation flanking fire may be used. Infantry combat vehicles (and armored personnel carriers) should keep as close as possible to the infantry to increase the angle of safety and to make fullest

use of the capabilities of the weapons on them. When infantry combat vehicles (and armored personnel carriers) or targets for attack are located higher than the infantry, overhead fire may be used. When mechanized infantry in infantry combat vehicles (or armored personnel carriers) use firepower to support combat, enemy anti-tank missile launchers, anti-tank gunners, and rocket launchers, which pose substantial threat to infantry combat vehicles (and armored personnel carriers) should be wiped out promptly in order to insure the safety of armored combat vehicles.

When the terrain is complex, observation is limited, and attack by enemy anti-tank weapons is likely, infantry combat vehicles (and armored personnel carriers) should dash forward in groups within sighting distance behind the infantry and maintain constant contact with the infantry and using their firepower to support tanks and the infantry or to transport infantry at all times. Armored personnel carriers should intensify their aerial observation and be prepared at all times to fire at low-flying aircraft. When infantry combat vehicles (and armored personnel carriers) are unable to advance with the infantry because of terrain impediments, when friendly adjacent forces are advancing fairly rapidly or if there is a road around, on command from higher headquarters, they may advance in the direction of attack to designated points in the direction of friendly adjacent forces or by taking the road around, and wait to rendezvous with the infantry.

Attached mortar fendui usually occupy firing positions at a point 400 meters behind the company combat formation. The mortar fendui commander and the mechanized infantry company commander are located together to carry out the firing mission handed down by the latter.

4) Action When a Fortified Enemy Strongpoint Is Encountered

When a fortified enemy strongpoint is encountered, mechanized infantry should rapidly dismount from their vehicles and coordinate closely with tanks to make a resolute and bold attack to take it. Infantry combat vehicles (and armored personnel carriers) may make use of favorable terrain and of gaps in tank and infantry combat vehicle formations to bring their firepower to bear in support of the infantry and tanks. After wresting control of the enemy strongpoint, they should develop the attack rapidly in the designated direction.

When a weak enemy strongpoint is encountered, mechanized infantry in vehicles should coordinate with tank fendui to take it while on the move.

When an attack launched from an enemy strongpoint has little effect on us, and if the strongpoint cannot be readily taken at the moment, mechanized infantry companies (and platoons) may act under instructions from higher headquarters to advance under artillery fire protection using favorable terrain or releasing a smokescreen to circle around and develop the attack in the designated direction.

When a strongpoint is encountered that the company (or platoon) does not have the strength to take, company (or platoon) commanders should act on instructions from higher headquarters and command mechanized infantry to dismount from their vehicles to occupy favorable terrain or strong positions and use their firepower to suppress the enemy and protect friendly adjacent forces or support reserves to go into battle to take it.

5) Actions When an Enemy Counterattack Is Encountered

When battle is inside enemy defenses, if a mechanized infantry company (or platoon) commander discovers an enemy counterattack, he should assess the situation rapidly, report to higher headquarters, and make a decision on the basis of the direction of the enemy counterattack, troop strength and terrain on how to resist the enemy counterattack.

When the enemy uses fairly large forces to launch a frontal counterattack against the company, mechanized infantry companies (or platoons) fighting on foot should rapidly occupy favorable terrain and coordinate with tanks to resist the enemy's counterattack. Infantry combat vehicles (and armored personnel carriers) should quickly get close to the favorable ground occupied by the infantry and use their firepower to support the infantry and tanks in combat. Mechanized infantry companies (and platoons) fighting from vehicles should rapidly dismount and occupy favorable terrain, and coordinate with tanks to resist the enemy's counterattack. Infantry combat vehicles (and armored personnel carriers) should use whatever favorable terrain is available to bring their firepower to bear to assist the infantry and tanks in resisting the enemy's counterattack.

When the enemy counterattack is not large, mechanized infantry companies (and platoons) may coordinate with tanks to wipe out the counterattack while on the move.

When the enemy launches a counterattack against an enemy's flank, the mechanized infantry that has sustained the enemy counterattack should quickly occupy favorable terrain and hold out against the enemy. Mechanized infantry troops that have not sustained a counterattack should launch an attack against the counterattacking enemy's flanks and coordinate with the frontally attacking mechanized infantry troops and friendly adjacent forces to wipe out the counterattacking enemy.

When the enemy counterattacks friendly adjacent forces, the company (or platoon) should move to render assistance. Depending on orders from higher headquarters and the current situation, it may counterattack the enemy's flank or render firepower assistance, coordinating with the friendly adjacent forces to wipe out the counterattacking enemy. When mechanized infantry companies (and platoons) coordinate with tanks in a counterattack on the enemy's flank, they should quickly stab at the enemy's flank in combat vehicles. If the enemy has not spread out as yet, they may attack in combat vehicles. If the enemy has fanned out to resist our attack, they should attack on foot.

In the process of resisting the enemy's counterattack, mechanized infantry company (or platoon) commanders should constantly observe the enemy situation and the terrain and keep abreast of the battlefield situation, giving timely directly to movements of their fendui. Infantry combat vehicles (and armored personnel carriers) should make full use of the terrain and bring into full play the power of the weapons they carry no matter whether firepower is being used to assist the infantry and tanks in combat or whether the infantry in vehicles is coordinating with tanks in an attack. When mechanized infantry mounts vehicles for combat, it should make the most flexible use of the firing

equipment aboard the vehicles and bring into play the effectiveness of the weapons in its hands. Recoilless gun and mortar fendui attached to mechanized infantry fendui should discharge their missions in turn in accordance with commands from the mechanized infantry company commander to support the infantry and tank fendui in battle.

6) Actions During Pursuit

When company (or platoon) commanders discover during battle that the enemy has retreated and fled, they should immediately order their fendui to board vehicles in pursuit and report the situation to higher headquarters. When an enemy that is in direct contact with a company (or platoon) withdraws and flees, the company (or platoon) should immediately pursue in vehicles formed up in the former battle formation. Next, depending on instructions from higher headquarters and the circumstances of pursuit, it may gradually shape the original combat formation into a dispersed formation or a column to convert to or develop a pursuit at full tilt. When the retreating and fleeing enemy has not been in direct contact with the company (or platoon), the fendui should act in accordance with instructions from higher headquarters and mount vehicles at once and form up into a dispersed formation or a column to carry out a pursuit at full tilt.

While in pursuit, the company commander should advance at the head of his unit's main force. The political instructor is usually moves in the middle or at the end of the unit. Platoon leaders should march at the head of their platoon, keep abreast of developments and command their platoon's movements. Attached mortars (or artillery) should constantly use their firepower to delay the enemy's movements, to through confusion into his ranks, and to obstruct his flight.

7) Actions When Encountering Enemy Obstacles

When enemy man made (non-explosive) and natural obstacles are encountered while engaged in in-depth battle with a defending enemy, company (or platoon) commanders should direct a quick assessment of the situation and efforts to find a way around them. While circling around them, observation and security has to be strengthened to guard against enemy raids. When there is no way around the obstacles, mechanized infantry should be ordered to dismount from their vehicles to open a route, and infantry combat vehicles (and armored personnel carriers) and some infantry should occupy favorable terrain from which they can use their firepower to cover the infantry engaged in opening a route. When there is neither a road around the obstacles nor any way to open a route quickly, infantry combat vehicles (and armored personnel carriers) should be ordered to use terrain concealment or firepower to protect the infantry as it goes through and continues to fight, and the situation should be reported to higher headquarters. After mechanized infantry troops have seized the target for attack, still no means can be found to organize infantry combat vehicles (and armored personnel carriers) to cross.

Should an enemy tank minefield be encountered and there is no way to go around it, firepower should be organized to protect mechanized infantry troops as they dismount from vehicles to clear a path. Alternatively, assistance of engineering troops or minesweeping tanks may be called upon to open a path.

In places where an enemy smokescreen is encountered, commanders should quickly assess the smokescreen area, particularly the situation on the fringes of the enemy. If there is no threat from enemy fire, the fendui should be ordered into vehicles to go through the smokescreen area in rows. In order to sustain the direction of attack and avoid bumping into each other, a compass should be used to guide drivers in maintaining a forward direction and lights on the rear sides of vehicles should be turned on. After crossing, attack should be developed immediately in the designated direction. If there is a threat from enemy fire, infantry should be ordered out of their vehicles to guide the infantry combat vehicles (and armored personnel carriers) through the smokescreen. While going through, the infantry should shorten intervening spaces in order to maintain its formation and contact with each other. Each squad should designate one soldier to use a colored signal light to guide infantry combat vehicles (and armored personnel carriers) forward. When approaching the the edge of the smokescreen near the enemy, the enemy that is blocking the smokescreen area must be annihilated and then the attack should be developed rapidly in the designated direction.

8) Actions When Vehicles Are Damaged

When vehicles are damaged during combat, infantry troops should dismount and continue to fight. If they must board the vehicles to advance before they have been fixed, they should share rides in other combat vehicles (or armored personnel carriers) or else advance on tanks. Drivers should quickly inspect and repair vehicles, and if they are unable to fix them themselves, they should ask the technical support team to fix them. When inspecting and fixing vehicles, alertness in observation and guarding is necessary to prevent enemy raids. After vehicles have been fixed, they should quickly catch up with combat formations and join in battle.

9) Actions After Completing the Attack Mission

Following completion of their attack mission, mechanized infantry companies (or platoons) may become reserve units on the orders of higher authority, or they may receive a mission to man fortified strongpoints or to retire from the battlefield and enter a designated assembly area.

After a company (or platoon) commander receives an order to convert to a reserve unit attached to higher headquarters, he should first command his fendui to use firepower to cover higher headquarters reserves going into battle, and then he should gather his formation behind the first echelon to move along the route designated by higher authority to follow along or to dash forward section by section. While moving forward, he should watch the movements of the first echelon and be prepared at all times to receive and carry out a new combat assignment.

When a company (or platoon) receives orders to man fortified strongpoints, he should command every platoon (and squad) to occupy favorable terrain at once, set up observation and guards, assign missions to subordinate units to meet the requirements of hurried defense, organize firepower and organization coordination, build more defenses and rapidly prepare to resist enemy attacks.

After company (or platoon) commanders receive orders to retire from the combat zone and enter an assembly area, they should quickly provide a clear picture to platoons (and squads) of the enemy's situation, the time for withdrawal, the order of withdrawal, routes to be used and location of the assembly area. Then, they should direct their fendui to move forward to the assembly area. After each platoon (and squad) receives orders, it should board vehicles in the location occupied and move in the designated direction. While moving forward, it should take up the company order of march. From the time it leaves the battle zone until arrival in the assembly area, it should intensify observation, guarding and security measures. After entering the assembly area, vehicles should be quickly dispersed in concealed locations and completely camouflaged. Observers and guards should be posted; vehicles should be inspected and maintained, fuel, ammunition and provisions should be replenished and reorganization should be done to revive fighting strength and to prepare for new combat missions.

7. Features of Organization and Command of Offensive Warfare When the Enemy Has Not Gained a Firm Foothold

a. Rapid Preparation To Advance. After receiving orders, fendui commanders should quickly prepare plans for the use of troops on the basis of known circumstances. They should assemble commanders of all fendui to transmit the orders and instructions of higher headquarters; they should provide a preliminary explanation of the mission of each fendui and of weapons reinforcement; and they should spell out the order of advance, routes and observation, guards, camouflage, and measures to defend against air raids and nuclear and chemical weapons as well as regulations on light packs for personnel. They should decide the division of labor for cadres; they should provide requirements and methods for combat mobilization; they should centrally arrange all preparatory work; and they should supervise and spur on inspection of fendui' completion of preparations to advance. In emergencies, commanders should quickly organize fendui to advance, completing all preparations while on the move.

b. Rapid advance and making of preliminary decisions. Units responsible for carrying out guard duties while advancing should send guards out in front and the fendui should advance according to the order of battle. Upon approaching the enemy killing ground while advancing, fendui commanders usually march with commanders from higher headquarters or out in front to approach the enemy. They participate in higher headquarters' organization of on-the-ground reconnaissance and receive specific assignments.

Companies usually select two attack point, one of which is the main one. Sometimes they may select just one attack point. Every effort should be made to select an attack point on the enemy's rear flank.

The company's battle deployments should concentrate main forces in the direction of main attack. Usually, a main attack unit, a holding attack unit and a reserve unit are formed. When there is one attack point, two attacking units and one reserve unit may be formed.

c. On-the-ground reconnaissance. After handing down oral combat orders and after preliminary decisions have been made, fendui commanders should lead

personnel concerned for an advance approach to the enemy in an on-the-ground reconnaissance; they should divide up responsibility for fendui among cadres, should transmit assignments, carry out preparations and lead their fendui in continuing to advance or going into concealment to meet the enemy.

The handing down of oral combat commands is usually done during the on-the-ground reconnaissance and is spelled out step by step as questions arise.

d. When attack is made against an enemy that has not consolidated his position, the opportunity that this lack of consolidation affords should be used to carry out raids and to make surprise attacks. When raids are conducted, positions from which an attack is to be launched may be occupied and an attack launched after rudimentary preparations. Alternatively an attack may be launched while on the march.

A strong attack should be executed in accordance with the principles for attacking enemy defended field warfare positions.

e. Ferocious Attack and Quick Penetration To Hit Enemy Strategic Points. After thrusting into enemy positions, enemy confusion or the advantageous situation of having intruded into enemy positions should be used to make full use of favorable terrain to hit and penetrate important targets such as enemy command and observation posts and defensive strongpoints on the enemy's flanks, at gaps in defenses or in weak spots in the enemy's formations using tank support. Commanders should command all weapons and reserve fendui to move forward rapidly to give prompt support to fendui fighting out in front. After approaching targets, the tactics of small groups moving over many routes in many directions to attack key points should be used to throw the enemy's defensive deployments into confusion and to encircle and wipe out the enemy one by one.

f) Encircling and Wiping Out an Enemy That Has Pulled Back for Stubborn Resistance. When the enemy pulls back, commanders should swiftly command each fendui to advance boldly in hot pursuit to bring pressure on the enemy. They should take advantage of the enemy's confusion during pull back to thrust courageously into enemy positions, wipe out enemy armor, and annihilate enemy infantry. When the enemy pulls back into strongpoints or to favorable terrain to carry out stubborn resistance, commanders should organize firepower and command fendui to carry out attacks via many routes against key points, to use gaps to penetrate enemy positions and to make pincer attacks to cut off and annihilate the enemy. They may also use some troops to attack the enemy frontally and on the flanks, concentrating their main forces on the enemy's rear flanks to carry out ferocious attacks and determinedly penetrate the enemy's positions to wipe him out.

g) Pursuit and Annihilation of a Retreating Enemy. When fendui commanders observe signs that the enemy is about to retreat, they should report them to higher headquarters at once and command their fendui to intensify attacks. At the same time, they should make all preparations to attack and wipe out the fleeing enemy. When the enemy has been found to have retreated, firepower should be organized at once to wipe out the vanguard of the retreating enemy first of all and to slow the enemy's movements. At the same time, higher headquarters artillery should be requested to carry out interdiction. Fendui

should moved with determination and boldness to smash resistance from fendui covering the enemy's retreat, and carry out hot pursuit or all out pursuit traveling at maximum speed or taking short cuts to overtake the enemy, thrust into the flanks and forward part of the enemy's route of retreat and take strong points to cut off his retreat route, using flanking fire or blocking fire in an effort to wipe out the enemy while he is on the move.

When pursuing, commanders should march at the head of their fendui, and they should provide each fendui with simple and clear assignments, particularly emphasizing the following: the direction of the enemy's retreat; the task of the fendui; pursuit routes and techniques for wiping out the enemy; and actions to be taken following completion of the pursuit mission. When pursuit is to be in vehicles (or tanks), the vehicles (or tanks) that are to be mounted should be assigned quickly, command methods set, air defense observation and air defense firepower organized, and pursuit done quickly.

During pursuit, should small groups of the enemy put up resistance, a small number of troops should be assigned to wipe them out or keep them under observation while main forces quickly penetrate their flanks and then continue to pursue the enemy. If the enemy occupies favorable terrain with the intention of carrying out stubborn resistance, before he has been able to consolidate his position, troops should be concentrated for a bold attack to encircle and wipe him out. If militia are operating with the fendui, there should be active coordination with them.

8. Features of Organization and Command for Nighttime Warfare*

a. On-the-ground Reconnaissance and Reaching Decisions. The key points to be clarified during on-the-ground reconnaissance are as follows: patterns of enemy nighttime movements and location of enemy guards; location and patterns of use of enemy nighttime sighting devices and location of flare posts; favorable terrain and routes for covert approach to the enemy and the carrying out of penetrations; and landmarks useful for nighttime identification.

Reconnaissance methods should be primarily point blank reconnaissance. In order to reduce the time of lingering in front of enemy frontline positions and to reduce the target, usually reconnaissance is carried out at several points by different commanders. The principal method is to use the cover of darkness and favorable terrain, taking advantage of the enemy's firing of star shells and firing, making visual observations, eavesdropping and using night sighting devices to get close to the enemy gradually and conduct a point by point reconnaissance. When circumstances permit, prisoners may also be captured or infiltration carried out.

When conducting on-the-ground nighttime reconnaissance, there must be thorough organization and complete camouflage, strict setting of reconnaissance discipline and of signaling methods, and good organization of guards. Discipline must be strictly observed during reconnaissance; movements must be secret; and making sounds or showing lights must be guarded against.

When choosing attack points, emphasis must be placed on the characteristics of enemy nighttime defenses, focusing on advantages that gaps afford, every effort being made to select attack points where enemy obstacles are weak,

nighttime defense slack, where there are clear landmarks and at places suitable for penetration and development in depth. Positions for the launching of the attack should, insofar as possible, be selected close to the enemy defense front on favorable terrain suited to concealment and where use of enemy night sighting devices is difficult.

Troop Deployment. The separation of and distances between battle formations have to be shortened to conform to the terrain. The deployment of weapons and reserve units and the location of the commander should be fairly far forward. When necessary, some troops may be used to form a containment fendui to conduct feints against the enemy's flanks or front in order to confuse the enemy and cover combat by main forces. If circumstances permit, a small number of troops may be formed into a support team for flares and smokescreens.

Nighttime attacks and temporary readjustment of deployments make for confusion; consequently prudence should be used in deciding on the initial deployments and they should not be lightly changed during combat.

b) When handing down oral combat commands and organizing coordination, in addition to paying attention to the ingredients of daytime attacks, the following should also be emphasized: surprise attacks and the movements and methods of coordinating movements of all units when changing to storming; and designation of guide fendui.

c) When organizing support, specific ways of dealing with enemy night sighting and illumination devices must be formulated, and preparations should be made in advance to try out night sighting and night aiming devices as well as to lay smokescreens and set off star shells. Particular attention must be given at night to handy and reliable ways that do not inhibit movements of concealing lights and reflective objects.

d) In secretly and quickly approaching the enemy and in occupying positions from which to launch an attack and closing with the enemy, full use should be made of favorable terrain and every effort should be made to avoid areas and landforms that form a fairly sharp contrast against the darkness; formations and movements should be used dexterously, and separations and distances should be shortened. Formations for movements should be perpendicular to enemy positions rather than strung out horizontally to them; dashing distances should be short rather than long; and movements should be concealed, silent and rapid in order to reduce the amount of exposure and shorten exposure times.

When enemy flares are encountered, if the terrain contains defilade, the hidden side may be used to continue to advance. If the terrain is flat and broad, cover should be taken at once and the illumination used to observe the enemy situation, the terrain and the route of advance. When the illumination has finished, forward movement should be resumed. Should the enemy send up flares continuously, clever use should be made of the terrain and dexterous use made of formations to advance in concealment.

When an enemy fire obstacle is encountered, the terrain should be used to avoid being silhouetted against the fire and troops should either conceal themselves at once or go around the area.

When the enemy uses night sighting devices for observation, fendui should either conceal themselves or continue to advance as the terrain allows.

When enemy blind firing is encountered, movement under concealment should continue. Should movements be discovered by the enemy, higher headquarters should be notified at once and advance made rapidly under cover of the terrain or firepower.

When small groups of enemy scouts are encountered, the situation should be sized up at once and small numbers of troops assigned to watch their movements while the main forces detours rapidly around the enemy's flank. If they cannot be avoided, a small fendui should be sent out or firepower used to capture or wipe out the enemy. However, until such time as movements have not been detected by the enemy, every effort should be made to avoid the use of firepower so as not to reveal movement intentions.

e) Sudden Launching of the Attack and Sudden Penetration of Enemy Positions. Nighttime attack should be a surprise attack if at all possible. In addition, preparations must be made to take the enemy positions by storm. If the surprise attack does not succeed, a shift should be made at once to storm enemy positions.

When making a surprise attack, all weapons fendui should be prepared to fire at any time. Usually the attack route is secretly opened ahead of time under cover of darkness, but sometimes it may be cleared at the time of attack; nevertheless, full preparations must be made to open it by storm. Once the route has been successfully opened, commanders should use a phased secret approach or a dash to get through the route quickly and charge into enemy positions secretly via pre-set targets and routes, first wiping out the enemy near attacking points and then rapidly expanding toward the enemy's flanks and the rear of his defenses.

Once fighting has broken out, commanders should order mortar fendui to put up star shells and fire suppression fire to assist the infantry in combat.

When movements for a surprise attack are discovered by the enemy, weapons fendui should be resolutely ordered to concentrate withering firepower to suppress the enemy. Fendui should quickly shift to a storming of enemy positions. When tanks have been attached, they should be commanded to move ahead at once and fire at designated targets in coordination with the infantry.

6. Rapid Expansion of the Victory Through the Cutting Up, Surrounding and Annihilation of the Enemy Within Strongpoints. After units have penetrated the enemy positions, they should move rapidly toward both flanks and behind the frontline positions to take advantage of the enemy's confusion to chop up the enemy's battle formations quickly so that they cannot support each other, attacking the enemy via many routes and from many directions.

During battle, commanders should intensify observation, organize the movement of troops and firepower as needed, and lay down smokescreens and fire star shells in support of a swift and decisive annihilation of the enemy. In fighting off enemy tanks and when the infantry is counterattacking, commanders

should make a prompt assessment of the enemy's intentions and of the strength, direction and time of enemy counterattack on the basis of artillery firing, illumination shells, motor sounds and such changes in the situation; then they should organize troops and firepower to prepare to hold off an enemy counterattack.

When the enemy counterattacks, depending on the situation, either deployment in ambush or deployment of some troops to envelop the enemy's flanks to wait in concealment may be used to smash the enemy's counterattack in active coordination with higher headquarters reserve units.

9. Requirements for Defensive Warfare on Deserts, Gobi and Grasslands

a. When oral commands are handed down and coordination is organized, guide units should be designated and if there are no obvious landmarks that can be used or if visibility is poor, the azimuth for the direction of attack must be given.

b. In order to guard against enemy ground and aerial reconnaissance, thorough camouflaging must be done and full use made of rolling terrain, sand dunes, clumps of grass, oases and poor visibility weather for camouflage; specific persons should be designated responsible for carrying water storage containers in order to insure a supply of water, and a water supply unit should be set up with individuals and vehicles assigned amounts of water to be carried. In addition, water discipline should be rigorously enforced to control the amount of water consumption. Attention should also be paid to guarding water sources and supply points, and attention should also be directed toward seizing stored water and sources of water within the enemy's defense perimeter; however, care should be exercised to test such water before use.

Vehicles consume a large amount of fuel on deserts, in gobi and on grasslands, so fuel consumption should be strictly regulated. In addition, technical measures should be taken to protect vehicles and weapons against dust, freezing and high temperatures in order to reduce breakdowns and the damage rate.

Prevention and Treatment of Naturally Epidemic Diseases in Desert, Grasslands, and Gobi. During the windy season and the winter season, inflammation of the membrane in the corner of the eye, snow blindness and frostbite should be guarded against. During the unbearably hot season, everything possible should be done to prevent sunburn and to prevent heat stroke, convulsions, exhaustion, and prostration. When it is discovered that someone has suffered heat stroke on the desert, sand pits 50 centimeters wide and 170 centimeters long may be dug and the victims placed in them. They should then be covered with tree branches to ward off the sun or other means may be used to effect rescue.

c) When circumstances permit, adaptability training should be given to adapt people to dramatic changes in the weather and in how to withstand sandstorms and snowstorms, to increase ability to determine direction and to move quickly in sandy areas, to toughen ability to fight naturally epidemic diseases, and to nurture an indomitable combat style and a tenacious will that makes it possible to bear great suffering and withstand great fatigue.

d) Rapid concealment to approach the enemy. In order to be able to maintain direction in approaching the enemy, soldiers and militia who are familiar with the local terrain and weather should be designated to act as guides, and point soldiers and search teams should be posted at the front of and on the flanks. If conditions warrant, markers should be set up along the route of approach to the enemy to mark the direction forward and topographic markers that are readily visible at night should be set up to point the direction and guide personnel. All commanders should march at the head of the fendui and they should check maps against the terrain as they go along and use compasses to determine the direction of advance. Commanders should observe from different angles and not be confused by mirages. They should also use topographic features (such as the shape and direction of sand dunes and sand ridges, the patterns of vegetation growth and melting ice and snow) to determine direction. When encountering areas that are difficult to traverse, commanders should personnel determine the direction, selection routes and command vehicles to go through.

e) Launching of Attack. When attacking an enemy that is holding fast on a sand ridge facing horizontally, firepower should be assembled frontally to contain the enemy's troops and firepower while the fendui is commanded to move along the spine of the ridge from one or both flanks, or to attack from the rear flank.

When attacking an enemy that is holding fast on a sand ridge facing vertically, firepower should be assembled to suppress the enemy and to cover main forces attacking the enemy either frontally or on an exposed flank. A small number of troops should envelop the enemy from the rear flank.

When attacking an enemy holding fast at a number of sand dunes, firepower should occupy a high sand dune to cover the attacking fendui, and small groups traveling via many routes should capture one by one the sand dunes occupied by the enemy. Alternatively, the sand dune concealment line leading to the enemy's rear flank should be used for an attack from the rear toward the front.

10. Features of Organization and Command for Offensive Warfare Under Frigid Conditions

a. On-the-ground Reconnaissance. The on-the-ground reconnaissance site should be selected at a place that provides for observation and concealment and in which the surrounding background is fairly variegated. Lone topographic features and bleak snow-swept areas should be avoided at all costs. When conducting on-the ground reconnaissance, every effort should be made to keep out of the wind and observe in the sunshine. Reconnaissance time at each site should not be overly long; frostbite should be guarded against; and emphasis should be on ascertaining the following: depth of snow drifts in front of and inside the enemy's positions; the extent to which personnel and vehicles can travel and places favorable for approach; status of the freezing of rivers, lakes and marshes in the movement area and extent to which they can be traversed; directions and routes suited for penetration and envelopment by our ski troops; inhabited places near the enemy's defensive positions where protection against the cold is available and the location of valleys and forests; situation regarding enemy use of ice and snow to construct defenses and facilities to keep out the cold as well as the location of guards in gaps in the terrain; and status of the emplacement of ice and snow obstacles in front of the enemy's positions and inside the position perimeter. It is particularly important to find out about concealed obstacles and those that have been covered by the snow, thereby ascertaining the enemy's strong and weak points and strategic points in order to select attack points and positions from which to launch an attack.

b. Need for Care in Protecting Radio Batteries and Microphones from Cold and Dampness and Keeping Them Warm. Organization of visual and auditory monitoring and reporting, and of the transfer of duties with prompt transfer of signals from higher headquarters and friendly adjacent units, using brightly colored flags to exercise command to the maximum extent possible. Bugles, whistles and mouthpieces may be tucked into the bosom to prevent their freezing.

c. Rapid and Concealed Approach to the Enemy and Completion of Preparations To Attack. Contingents usually use bad weather on cold nights or snowstorms when visibility is poor and when observation and firing is difficult, or they advance under cover of friendly artillery fire or smokescreens making full use of favorable terrain with a dusting of snow or no snow to make a rapid, concealed approach to the enemy.

When deep snow and icy slopes and precipices are encountered, means should be found to go around them. If they cannot be circumvented, equipment available at hand should be used to surmount them.

When attack is made on skis, the enemy should be approached covertly via sheltered terrain and forests. When on the move, full use should be made of sleds and skiing equipment to increase speed of movement. When area of deep snow and slippery ice that are difficult to traverse are encountered, every effort should be made to go around them provided the course of battle is not adversely affected. When movement is in coordination with tanks, infantry may ride on the tanks, and commanders should keep close watch on both the direction and speed of movement and make sure that the fendui occupies on time the positions from which the attack is to be launched. They should

additionally help tanks surmount ice and snow obstacles, and take care to prevent being crushed when tanks slide on the ice and snow.

When attack is made on skis, the attack should be launched suddenly by deploying while on the march against the enemy's flanks and rear flanks, striking the enemy unexpectedly.

When carrying out a raid against the enemy on a cold night, account should be taken of the increased visibility on snowy ground and how easy it is to make sounds by stepping on snow. Units should take action to dampen the sound and camouflage thoroughly, increase distances between fendui and use the darkness of night and snowstorms as cover in approaching the enemy rapidly. They should clandestinely open and traverse routes and wipe out the enemy in his defenses or in the confusion. Should surprise attack fail, they should shift to storming the enemy's positions according to a previously set plan.

d. Resisting an Enemy Counterattack. When a counterattacking enemy dismounts from his vehicles to attack, firepower should be organized to cut off contact between the enemy infantry and tanks and force the enemy to halt in deep snow. The separation between the infantry and the tanks and the tumult in formations should be seized upon to command the fendui quickly to take sudden and bold action, attacking the enemy's flanks and rear flanks with many small groups moving over numerous routes to cut up, surround and wipe out the enemy swiftly.

When the enemy launches a counterattack using ski fendui, commanders should direct mortars to lay down a barrage on the enemy, and they should use part of their troops to occupy favorable terrain for frontal resistance. They should concentrate firepower to wipe out the most exposed enemy fendui and force the enemy to deploy in places having shallow snow and in complex terrain. Main forces should capitalize on the tumult in formations or the discarding of ski poles and skis and the resultant reduction in speed of movement to launch a swift and bold attack on the enemy's flanks to cut up the enemy's battle formations and wipe out the enemy while he is on the move.

e. Annihilation of a Fleeing Enemy. When the enemy flees in disarray, commanders should send out some of their troops along paths, frozen marshes and rivers, using them as shortcuts to thrust into the front or the flanks of the fleeing enemy and to occupy narrow roads and strategic points to cut off the enemy's escape route and force the enemy to leave roads and travel across country so that the enemy's armored vehicles will become mired in deep snow. The opportunity that the chaos in the enemy's ranks affords should be used to launch bold attacks and a pincer movement front and rear to wipe out the enemy while on the move.

When pursuing, light packs suited to the pursuit mission and the weather should be carried, and proper lightening of loads should be considered, while maintaining a certain amount of protection from the cold. All manner of equipment used to prevent slipping and rope for climbing should be made ready, and all preparations should be made to overcome ice and snow obstacles. Commanders should march at the head of their fendui, and they should assign simple assignments to each fendui while on the move. Not only should maps and compasses be used to avoid losing direction, but attention should also be paid

to tracks that the enemy has left in the snow to maintain the direction of pursuit. When halted, care should be taken to move sufficiently and on no account should personnel lie down in the snow out of fatigue in order to guard against frostbite. When conditions permit, skiing equipment should be used or else personnel should ride vehicles (or tanks) in carrying out pursuit. During pursuit, when vehicles (or tanks) encounter ice and snow and are unable to go through, help should be given in conquering the obstacles. If they cannot be conquered right away, a shift to pursuit on foot should be made without the slightest hesitation.

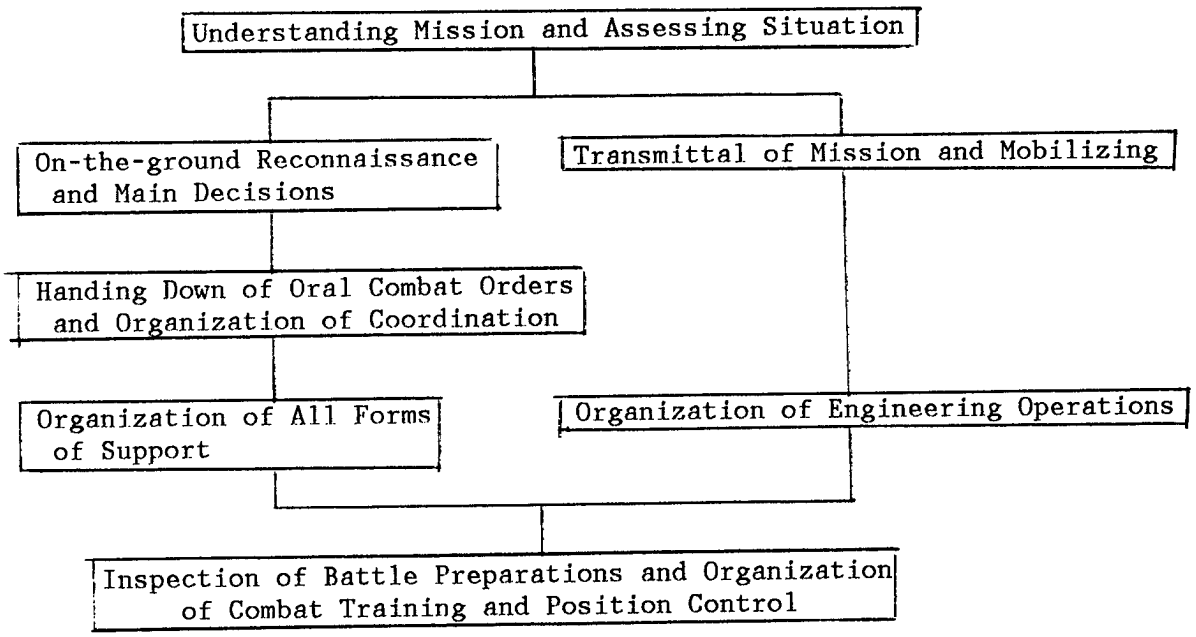
C. Defensive Combat

1. Organization and Command of Defensive Combat from Strongly Fortified Positions*

a. Organization of Combat

After commanders receive their mission, they should build on preparations already made in ordinary times to plan and organize combat thoroughly and to complete defense preparations rapidly to meet the intentions of higher headquarters, the mission they have received, and the time limits for completion of defensive preparations. (See the figure below.)

Diagram Showing Sequence in Organizing For Combat



1) Understanding Mission and Assessing the Situation

(a) Understanding the Mission

The defensive area assigned by higher headquarters, the main direction of defense, strategic points for defense and the area (or sectors where troops are to be concentrated for defense, location for deployment of reserves and direction of counterattack, defensive area (or sector) of the fendui, defense front and in-depth, amount of troop and weapons reinforcement, strategic points (or sectors) to be defended, time limits on completion of defense preparations and duration of time for holding fast, defense area (or sector) of friendly adjacent forces, and support at the fendui's combat boundary lines and junction points.

An appreciation of higher headquarters' intention should be gained from an understanding of the mission; the mission of the fendui and of friendly neighboring forces should be clarified; and the position and function of the fendui in the plans of higher headquarters should be made explicit.

(b) Assessing the Situation

The Enemy Situation. Enemy intention to attack, approach routes, positions from which to launch attack and troop dispositions; troops available to be thrown against the fendui's defense front, direction of main attack and main breakthrough sector; places at which airdrops may be carried out, times when an attack may be launched, and tactics that might be employed. Battalion should additionally assess which targets the enemy might attack with nuclear or chemical weapons.

Our Own Situation. Weapons and equipment, strength, military and political quality, and combat ability of the fendui and attached subordinate units as well as the extent of material support in ammunition, provisions and medical rescue, plus the status of tunnels connecting positions, permanent fortifications and other facilities.

Friendly Adjacent Forces. Mission of friendly adjacent forces and effects on one's own fendui of their completion of the defense mission.

Terrain. Characteristics of terrain in front of and within the defense perimeter and its effect on the combat movements of both the enemy and ourselves; location of the deployment area and positions to be occupied to launch an attack. Analysis of the terrain within the defense perimeter mostly in terms of the tactical value and the interrelationship of high ground, valleys, roads, and mountain passes as well as conditions for observation, firing, concealment and camouflage plus nature of the soil.

Weather. Principally an assessment of the effects of weather on combat operations.

Social Situation. It is necessary to know the status of local forces and militia cooperating in military operations, the status of combat villages (and towns) located near positions, transportation capabilities of the local organization for support to the front and the extent to which it can render assistance.

After having assessed the situation, fendui commanders should reach a conclusion the principal ingredients of which are as follows: enemy intentions

to attack, direction of the main attack and breakthrough sectors, and tactics that might be employed; the fendui's main defense direction; strategic defense points; troop disposition, forward defense position and location of all positions in it.

2) On-the-ground Reconnaissance and Making of Decisions

(a) On-the-ground Reconnaissance. When organizing on-the-ground reconnaissance, observers, guards and weapons to be used (when there is concern about the enemy) should be posted; there should be an on-the-ground determination of points of the compass, familiarization with the terrain, pointing out of landmarks, briefing on the enemy situation, transmittal of the missions of higher headquarters, of one's own fendui and of friendly adjacent forces and time limits for completion of defensive preparations; clarification of reconnaissance sites, reconnaissance of routes, and a pointing out of things to be given attention and requirements.

When conducting the reconnaissance, fendui commanders should lead commanders of organic and attached subordinate units in a site by site reconnaissance that follows earlier agreed upon reconnaissance sites and reconnaissance routes, and that takes up the main direction first and secondary directions next and frontline positions first and behind-the-lines positions second. When circumstances permit, the positions should also be surveilled.

When making a reconnaissance of frontal positions, of most importance is an examination of the defense front and the terrain in front of the defense front, analysis of its tactical value and its effect on the enemy's and our own movements, further assessment of enemy approach roads, places that might be used for deployment and the location of positions from which an attack might be launched, forces available to the enemy for battle, the direction of a main attack and the form of attack. Determination of the location of the fendui's main defense direction, the defense front and strategic defense positions, strongpoints along the defense front, first echelon troop dispositions, position locations of attached first echelon weapons fendui, and zones of fire and sectors for the concentration of fire.

When conducting a reconnaissance behind the defense front, most important is an examination of the terrain behind the front line defense positions, an analysis of its tactical value and its effect on the enemy's and our own movements, ascertaining the direction in which the enemy might develop the attack, routes by which an envelopment might be carried out and tactical methods to be used in such an envelopment, and targets for attack using nuclear or chemical weapons. Determination of strategic defense points behind the enemy lines, the location of behind-the-lines strongpoints, first echelon troop disposition, weapons fendui attached to the second echelon and the location of weapons fendui under control of battalion (or companies). The second echelon's counterattack direction, routes and deployment area, location of command and observation posts and of civilian war service teams. The location of network positions should also be determined in the course of on-the-ground reconnaissance; the location, numbers and quality of tunnels and permanent fortifications should also be found out, and the numbers and locations of field warfare fortifications that have already been built as well as the kinds of obstacles and sectors in which they have been emplaced should also be determined.

(b) Listening to Reports and Suggestions from Commanders of Reinforcing Fendui. Listening to reports and suggestions from commanders of reinforcing fendui may be done either before or during the on-the-ground reconnaissance. The content of these reports and suggestions should be decided by commanders needs for making decisions, and it usually includes the following: the weapons and equipment of the reinforcing fendui plus the amount of ammunition it is carrying; the strength and quality of the fendui and its present location; the mission assigned by higher headquarters, the fendui's combat capabilities and times when supplementary missions might be assigned; location of position dispositions; the time required to complete combat preparations and problems requiring solution in infantry fendui coordination; primary methods of coordinating operations with infantry fendui.

(c) Making of Decisions. The main components of decisions are as follows: defense intentions; direction of main defense and strategic points that must be held; deployment of troops; mission of organic and attached subordinate units; layout of positions; and time limits on completion of defense preparations.

After commanders make decisions, circumstances permitting, they should convene members of the CPC Committee (or branch committee) for discussion to perfect their decisions and to insure that decisions will be carried out. In emergencies, commanders should make resolute decisions, reporting to the CPC Committee (or branch committee) after the fact. Once a decision has been made, it should be reported at once to higher headquarters.

3) Handing Down of Oral Combat Commands and Organization of Coordination

Unit designation, strength, direction of main attack and intentions of the attacking enemy.

Intentions of higher headquarters; the fendui's defense mission; area for concentration of main forces and weapons; direction of main defense and strategic points to be be held; tactics to be employed and objectives.

Mission of friendly adjacent units, and support at combat boundary lines and junction points.

Location of defense frontline positions and layout of positions.

Combat organization of each fendui, deployment area and mission; support at combat boundary lines and junction points.

Mission and location of deployment of anti-tank weapons fendui under direct control of a given level.

Deployment location and mission of anti-aircraft machine gun fendui and mortar fendui.

Time limitations on completion of defense preparations.

Location of commander and location of deputy and civilian war service team.

In places where local forces and the militia are a part of military operations, their missions must also be assigned.

(b) Organizational Coordination

Concealment opportunities, locations and protective measures for all fendui during the period of enemy artillery softening up; mission of observer personnel and on-line weapons; troops and methods of operating to prevent enemy opening of routes; times and sequence in which fendui occupy positions.

Combat operation methods of fendui holding fast in frontline positions when resisting continuous enemy attacks; movements of the second echelon or of reserves; sectors for mortar fendui concentration of fire or barrages; mission and firing times for anti-tank weapons fendui; methods each fendui is to use in firing at low-flying enemy aircraft.

Methods used by fendui holding fast in frontline positions to plug breeches in defenses and to halt their exploitation by the enemy when wiping out an intruding enemy; methods of maneuvering troops and firepower to wipe out an intruding enemy; troop strength, direction and deployment area for counterattacking and methods of coordinating all fendui.

Actions taken by each fendui to prevent enemy envelopment and encirclement when smashing an enemy envelopment and encirclement; actions of surrounded fendui and methods by which other fendui can lend combat assistance when some positions have been surrounded by the enemy; and actions of all fendui and ways of supporting each other when all positions have been surrounded by the enemy.

Time, sequence and methods whereby each fendui holds fast to tunnels while retreating during combat to hold fast to tunnels; tactics for preventing the enemy from destroying or besieging during battle to hold fast to tunnels; methods for providing mutual assistance and maintaining contact among tunnels; and the mission of each fendui and methods of mutual coordination when participating in a high headquarters' counterattack to retake ground positions.

Methods of coordinating with friendly adjacent forces and militia.

In order to support coordinated operations without let up, smoothly functioning communications liaison must be established, and commonly agreed upon landmarks, position code names and signals (or signs) for the coordination of operations designated. Provisions should also be made to readjust and revive the coordination of operations should it be destroyed.

4) Organization of Engineering Operations

In organizing engineering operations, unit commanders should provide explicit instructions on the ground to both organic and attached subordinate fendui about the following:

Location and numbers of battle trenches, communications trenches and weapons firing defenses that are to be constructed.

Sectors for the clearing of fields of observation and fields of fire.

Locations in which obstacles are to be emplaced, kinds, numbers and density; sections in which natural obstacles are to be improved and methods to be used.

Camouflage measures, locations and methods for construction of dummy fortifications.

Order in which work is to be undertaken, methods to be used, and time limits for completion.

During work, fendui commanders should constantly check on whether the location, dimensions and strength of defenses are in keeping with tactical requirements. When problems are uncovered, they should be corrected, and as each fendui's work progresses, troop strength and equipment should be appropriately readjusted and work completed within time limits allowed.

5) Organization of Various Kinds of Support

(a) Organization of Combat Support. After organizing coordination, all fendui commanders should organize combat support thoroughly and completely.

Organization of observation and security guards. The following should be spelled out: location of observer personnel and areas to be kept under observation, areas to be given particular attention and reporting methods. Security guard troop strength and security guard area, direction that should be particularly guarded, methods of dealing with situation and methods for mutual liaison. Battalion should also explain clearly actions whereby security guards are to assist combat and methods of communications and liaison, plus requirements in guarding positions, command posts and materials storage caves.

Air defense. Organization of aerial observers and reporting. Designation of fendui responsible for air defense and their mission in using infantry rifles and machine guns in air defense fire: formulation of air defense discipline; spelling out of air defense measures and means of coping following an enemy air raid.

Defense against nuclear and chemical weapons. The following should be made clear: methods of observing and warning of enemy attacks using nuclear or chemical weapons, issuance of signals to be used and methods of transmittal as well as the detection of radiation and chemicals; requirements of the defense facilities and safeguarding and maintenance actions. Requisitioning and supplementing amounts of protective materials; protective actions that all fendui should take and methods of coping following an enemy attack.

Protecting the flanks and junction points. The mission of each fendui for protecting flanks and junction points should be spelled out. Depending on circumstances, needed troop should be deployed and needed defenses built on the flanks and at junction points, as well as a certain number of obstacles emplaced and thorough camouflaging done.

(b) Organization of logistical support. Logistical support should be the responsibility of the deputy political instructor and the mess officer under

direction of the commander. They are to organize an ammunition team, a provisions team and a rescue team to provide ammunition and provisions support and to rescue wounded personnel. At the time of the organization of logistical support, the following should be made clear: the organization of each team and the person in charge of it; the location at which all fendui of battalion logistics are located; times when company ammunition units are open, their location and methods of replenishing ammunition; messing times and places; places for refueling of vehicles; battlefield rescue measures; precedence and methods for transporting the wounded.

When battalion organizes logistical support, it is most important to spell out authorized amounts on hand and consumption quotas for ammunition, fuel, water, grain and fodder; mission and requirements of guard functions and technical support, guarding of the place where the civilian war service unit is disposed and major actions for defense and protection; employment and requirements for local forces supporting the front; a system for requesting instructions and reporting and time limits on completion of logistical support preparations.

6) Pre-combat Training

Unit commanders should immediately inspect the state of readiness on the eve of combat in each subordinate fendui. They should conduct a particularly detailed inspection of all fendui and all service arms responsible for the main defense direction and strategic defense points. When problems are discovered, they should be solved at once.

After fendui complete all defense preparations, commanders should look at defense positions in terms of combat plans and use all available time to organize all subordinate organic and attached fendui to carry out pre- combat training. They should mobilize the masses to the full, put military democracy into practice and conduct repeated exercises in order to improve commander's ability to organize and command combined operations and to improve the combat skills of fendui. They should become more familiar with positions, the terrain, the mission and combat methods, and they should flesh out and perfect combat plans.

b. Conduct of Combat

1) Vigorous Attacks on the Enemy

When the enemy occupies positions from which to launch an attack, the battalion commander should command artillery troops to occupy temporary firing positions to launch a sudden and ferocious firepower attack against the enemy to slow his movements. When the enemy makes a combat reconnaissance of our frontline positions, the battalion commander should command the first echelon company's assigned fendui to use firepower to wipe it out or force it to retreat. However, our troop deployments and firepower support system should not be revealed. After driving off the enemy, the assigned fendui should conceal itself quickly or shift its position.

When no direct contact is made with the enemy, units should follow instructions from higher headquarters and use the cover of darkness or other favorable conditions to send out small fendui to work with the militia in

planting land mines in places that the enemy must traverse, and make surprise raids and ambushes against the enemy. They should capture enemy scouting parties to find out the intention's of enemy movements, smash enemy tanks, inflict casualties on his effectives, slow down his movements and cover the fendui completion of combat preparations.

When direct contact is made with the enemy, the enemy situation should be constantly observed to figure out the pattern of enemy activities, and sniper fire with rifles and guns should be vigorously pursued to inflict casualties on the enemy and to wear him down. On instructions from higher headquarters, the cover of darkness and tunnels may be used for the concealed dispatch of small fendui to slip stealthily along the enemy's flanks, through gaps in the terrain or along his frontal positions to reconnoiter, make ambush attacks, wipe out enemy tanks and important technical weapons or to make raid's against enemy exposed or weak spots, quickly withdrawing upon completion of the mission.

2) Preparations Against Enemy Firepower

(a) When a softening up by the enemy's air force and artillery is about to begin and units receive warning that the enemy is about to use firepower to soften up positions, all personnel except observers and assigned fendui (weapons) should seek cover in tunnels or shelters and complete combat preparations. Commanders should personally observe the battlefield to ascertain the enemy's movement intentions from his firepower attack so as to be able to direct their units in battle at any time.

When an enemy firepower attack is suddenly encountered, commanders should organize their fendui to seek shelter in tunnels at once, and personnel who are fairly distant from the mouths of tunnels should use nearby defenses for shelter, moving rapidly into shelter in tunnels later on during gaps in enemy firing to complete combat preparations. Commanders should command aerial weapons to fire at low-flying aircraft as circumstances permit. When the enemy uses firepower softening up to open a route nearby and through our obstacles, commanders should call for higher headquarters artillery to lay down a barrage against the encroaching enemy. Assigned weapons in frontline fendui should be commanded to wipe out enemies trying to open a route. When necessary, frontline anti-tank weapons and firing points in ambush should be commanded to use firepower to attack and destroy enemy minesweeping tanks and rocket minesweeping vehicles to put a firm stop to enemy efforts to open a route.

When the enemy has opened a route through our obstacle field, higher headquarters should be requested at once to use rapid minelaying methods to seal it off or to use quick demolition methods to open anti-tank trenches. Artillery and frontline holding fendui should be commanded to create a fire blockade.

Following an enemy air raid or creeping artillery fire, commanders should note enemy attacking strength and estimate the number of enemy troops to be used, commanding their units and weapons to take up positions accordingly and prepare to resist an enemy attack. However, they should not be deceived by fake shifts of enemy artillery fire.

(b) When the enemy attacks with nuclear or chemical weapons, as soon as warning is received of enemy nuclear attack or when signs of an enemy nuclear attack are detected, unit commanders should immediately sound the alarm ordering observers to take shelter where they are and to don protective equipment and continue to observe. They should command all other personnel to take shelter in tunnels at once. When the explosion flash is discovered, all personnel should take shelter in defenses at once. After the shock wave has passed, they should quickly don protective equipment and prepare for battle. Depending on circumstances or on the basis of orders from higher headquarters, they should revive their firepower support system and communications contact, and they should make rush repairs on defenses, replace obstacles and rescue the wounded. Chemical detection teams should be ordered to determine the extent to which the defense perimeter has been contaminated and to mark it. The situation should be reported to higher headquarters.

When there is a nuclear weapons attack, commanders should immediately ascertain the site of the nuclear attack and find out the status of losses. If damage to their unit is not great, on instructions from headquarters they should move necessary troops and weapons to the flank at the fringe of the nuclear breech and use their firepower and obstacles to wall off the breech. If the unit has sustained substantial losses, the loss situation should be determined quickly and personnel who are able to continue to fight should be organized to occupy positions and favorable terrain to prepare to resist an enemy attack.

When an enemy attack using chemical weapons is sustained, the unit commander should quickly sound the alarm and order personnel in positions to don protective equipment and seek shelter quickly where they are. Personnel in tunnels should quickly close airtight doors to protect themselves. Chemical detection teams should be commanded to determine the kind of toxicant used and the extent of contamination, and they should immediately notify fendui and friendly adjacent forces in the direction in which the toxic cloud is traveling of a possible threat.

3) Holding Fast to Frontline Strongpoints and Resisting Continuous Enemy Attacks

When the enemy launches an attack against us, unit commanders should immediately ascertain the direction of the enemy's main attack and then should act on the basis of the enemy's different methods of attack, distance from targets, the number of tanks and infantry and the speed of the attack to issue timely commands to a certain number of anti-tank weapons to take up positions successively to attack and destroy the attacking armor. Commanders should command artillery (and mortars) as well as infantry fendui to use their firepower to wipe out enemy infantry that has dismounted from vehicles and is attacking, and they should organize aerial firing to attack low-flying aircraft if the situation warrants.

When the enemy approaches our obstacles and passes through them, commanders should avail themselves of the obstruction that the obstacles cause the enemy, the slowing of his movements and the distortion of his formations to direct small teams lying in ambush ahead of the front lines and anti-tank weapons near first echelon strongpoints to concentrate their fire all of a sudden and

to detonate groups of mines to smash enemy minesweeping tanks and lead tanks first and then to smash other tanks and armored vehicles. They should use the firepower of rifles, machine guns and mortars to inflict casualties on the enemy infantry, to cut off contact between the enemy infantry and tanks, resolutely wiping out the enemy in our obstacle zone while using firepower or movable obstacles at the same time to block the route quickly and block the enemy's entry.

When the enemy gets close to our frontline, commanders should command anti-tank weapons and anti-tank teams to use their frontline positions and forward defenses to take advantage of the favorable situation of squeezed together enemy formations, slowed speed and perpendicular movement through the obstacles, resourcefully and flexibly coordinating closely, and using both combat and demolitions to destroy enemy tanks and armored vehicles. Heavy machine guns and mortars should be used to sever contact between the enemy infantry and tanks. A ferocious attack of short duration with rifles, machine guns, hand grenades and bayonets should be made to wipe out the infantry, to fight back and forth with the enemy, to defend positions staunchly and to repulse the enemy's attack.

When the enemy attack is blunted or he sustains heavy casualties from our firepower, when his formations are in disarray, and the situation favors us, commanders should send out small fendui promptly to use favorable terrain in front of positions or forward defenses or troops lurking in tunnels to launch surprise attacks against the enemy's flanks over the short distance ahead of positions under cover of firepower and smokescreens to destroy the enemy's tanks and armored vehicles and wipe out the enemy infantry in a ferocious fight that is quickly over.

When an enemy attack group assaults frontline strongpoint permanent defenses, artillery (and mortars) should be commanded to lay down concentrated fire to suppress the enemy attack group. At the proper time, fire should be shifted to lay down a barrage against the enemy who is extending into the area behind our lines. Front line defending fendui should be directed to hold fast in defenses and make full use of the power of their various kinds of weapons using flanking fire, oblique fire and counter fire to attack and destroy enemy accompanying artillery, tanks and armored vehicles, to wipe out enemy infantry and to maneuver troops and weapons to wipe out the enemy approaching permanent defenses. Commands should be given to fendui deployed behind the front lines to use their main firepower to halt enemy use of our flanks and gaps in the terrain to make an envelopment and resolutely smash the attacking movements of the enemy attacking group.

When enemy tanks and armored vehicles enter network positions, machine guns should be directed to use flanking fire to suppress the infantry following the tanks and to cut off contact between the infantry and the tanks. Anti-tank weapons should make full use of anti-tank obstacles to concentrate their firepower to attack and destroy the enemy's tanks and armored vehicles. Anti-tank teams should maneuver rapidly to circle around to the enemy's flanks or rear and use a combination of fighting, demolitions and blocking to wipe out enemy tanks and armored vehicles one by one.

When the enemy attacks the positions of friendly adjacent forces, fendui should use flanking fire to assist them. When necessary, some troops should coordinate with the friendly adjacent forces to wipe out the enemy. After the enemy has been repulsed, deployments should be quickly readjusted, the firepower support system revived, the wounded rescued, rush repairs made on defense works, new obstacles emplaced, ammunition replenished, mobilization carried out and observation intensified, attention given to concealment and enemy firepower attacks strictly guarded against with good preparations made to resist a second enemy onslaught.

4) Annihilation of Intruding Enemy and Recovery of Positions

When our defense positions are broken through by the enemy, units near the breakthrough points should be commanded to hold fast firmly to existing positions and to hold out against attacks by the enemy facing them. Troops and firepower should be moved quickly to the breakthrough points to wall them off and to prevent enemy follow-on echelons from continuing to enter. Anti- tank weapons, rifles and machine guns should be ordered to hold fast in their positions and every fortification and all favorable terrain should be used to attack using point blank fire, flanking fire and counter fire to wipe out tanks and armored combat vehicles, and to annihilate the enemy infantry. Mortar fendui should use their firepower to interdict follow-on enemy echelons and to support the infantry in wiping out the invading enemy.

When the enemy invades our pre-set counterattack positions or threatens the stability of defenses, commanders should capitalize on the favorable opportunity provided by the enemy having sustained setbacks, the cutting up of his formations, his loss of coordination, the failure of his follow-on and the loss of his effective firepower support to come to a firm decision to counterattack using the second echelon to carry out a resolute and daring counterattack on the enemy's flanks and rear. The counterattack must be vigorous, prudent, and be of benefit to long-term resistance and to completion of the defense mission. The decision to counterattack and the troops to be used are to be reported to higher headquarters with a request for approval. When launching the counterattack, the commander must provide explicit instructions to the counterattacking units on the mission, the direction of attack, the route to be used, the deployment area, movement signals and times, artillery support and methods of coordination among individual fendui. The counterattacking units are to press close to the enemy rapidly under cover of firepower and smokescreens and in coordination with defending units to occupy favorable terrain and defenses (network positions) and using the tactics of small groups traveling over many routes to strike resolutely and boldly against the enemy's rear flanks, thrusting into his combat formations and use a combination of fighting, demolitions and blocking to wipe out enemy's tanks and armored vehicles, annihilate the enemy's infantry and recover defensive positions.

Following a successful counterattack, it is necessary to take strict precautions against enemy fire attacks. All personnel, except for the troops required to hold fast to the recovered positions, should take cover quickly. When the counterattack has not succeeded, nearby favorable terrain should be occupied and defended tenaciously and enemy expansion resolutely blocked so as to be able to make another counterattack or in order to set the stage for a counterattack by higher headquarters.

When the enemy penetrates the positions of friendly adjacent forces, units should use their firepower to provide support. If circumstances warrant, they may also send some troops to maneuver on the enemy's flank to wipe out the invading enemy in coordination with the friendly adjacent forces.

5) Holding Fast to Strongpoints Behind the Frontline and Smashing Enemy Attempts at Envelopment and Encirclement

When threatened with enemy encirclement, the fendui commander should seize control of the situation at once ascertain the enemy's intentions, and direct units in the direction of the threat to hold fast doggedly to strategic points and to set up obstacles quickly to stop the enemy's movement. He should also use tank firepower to attack and destroy enemy tanks and armored combat vehicles. At the proper time, he should also move troops and weapons in the threatened direction to stop the enemy's in-depth development and to smash the enemy's encirclement.

When some unit positions have been encircled by the enemy, the encircled units should immediately redeploy, falling back on strategic points and tunnels and using tunnel defenses and obstacles to form a circular defense from which they can use ferocious firepower and vigorous combat actions to attack and destroy the enemy's tanks and armored vehicles, kill and wound enemy infantry and grapple repeatedly with the enemy, resolutely holding fast to positions. Commanders should devise means of making contact with the encircled units and concentrate firepower to hit at enemy tanks and armored vehicles that pose a threat to the encircled units and wipe out the enemy infantry. If circumstances warrant, some neighboring troops or reserves may be moved in to counterattack the enemy's flank and to coordinate with the encircled units to smash the enemy encirclement.

When a unit's positions have been encircled by the enemy, commanders should remain calm and cool, do all possible to maintain contact with higher headquarters and firmly direct battle. They should redeploy rapidly, concentrate their troops to defend strategic points, and use firepower and hastily erected obstacles to block the movement of the enemy's tanks, armored vehicles and infantry and resolutely prevent the enemy from cutting up our combat formations. They should organize a unified command for the encircled units, mobilize for combat and enhance morale. They should use anti-tank firepower to occupy favorable terrain and smash enemy tanks and armored combat vehicles. They should concentrate infantry rifles and machine guns as well as artillery (and mortars) to kill and wound enemy infantry, fighting back and forth with the enemy to hold fast resolutely to positions. When necessary, favorable opportunities such as the darkness of night may be used to send out small fendui from tunnels to lie in wait and attack the enemy suddenly, developing a pincer movement in coordination with units holding strategic points to break the enemy's encirclement. If circumstances do not permit, they should hold fast to positions and fight vigorously to wear down and contain the enemy, setting the stage for combat movements by higher headquarters.

6) Annihilation of Airborne Enemies

Unit commanders should organize uninterrupted aerial observation to ascertain as early as possible the places and times where the enemy may make airborne landings and the number of troops and movements after landing in order to make prompt decisions against the airborne landings and use flexible tactics to wipe out the airborne enemy.

When the enemy airborne troops are overhead, commanders should direct their aerial gunners to concentrate fire against the enemy aircraft in an effort to wipe them out in the air. When the airborne enemies touch down, commanders should direct mortars to suppress them and should use second echelon troops to take advantage of the enemy's not yet having consolidated his position to advance under cover of firepower to wipe them out quickly. When a ground attacking enemy poses a substantial threat to us, some troops should monitor the airborne enemy and block his expansion until after the ground attack has been smashed; then the airborne enemy may be annihilated. After the enemy has been wiped out, attention should be turned to guarding against an enemy firepower attack.

7) Battle To Hold Fast to Tunnels

When a unit encounters continuous attack by superior forces and sustains excessive losses; when the enemy is already in control of most of its ground positions and higher headquarters finds it difficult to send assistance; and when continued defense of ground positions would not be to our advantage, on instruction from higher headquarters the unit should shift to tunnel combat. In a situation in which contact with higher headquarters has been broken and there is danger that troops will be vanquished and territory lost, units may shift into tunnels in accordance with previously drawn up combat plans and then quickly devise means of reporting to higher headquarters.

Before transferring to tunnels, firepower should be used to inflict casualties on the enemy who is being held off in deadlock, and designated weapons should occupy defenses at the mouths of the tunnels to cover the entrance of units one after another into the tunnels. After transferring to the tunnels, thorough organization should be done to convoy the wounded and to transport ammunition first, and then the unit should be commanded to move along through trenches and communications trenches to enter the tunnels, those going first moving the farthest inside and those going last being closest to the mouth of the tunnels, with heavy weapons going first and infantry units going next. Unit commanders should move with the protecting unit so as to be able to observe the situation and issue commands promptly and rigorously guard against the enemy following.

After transferring into the tunnels, commanders should immediately post observers and guards, and they should designate the weapons and the combat teams that are to defend the mouth of the tunnels. Next, there should be an immediate reorganization, determination of organization for combat, drawing up of deployment locations for each unit and its mission, forming up all personnel into tunnel defense teams, teams to go out and attack, reserve teams, rescue and replenishing teams and rush repair and danger elimination teams, appointment of those who are to be in charge and spelling out their

duties. Unified command should be established, the division of labor among cadres spelled out, Party and League organizations put on a sound footing, the model leadership role of Party and League members brought into play, political and ideological work intensified, confidence in the inevitability of victory strengthened and all possible done to maintain contact with higher headquarters and friendly adjacent units. Food, ammunition and water should be conserved, the wounded taken care of and attention given to control in the tunnels in order to hold out for a long time.

Of greatest importance to holding out in the tunnels is combat at the mouth of the tunnels. With the assistance and cooperation of higher headquarters and friendly adjacent units, the fendui should use all means to fight against the enemy's destruction and blockade and staunchly defend the mouths of the tunnels. When the enemy tries to plug, demolish or spurt flames into our tunnel entrances, firepower and vigorous combat should be used to wipe him out. When tunnel mouths are damaged by the enemy, rush repairs should be organized at once and firepower should be used to control the damaged places. When the enemy uses chemical agents against us, we should use chemical protection equipment and materials available at hand to protect ourselves, and stricken personnel should be rescued at once. When the enemy constructs fortifications near the mouth of our tunnels and emplaces obstacles, advantage should be taken of favorable opportunities for using firepower or demolitions, or else higher headquarters artillery support should be requested to wipe them out. When the mouths of our tunnels are occupied by the enemy, vigorous combat actions should be used in a determined effort to take them back.

Units holding fast to tunnels should make full use of the cover of darkness, of inclement weather and of results achieved by artillery fire to send small combat teams to lie hidden at the mouths of tunnels and move secretly to launch surprise attacks against the enemy, to fight with the enemy outside the tunnels and to strike vigorously at the enemy and wear him down.

When higher headquarters launches a counterattack, the tunnel units should take the initiative to attack and give vigorous support. Before attacking, commanders should spell out the mission for subordinate personnel, should mobilize, and should clear obstacles away from the mouth of the tunnels. When they attack, units should suddenly rush out of the tunnels either at the instant that our artillery lifts fire or on signal to deliver a ferocious attack against the enemy's rear flanks and to act in concert with counterattacking units from higher headquarters to wipe out the enemy who is occupying ground positions and recover those positions.

2. Organization and Command of Defensive Warfare from Field Warfare Positions*

a. Organization for Combat

After receiving their mission, unit commanders must make comprehensive plans, direct attention to key points and complete defense preparations both quickly and thoroughly.

1) Understanding the Mission and Assessing the Situation

(a) Understanding the Mission. The most important things to understand are as follows: higher headquarters' combat intentions and mission; one's own unit's mission, combat organization, defense area, direction of main defense, strategic points and the duration of time that defense must be maintained; location and mission of friendly adjacent forces and militia, their contact with one's own unit and support at junction points.

(b) Assessing the Situation. Special attention should be given to assessing the intentions of enemy movements, his location and the time when he may reach our defense front; the number of troops that the enemy may throw against our defense front and the direction of main attack as well as approach routes, deployment area, area from which the attack may be launched and tactics that may be used; times and places when attacks with nuclear and chemical weapons might be made.

The military and political quality of the unit and of reinforcing units, state of readiness of personnel and weapons, strengths of commanders and of individual fendui and missions they are capable of undertaking, numbers of anti-tank weapons, availability of ammunition, provisions and other materials. This should be used as a basis for figuring out the relative strength in troops and weapons of both sides.

The mission, location and role of friendly adjacent forces as well as their effect on one's own unit's completion of its mission.

Terrain features in the combat area, status of roads and their effect on the movements of both sides, thereby making clear the sectors suited to enemy advance, deployment and carrying out the main attack as well as routes that may be used for envelopment; locations suitable for deployment of our forces and disposition of weapons, and strategic points to be defended; terrain favorable for wiping out the enemy and routes for movement in counterattacking the enemy.

The weather situation in the defense areas, the pattern of changes, and possible effects on the movements of both sides.

Battalion commanders should also ascertain the status of activities by local people's armed units and methods for contacting them and coordinating actions.

Unit commanders should reach a conclusion based on a comprehensive analysis and judgment of the situation from all angles. This conclusion should contain the following: enemy intentions to attack and the direction of main attack; the unit's direction of main defense and strategic defense points; troop deployments and the layout of positions.

Fendui commanders should use their understanding of the mission and their assessment of the situation as a basis for the rapid transmittal to the commanders of subordinate organic and attached units of the mission assigned by higher headquarters.

2) On-the-ground Reconnaissance and Making Decisions

(a) On-the-ground Reconnaissance. On-the-ground reconnaissance and emphasis on finding out the character of the terrain in the defense area, the status of roads and places of crucial importance to defense, the main direction in which the enemy may attack, terrain suited to his concealed approach and sectors for attack, for making deep thrusts and for envelopment, the specifically decided upon defense frontline, the direction of main defense, strategic defense sites and location of positions of individual fendui, the location of primary and reserve firing positions for major weapons, the locations of the firepower support system, of defenses to be built and of obstacles to be emplaced, and the location of the command (and observation) posts and of the ammunition depot.

(b) Making Decisions. The major ingredients in making decisions is the same as for strong position defense.

3) Handing Down of Oral Combat Orders and Organization of Coordination

(a) Handing Down of Oral Combat Orders. Once the commander's decisions have been approved by higher headquarters, they should be quickly passed down on the spot in the form of oral combat orders to commanders of subordinate organic and attached units. The method may be decided as circumstances dictate. They may either be handed down in a group setting or individually. Sometimes they may be spelled out in the course of the reconnaissance. Combat commands should be brief and to the point, accurate, easily understood by subordinates, and easily memorized and carried out. Matters that have already been clarified need not be repeated, but matters of special importance should be emphasized. The major ingredients are the same as for strong position defense.

(b) Organization of Coordination. Unit organization of coordination is usually done on the ground. Organization may be done separately or it may be done simultaneous with the handing down of oral combat commands. When there is ample time, unit commanders should assemble the commanders of subordinate organic and attached units for joint delineation of combat stages, to anticipate combat situations that might arise during each stage and to study fighting methods. With this as a basis, commanders should spell out for each fendui coordination for each situation. Usually the following are spelled out:

For the stage of assisting the guard fendui's combat and covering its withdrawal, the location and mission of the guard fendui as well as the time and route by which it is to withdraw should be made clear; assisting the guard fendui in battle and covering the combat movements of its withdrawing units.

For the preparatory stage in defending against enemy firepower, the times of concealment and protection methods should be spelled out for each unit as well as the mission of observer personnel and of assigned weapons, the actions of all fendui when preventing the enemy from opening a route and following an enemy firepower attack the time for occupying positions and mutual coordination methods.

For the stage of resisting tank and infantry assaults, the times when the enemy launches an attack, overcomes obstacles and goes through a route to attack our frontlines, the mission and firing methods of anti-tank weapons and artillery (including mortars), and the movements and methods of coordination of other units should be spelled out.

For the stage of wiping out the invading enemy, the movements of each unit and methods of coordination should be spelled out for sealing off breeches, for stopping the enemy from extending, for using firepower to wipe out the invading enemy and for carrying out a counterattack.

For the stage of smashing the enemy's envelopment, the movements of each unit and methods of mutual coordination should be spelled out for when there is a threat of being encircled, for when some positions have been encircled, and for when all positions have been encircled. In addition, means of assisting an encircled friendly adjacent unit should be spelled out.

Clarification of the methods of coordinating movements at all stages of combat with friendly adjacent units and with participating militia, as well as with weapons fendui assigned by higher headquarters to the unit's positions.

In the coordination of signals (and signs), signals calling for artillery fire, a shift in firepower and cease fire should be spelled out, as should signals for reporting an enemy attack with nuclear weapons and chemical weapons, signals for reporting enemy air and artillery attacks, methods for identifying our own aircraft and for marking the defense front, methods for designating targets for anti-tank weapons, combat alert signals, and signs for nighttime identification.

4) Organization of Engineering Work

Before work begins, a work plan should be formulated first that is based on the number and kinds of fortifications to be built and obstacles to be emplaced, the work capabilities of the unit and time limits on completion of defense preparations. The main ingredients of these plans should be as follows: the projects, the number of projects and the required workforce; the order of construction, planned rate of progress and required time; and fendui to be responsible for the work and work methods to be used. Then specifics of the plan should be made clear to each fendui.

While the work is in progress, commanders should become closely involved in checking and providing guidance, promptly discovering and solving problems. The main components of checking and guidance are as follows: the location of fortifications, firing direction, dimensions, and strength; location of obstacles, the number and quality; work organization and methods as well as the status of completion; use of materials and its availability; project camouflage and work discipline. When in direct contact with the enemy, it will be necessary to continue to fight while building the fortifications.

5) Organization of Various Kinds of Support

(a) Combat Support

Organization of Observation and Reporting Duties. The location and duties, means of reporting situations and alert signals of observers should be spelled out.

Organization of Guards. The location, duties, means of communication and support of guards as well as their handling of various situations should be spelled out. Fendui and weapons to be assigned for guard functions should be designated, and a good job done of preparing to resist sudden enemy assaults.

Organization of Defense Against Air Raids and Attacks By Nuclear and Chemical Weapons. Aerial defense measures should be spelled out, and aerial security should be organized if circumstances warrant. Protective equipment should be made ready; camouflage and defense measures should be spelled out; full use should be made of the role of chemical detection teams and three defenses cadres; and a good job should be done in mass protection work.

(b) Communications Support. The make-up of radio networks, wave lengths to be used, communications regulations and times and security measures should be spelled out. Provisions should be made for both wired communications and rudimentary communications together with pertinent regulations.

(c) Logistics Support

The make-up and location of the ammunition depot (or team), amounts of ammunition and combat equipment kept in each fendui, requirements for the conservation of ammunition and materials and methods of replenishment should be made clear. The organization and location, as well as the duties of the rescue post (or team), and self-help and mutual help actions should be spelled out. The organization and location of the provisions depot (or team), amounts of food and water on hand, messing of personnel and methods of sending cooked food to the front should be spelled out.

6) Inspecting and Guiding the Unit in Completion of Defense Preparations

In order to complete defense preparations on time, commanders should inspect and guide their units from time to time. They should particularly check on the degree of understanding of the enemy situation, their mission, matters for coordination and support measures; status of firing preparations for all weapons; the status of the building of fortifications, emplacement of obstacles and camouflaging; state of readiness in the organization of communications; status of support for the flanks and junction points; vigilance of guard personnel and the degree of their familiarity with reporting signals; state of readiness of weapons, equipment, fuel, combat equipment, food and fodder and medical support; and ideological state of personnel in each fendui and their confidence in fulfillment of the mission. Detailed inspection must be made of fendui in the main defense direction and at strategic defense points. When questions and problems are uncovered in the inspection process, they should be solved and corrected at once.

b. Going Into Battle

1) Vigorous Attacks On the Enemy

When not in direct contact with the enemy, on instructions from higher headquarters, commanders should use the cover of darkness and other favorable conditions to send out teams to coordinate closely with the militia in the selection of favorable terrain ahead of positions or on the flanks that the enemy will have to traverse from which the enemy may be monitored and ambushed, and from which surprise attacks may be launched against small groups of reconnoitering enemies, with prisoners taken to find out the enemy situation. Alternatively, mines and satchel charges may be buried on the routes of enemy approach and bridges may be cut and roads blown up to block and destroy tanks and armored combat vehicles and to delay and wear down the enemy, protecting the fendui while it prepares to resist the enemy's attack.

When in direct contact with the enemy, vigorous rifle and artillery sniper firing should be carried out to tire, wear down and inflict casualties on the enemy continuously. Alternatively, teams may be sent out on instructions from higher headquarters to reconnoiter the enemy front, flanks and gaps in the terrain and to make ambushes, or the cover of darkness and inclement weather may be used to make surprise attacks on enemy exposed and weak spots to kill some of the enemy and then withdraw quickly.

When a unit is charged with supporting combat from combat guard positions, commanders should quickly apprise themselves of the situation and take the initiative in using troops and firepower to support combat by guard fendui. When guard fendui have completed their mission and are ordered to withdraw, commanders should take the initiative in organizing firepower to bombard the enemy and protect the guard fendui's disengagement from contact with the enemy. Frontline units should also be ordered to seal off routes through the frontline obstacles at the right time to prevent the enemy's rear guard from penetrating our defenses.

While supporting the battle of combat guard positions, care should be taken to conceal defensive intentions, not revealing the defense area's firepower support and troops dispositions. In addition, situations that have been observed should be reported to higher headquarters at once, and every fendui should be prodded to make combat preparations in light of enemy movements.

2) Preparations To Counter Enemy Firepower

Fendui commanders should closely watch enemy movements, and they should be adept at figuring out quickly from situation reports from higher headquarters and from indications of enemy movements in front of them enemy plans to use aerial or artillery softening up, or signs of impending attack with nuclear and chemical weapons. They should transmit a warning signal before they do anything else, seek to protect themselves before the enemy acts and defend themselves against casualties from enemy firepower.

When the enemy uses aerial and artillery softening up, fendui commanders should act in accordance with enemy emphasis on the use of chemical attack during aerial and artillery softening up to order observers and duty personnel

to don protective gear and to monitor enemy movements. Remaining troops should enter shelters and tunnel caves; and chemical detection teams and NBC defense cadres should be ordered to carry out a chemical reconnaissance. Anti-aircraft machine guns should be directed to coordinate with anti-aircraft weapons from higher headquarters in attacking low-flying aircraft. Commanders should keep themselves informed at all times about their unit's casualties, damage to weapons and destruction of defense facilities. They should ascertain the enemy's intentions and the direction of main attack. They should urge all fendui to make full preparations to resist the enemy's attack.

When warning of impending nuclear attack is received, commanders should direct observers to continue to observe (and to take cover on the spot when a nuclear blast occurs). Other personnel should take cover quickly. After the shock wave, a quick inspection of damage to the unit should be made, and the chemical detection team or the NBC defense cadres should be directed to ascertain the extent of contamination and to make a report at once to higher headquarters. Every fendui should be ordered to make rush repairs on fortifications, to look after the wounded, to organize firepower, to decontaminate and to prepare for battle.

Depending on the situation, battalion commanders should move troops and weapons (particularly anti-tank weapons) into the positions that sustained nuclear attack; they should replace fendui that have taken serious casualties, occupy positions in front of or behind breaches made by the nuclear attack, work with fendui on both flanks to built frontline defenses or a behind-the-front resistance line to resist the enemy assault or to slow the enemy's movements in order to gain time and set the stage for higher headquarters to maneuver reserves to seal the breach made by the nuclear attack.

When a chemical attack occurs, fendui commanders should direct observers to don protective gear and continue to observe. The unit should enter fortifications quickly or don its protective equipment on the spot and continue to defend. The chemical detection teams and NBC defense cadres should be directed to conduct chemical reconnaissance, and the unit should be organized to conduct decontamination and to carry out self rescue and mutual rescue. Damage sustained by the unit and the direction of movement of the toxic cloud should be reported to higher headquarters.

When the enemy artillery preparation is conducted simultaneous with efforts to open a route through our obstacles, the unit commander should ascertain at once the location and the number of troops being used by the enemy to open the route. They should command assigned weapons or anti-tank sections to make a concealed occupation of temporary firing positions or network positions in front of the frontline to attack the enemy who is trying to open a route and to destroy the enemy's minesweeping tanks. When higher headquarters provides firepower support to wipe out the enemy who is trying to open a route, the infantry should be assigned the task of pointing out targets at once. After the enemy has opened a route through the obstacles, firepower should be organized to close it and both engineers and some troops should be order to advance quickly under artillery fire protection to set up obstacles hastily to close the route.

Fendui commanders should make an accurate assessment on the basis of the enemy artillery preparation of shifts in the enemy's firepower, and they should command their units at the right time to take up their positions, to rush repairs on defenses and prepare to resist the enemy attack. However, they should not be deceived by fake shifts in enemy firepower.

3) Resisting Enemy Attack

When enemy tanks and armored combat vehicles launch an attack under cover of armed helicopters, unit commanders should further ascertain the direction of the enemy's main attack, organize air defenses to attack the enemy's armed helicopters, command fendui and weapons to take up positions, command anti-tank missiles, tanks, 85mm cannons, recoilless guns and RPGs to fire, and use a concentrated and ferocious fire attack to destroy first the enemy tanks that have moved out in the main direction of attack and then to shift their firepower to destroy other armored vehicles one by one. When the infantry alights from vehicles, mortars, rifles and machine guns should be ordered to take advantage of the enemy's not yet having spread out or his disarray, using firepower to kill and wound the infantry, cut off contact between the infantry and the tanks, and chop up the enemy's battle formations. Anti-tank weapon and machine gun hidden firing points set up in front of the frontline should suddenly fire at close range, attacking the enemy's tanks and armored vehicles and wiping out the enemy infantry.

When enemy tanks and armored vehicles approach the obstacles and move through them, frontline fendui should be commanded to detonate anti-tank trench explosives and to detonate clusters of controlled anti-tank mines. Tank and anti-tank weapons should be ordered to concentrate their firepower first on destroying the enemy's lead tanks and minesweeping tanks to block the route through the obstacles. Next, anti-tank weapons and teams lying in ambush to strike tanks in front of the frontline should be commanded to use temporary firing positions, forward positions or network positions to take advantage of the reduced speed, the bunched formations and the perpendicular movement to attack at distant and close range to knock out the enemy's tanks and armored vehicles. When enemy tanks guide infantry in approaching obstacles and going through a passage, mortars, rifles and machine guns should be order to concentrate their firepower to skill and wound the enemy infantry and to cut off contact between the infantry and the tanks. Frontline anti-tank weapons should be ordered to destroy the enemy tanks and to close the passageway. Anti-tank missiles should attack and destroy follow-on tanks and armored vehicles. When necessary, a smokescreen should be laid to confuse the enemy and to destroy his equipment and kill his infantry in the obstacle zone.

When the enemy tanks and armored vehicles go through the passageway and approach our frontlines, the frontline anti-tank weapons should be commanded to use fortifications and favorable terrain to bring accurate and fatiguing firepower to bear to wipe them out. Tanks and anti-tank missiles should be directed to destroy armor while it is passing through or following along. Nearby fendui should be commanded to use a combination of in-place strikes and moving strikes to cover each other and wipe out the enemy tanks and armored vehicles. When enemy tanks guiding infantry attack close to our frontlines, anti-tank weapons and anti-tank teams should be commanded to smash the enemy tanks. Mortars and heavy machine guns should be directed to use their

firepower to cut off contact between the tanks and the infantry and to kill and wound enemy infantry that is entering and approaching the passageway. Frontline fendui should be commanded to use their positions to wipe out the enemy infantry using firepower, hand grenades, and bayonets, and to fight back and forth with the enemy to repulse the enemy attacks resolutely.

When the enemy airdrops teams near our behind-the-lines defensive positions, aerial firing fendui should be commanded to wipe out the enemy in the air and while parachuting and landing. Once the enemy has landed and before he has consolidated his position, some second echelon troops supported by mortar fire should be used to wipe out the enemy quickly. Should a ground attacking enemy seriously threaten the unit's defenses, some troops should be assigned to keep an eye on the airborne enemy and to prevent him from spreading out; then after the ground attacking enemy's attack has been smashed, troops should turn to wiping out the airborne enemy.

When an enemy attacks friendly adjacent forces, the unit should be commanded to help the forces with firepower as needed. When necessary, some troops should be used to assist the adjacent forces.

After the enemy has been repulsed, observation should be intensified; redeployment should be done quickly; and the firepower support system should be revived. Anti-tank firepower support should be revived first; rush repairs should be made on fortifications; ammunition should be replenished; and the wounded should be rescued. Signs of enemy firepower attack should be spotted at once; fendui should be ordered to disperse in concealment at the right time; a thorough mobilization should be done; and preparations should be made to resist another enemy attack.

4) Annihilation of the Invading Enemy

When the enemy breaches our frontline, fendui near the breach point should be organized first to use their firepower to seal off the breach, and they should set up temporary obstacles to prevent the enemy's follow-on units from continuing to intrude. Tanks and anti-tank weapons should be commanded to concentrate on attacking tanks and armored vehicles near the breach. Rifles and machine guns should lay down dense fire to kill and wound the infantry; anti-tank missiles should be ordered to attack and destroy enemy follow-on tanks; mortars should be ordered to bombard enemy follow-on echelons; and troops and firepower in the direction of the sector that has been breached should resolutely prevent the enemy from fanning out and should seal off the breach. Units that have not been breached should resolutely defend their positions and use vigorous combat maneuvers to smash the enemy attack.

After enemy tanks and armored vehicles have overrun our positions, the unit should be commanded to seal off the breach to prevent the enemy from continuing to pour through. Tanks and anti-tank weapons should be commanded to use their positions to concentrate attacks from several directions on the intruding tanks and armored vehicles. Anti-tank teams should use favorable terrain within their defense positions to form a network in which they can maneuver in concealment and use fighting, demolitions and obstacles in combination to wipe out the enemy tanks and armored combat vehicles. When tanks and infantry break through our positions at the same time, the unit

should be commanded to hold fast to positions, to set up obstacles quickly in the route over which the enemy must travel, to concentrate anti-tank firepower to wipe out enemy tanks; to concentrate mortar, rifle and machine gun firepower to kill and wound the enemy infantry, to throw his battle formations into confusion, to cut off contact between the infantry and the tanks, and to wipe out the enemy one by one or to force the enemy into an unfavorable position setting the stage for a counterattack. When the enemy infantry breaks through, anti-tank firepower should be directed to concentrate firepower against tanks and armored vehicles in front of the frontline or to lay a smokescreen to confuse the tanks, thereby denying the enemy infantry firepower support. Then mortar, rifles and machine guns should concentrate firepower to annihilate the invading enemy.

When the enemy breaks through first echelon positions, commanders should report the situation at once to higher headquarters. They should ask for firepower support and direct the frontline defending fendui to hold fast tenaciously to strategic defense points, to build a circular defense, to resist enemy encircling attacks and to take decisive actions to prevent the enemy from making deep thrusts and an encirclement.

When the invading enemy meets with our heavy attack and is unable to move, and when his formations are in disarray and he is unable to consolidate and has lost support, the opportunity should be seized and a firm decision made to use the second echelon to counterattack, higher headquarters being notified. When a counterattack is being organized, the following should be spelled out for the fendui participating in it: targets, direction, route and deployment area for the counterattack; the time for the beginning of the counterattack and signals to be used; and artillery firepower support and means of coordination among individual fendui. When counterattacking, firepower should be assembled to suppress the invading enemy and to bombard the enemy's follow-on echelons; tanks and anti-tank weapons should concentrate their firepower on destroying armor that has broken through positions; fendui in the direction of the counterattack should use their firepower to plug breaches, and they should vigorously coordinate with counterattacking fendui to wipe out the invading enemy. Counterattacking fendui should operate under protection of firepower and smokescreens and in conjunction with other units, employing trenches, communications trenches and network positions or favorable terrain, small groups traveling by many routes and using concealment to close rapidly with the enemy and ferociously stab from the enemy's flanks into his massed tanks to wipe them out one by one to regain positions and stabilize defense.

After a successful counterattack, redeployment should be carried out quickly and commanders should calmly but firmly await the arrival in ambush zones of most of the enemy forces before giving the single signal to open fire and use concentrated crossfire at close quarters to wipe out enemy tanks and armor, to annihilate enemy infantry and to go on the mop up stragglers and regain the positions.

When a substantial number of enemy troops makes a breakthrough, the unit should be commanded to hold fast to positions and vigorous combat movements should be used to stop the enemy from expanding in depth. At the same time, contact should be made quickly with higher headquarters and preparations made to counterattack and wipe out the invading enemy in conjunction with higher headquarters.

When the positions of friendly adjacent forces have been overrun by the enemy, depending on circumstances either firepower support may be provided the friendly forces or some troops may be sent out to counterattack the enemy's flanks and to work together with the friendly adjacent forces to wipe out the invading enemy.

5) Smashing Enemy Encirclement

When threatened with enemy encirclement, the unit commander should promptly ascertain enemy intentions and direct the fendui in the direction of the threat to occupy or defend strategic points and rapidly emplace obstacles or to use clusters of mines and satchel charges set out in advance to control routes through the flanks or the rear of positions and gaps in the terrain thereby restricting enemy movements and envelopment. He should move troops and firepower to the threatened direction at the proper time and use various methods to blow up the enemy's tanks and armor, to wipe out the enemy infantry, and to coordinate with the threatened unit to smash enemy encirclement plans.

When some positions have been encircled, commanders should devise means of maintaining contact with the encircled units and direct a prompt redeployment by the encircled unit, relying on strategic positions and the use of fortifications to form a circular defense, and on the use of ferocious firepower and vigorous movements to smash enemy tanks, kill and wound infantry, and battle back and forth with the enemy to hold fast steadfastly to the positions. At the same time, firepower should be organized to support battle by the surrounded unit. When necessary, some troops should be organized to counterattack the enemy's flanks and to coordinate with the encircled fendui to break out of the enemy encirclement.

When fendui are encircled, commanders should firmly but calmly direct battle, devise means of maintaining contact with higher headquarters and with adjacent friendly units, rapidly redeploy, concentrate main forces to hold fast to strategic points, form a circular defense primarily for the purpose of hitting tanks, and rapidly emplace obstacles to check the enemy's movements and deployment. They should organize a central command for the surrounded fendui and personnel under a different system of command; they should strengthen political and ideological work, mobilize for combat, enhance morale, carry forward a spirit of bold, indomitable and unitary combat, vigorously attack the enemy, struggle back and forth with the enemy and hold fast resolutely to positions, smashing the enemy's encirclement with assistance from higher headquarters and adjacent friendly units.

After a unit has completed its defense mission and both the situation and the mission require its withdrawal from battle, it should withdraw from battle on orders from higher headquarters. When this happens, it should organize thoroughly, move covertly, rapidly disengage from the enemy and take up a new combat mission.

Before withdrawing from combat, it should maintain strict secrecy, should maintain its former activities and pattern of communications, and covertly send the wounded and important materials and equipment to the rear. It should

designate the time, the order and the route for withdrawal, the assembly area and both communications methods and camouflage measures. It should spell out coordination actions, signals for withdrawal, and measures to support the flanks and junction points. It should organize a covering fendui and designated its mission.

The order for withdrawal from combat is usually civilian war service teams followed by anti-tank missile fendui, mortar fendui, heavy machine gun fendui, anti-aircraft machine gun fendui, recoilless gun fendui, infantry fendui, and covering fendui. Battalion and company commanders should have one person move with the covering fendui.

The assembly area is usually selected in a concealed location behind the defense area and beyond the effective range of enemy tank and armored combat vehicle firepower. In the assembly area, a check of personnel and weapons should be conducted and entry made quickly into designated assembly areas.

When withdrawing from combat, withdrawal from positions should take advantage of the cover of darkness or poor visibility conditions. Alternatively, withdrawal from combat may be done under cover of a smokescreen or firepower through protective terrain. During this action, land mines should be laid on routes and in sectors that the enemy must traverse should he pursue.

The number of troops in a covering fendui is usually one reinforced infantry platoon for a company. For a battalion, the number depends on the circumstances. The covering fendui should use firm and indomitable movements to cover units' smooth withdrawal from combat. After completing the covering mission, they should regroup by themselves.

3. Organization and Command of Hasty Defense*

When a unit has to defend hastily, commanders should firmly but calmly and quickly yet resolutely make decisions, directing units to occupy favorable terrain or to fortify already held positions. They should post observers, guards and assigned weapons, designate the disposition of covering fendui' troops and weapons, complete firepower support as quickly as possible, particularly the fire support system for hitting tanks and airborne troops. They should also quickly emplace anti-tank obstacles at key points and make use of all available time to rush construction of fortifications using successive wall building methods. They should complete as quickly as possible initial preparations to withstand enemy attack. When the enemy attacks, even though they may only have rudimentary defense works, they should use the terrain to the full in a firm and tenacious way to smash the first assault by enemy tanks and armor; then they should redeploy troops and the firepower support system step by step and strengthen defense works and obstacles step by step in an effort to perfect the defense system step by step in a short period of time.

a. Organization for Combat

After the unit has received its assignment, the commander should act in accordance with the intentions of higher headquarters, the enemy situation, the terrain, the unit's mission and the weather to make full use of subjective

activity, devote attention to key points, simplify organizational procedures and strive to complete combat preparations within the shortest period of time.

1) Prompt Decision Making

After a unit receives its mission, the commander should acquaint himself with the mission, make some rough decisions and arrive at conclusions on the basis of the situation that is already known. He should use this as a basis for promptly and firmly reaching decisions.

The data on which decision making is based are: the enemy's intention to attack; the mission and combat intentions of higher headquarters; the mission, position and role of the unit; the mission of friendly adjacent units and their relationship to the unit's completion of its mission; characteristics of the terrain and the weather in the defense area and its affect on both combatants.

Ingredients in making decisions include the direction of main defense and strategic defense points; deployment of troops; location of positions and the mission of organic and attached subordinate fendui; and time limits on completion of combat preparations.

2) Occupation of Positions and Handing Down of Oral Combat Commands

After the commander has made his decisions, the unit should be directed to occupy its positions quickly and observers and guards should be posted at once. The unit should be organized to rush the building of fortifications, and each fendui should have its defense mission spelled out in turn.

(a) Occupation of Positions and Handing Down of Oral Orders When in Direct Contact with the Enemy.

When positions are occupied while in direct contact with the enemy, usually three methods are used as follows:

Deployment on the ground and occupation of positions when in direct contact with the enemy. The fendui commander should make full use of the existing situation to organize firepower cover and direct each fendui to deploy on the ground, relying on existing fortifications or favorable terrain to withstand enemy attack. When deploying, usually no substantial changes are made in previous dispositions; readjustments may be made in the course of battle.

Taking of favorable terrain and occupying positions when the terrain occupied is not suited to the organization of defense. All fendui should be quickly organized under cover of firepower or a smokescreen, and frontal containment or flank attack may be used to take the important terrain needed to organize defense. Before the attack, the attack routes, targets of attack and sectors occupied should be spelled out for each fendui. During combat, positions should be occupied as fighting continues and troops and weapons should be arrayed in turn to organize defense.

Withdrawal to favorable terrain and occupation of positions. When the position is not favorable and no favorable terrain has been taken, on instructions from

higher headquarters, the unit should withdraw to favorable terrain to take up defense. When withdrawing, the covering fendui should be posted and each fendui should be assigned its order of withdrawal, the route and location to occupy. Under cover of firepower or a smokescreen, units should take turns in withdrawing to the designated area. Commanders should direct fendui to occupy positions rapidly on the basis of the enemy situation and the terrain, to deploy troops and weapons and to organize defense.

When in direct contact with the enemy, when unit commanders issue oral combat orders, usually clarification is made while positions are being occupied. This consists of the following: transmittal of orders from higher headquarters; clarification of the defense area of each fendui and each weapons fendui, the key sectors to be held, the main direction of defense, and pertinent coordination matters. These continue to be fleshed out during battle.

(b) Occupation of Positions and Handing Down of Oral Combat Commands When Not in Direct Contact with the Enemy.

After a unit receives its mission on the ground, commanders should use their understanding of the mission, the assessment of the situation and decisions made as a basis for posting observers and guards and for assembling all fendui commanders to carry out a general on-the-ground reconnaissance, to designate the defense area and mission of each fendui and weapons fendui, to direct each fendui to occupy positions and rapidly deploy forces and weapons and hurry to build fortifications. If the mission is received while in the assembly area or while on the march, commanders should study the terrain on a map before starting out or while on the way and rough out the defense area and mission of each fendui, leading the unit to the designated location at the time specified by higher headquarters.

When not in direct contact with the enemy, usually the mission is defined while reconnaissance is underway. It should be brief and to the point and accurate; simultaneous with issuance of oral commands pertinent coordination particulars should be spelled out. This includes the following:

--Enemy military unit designations, troop strength, intentions, current location and possible time of arrival at our frontal positions.

--The mission of higher headquarters and of the unit.

--The mission of friendly adjacent units, means of coordinating with them and support at junction points.

--The make-up of all fendui, defense zones, strategic points to be defended, firing zones, concentrated firing sectors and methods of maneuvering during all combat stages.

--Mission of attached fendui, their weapons firing positions, firing sectors, concentrated firing sectors, and means of assisting each fendui in combat

--Time limits on completion of defense preparations.

--Signals.

--Location of commander and deputy

3) Rush construction of fortifications and rapid emplacement of obstacles.

After the unit occupies its positions, it should make full use of and improve the terrain, and use all available time to rush the building of fortifications. The order in which this should be done should be the frontline first and in-depth later; individual shelters and weapons firing positions first with improvements being made subsequently during combat lulls. If there are no defenses that can be used while under threat of enemy fire, firepower cover should be organized and construction carried out under fire, building as fighting goes on with constant strengthening during battle.

Rapid emplacement of obstacles should be done as much as possible and in accordance with instructions from higher headquarters, the terrain being used and improved under protection of firepower and smokescreens or poor visibility. In sectors suited to enemy movement, anti-tank and anti-personnel obstacles should be emplaced quickly in key areas. Later on, they may be strengthened as circumstances permit.

When building defenses hurriedly and emplacing obstacles, commanders should make certain to prod and check, correcting problems when they are found. Defenses or obstacles located in the wrong places should be re-arranged no matter when they are found. In addition, battlefield observation should be intensified so that should the enemy suddenly be found to be about to launch an attack, units may be sent into battle at once.

b. Going into Battle

During battle, commanders must intensify battlefield observation, be accurately informed about the situation, quickly ascertain the intentions of enemy movements, act promptly at their own discretion, move troops at weapons at the right times, make full use of the power of anti-tank weapons and closely combine fighting, demolition, and obstacles to smash the enemy attack, hold fast to positions, and complete the defense mission.

1) Preparations To Withstand Enemy Firepower

The actions described in 'Defensive Warfare from Field Combat Positions" may be consulted in this regard.

2) Resisting the Initial Attack of Tanks and Armored Vehicles

Fendui commanders should have an accurate and up-to-the minute understanding of the situation, be adept at concentrating troops and firepower, be skilled in the use of terrain and be able to use various tactics to attack and destroy attacking tanks and armored vehicles, smashing the enemy's first assault.

(a) Setting Up of Ambushes in Front of Frontline Positions; Rapid Emplacement of Obstacles; Hitting Approaching Tanks and Armored Combat Vehicles

When enemy tanks and armored combat vehicles approach our positions under cover of firepower, commanders should direct teams lying in ambush in front of

the frontline positions to intensify their observation, make sure of their concealment and wait until they are within the effective range of our anti-tank weapons so as to be able to bring to bear sudden and accurate firepower to wipe out the enemy tanks and armored combat vehicles. Next, they should take turns returning to our own positions under cover of firepower. In addition, the unit should be directed to play land mines along roads and on terrain that the enemy must traverse, and higher headquarters rocket minelaying vehicles should be requested to lay mines quickly to obstruct and blow up enemy tanks and armored vehicles to slow the enemy's movements.

(b) Concentration of Troops and Firepower To Hit Attacking Enemy Tanks and Armored Combat Vehicles

When enemy tanks and armored combat vehicles come within the effective range of our anti-tank weapons, firepower should be concentrated to wipe out first those enemy tanks and armored combat vehicles that pose the greatest threat; then firepower should be shifted rapidly to destroy the others one by one. When enemy infantry is forced to alight from its vehicles, a ferocious firepower attack by artillery (or mortars), rifles and machine guns should be used to throw the enemy's combat formations into chaos, to cut off contact between the tanks and infantry and to wipe out the infantry.

When enemy tanks and infantry approach our frontline positions, commanders should command anti-tank weapons and tank attack teams to use favorable terrain and to act in close coordination to destroy the enemy's tanks and armored vehicles by using the tactics of hitting those that come close and waiting for changes to strike. Artillery (and mortars) should be used to bombard the enemy's follow-on echelon, and rifles, machine guns, hand grenades and bayonets should be used to wipe out the enemy infantry and resist the enemy assault.

When the enemy attack is blocked or when the enemy takes serious casualties and his formations are in disarray, presenting a situation that is favorable for us, commanders should command their units at the right time to make use of favorable terrain to advance under cover of firepower and smokescreens toward the enemy's flanks to carry out a sudden and close range attack from in front of positions to wipe out the enemy's tanks and kill and wound the enemy's infantry in a ferocious attack to produce quick results. Once the enemy has been repulsed, firepower should be organized at once for pursuit.

When enemy armed helicopters directly use firepower to support a ground attack, the unit should assign some of its rifles and machine guns to aerial firing in coordination with higher headquarters firepower to shoot them down.

3) Annihilation of an Intruding Enemy

(a) Holding Fast to Present Positions and Block the Enemy's Expansion in Depth

When the enemy intrudes into our position, commanders should quickly direct fendui in the vicinity of the breach to work from strategic points or from advantageous terrain to hold fast to their present positions and to halt enemy expansion. The remaining fendui should use accurate and ferocious firepower to plug the breach and rapidly set up anti-tank obstacles to block and destroy

the enemy tanks and armored combat vehicles. Artillery (and mortars) should bombard the enemy's follow-on echelons with ferocious firepower.

(b) Movement of Troops and Weapons To Blow Up Intruding Enemy Tanks and To Wipe Out the Infantry

When an intruding enemy comes up against our tenacious blocking action that slows his movement and impedes his forward advance, at the proper time commanders should direct behind the lines anti-tank weapons to use favorable terrain to carry out a rapid maneuver to attack and destroy tanks and armored combat vehicles from the flanks. The tank attack team should advance under firepower and smokescreen protection to take advantage of the blocking of enemy tanks by our obstacles, using defense works and terrain for concealed maneuver to blow up the enemy's tanks and armored combat vehicles by using explosives on the rear flank. At the same time, rifle and machine gun fire should be concentrated to cut off contact between the infantry and the tanks, to kill and wound large numbers of the enemy infantry and to throw the enemy's formations into disarray in order to create favorable conditions for a counterattack.

(c) Carrying Out of a Counterattack To Wipe Out an Intruding Enemy

When an intruding enemy sustains heavy casualties at our hands, suffers a failure of command and encounters disarray in his formations, commanders should decide at once to make timely use of reserves in carrying out a counterattack to wipe out the intruding enemy. Before counterattacking, a brief but ferocious firepower attack should be launched against the intruding enemy, and artillery should be directed (or requested) to bombard or suppress the enemy's follow-on echelons. The counterattacking units should use favorable terrain to close with the enemy under firepower or smokescreen protection, suddenly thrusting from the flanks into the enemy's massed tanks to use a combination of battle and demolitions to wipe out the enemy's tanks and armored combat vehicles one by one, to wipe out the enemy infantry and to take back lost positions.

4) Smashing of an Enemy Deep Thrust, Carving Up, Envelopment and Encirclement

When positions are carved up or encircled by the enemy, commanders should meet the attack calmly and command their unit to hold fast to strategic points or favorable terrain and take vigorous action to attack, wear down and contain the enemy in order to set the stage for a counterattack by higher headquarters.

(a) Preventing the Enemy from Making a Deep Thrust, Carving Up, Enveloping and Encircling

When the enemy resorts to the use of small forces to contain us frontally while his main forces make deep thrust through gaps in our defenses or on our flanks in and effort to carve up and envelop our positions, commanders should promptly ascertain the situation and strengthen control over gaps or the flanks. They should direct frontline fendui to use a small number of troops to hold off the frontally attacking enemy while maneuvering troops and weapons simultaneously in the direction of major threat from the enemy to occupy

favorable terrain and use a sudden and violent firepower attack to hit the enemy's lead tanks. They should also use results gained from the firing to emplace anti-tank obstacles rapidly. Alternatively, they should use previously buried mine clusters or satchel charges to control routes and gaps through the flanks and rear of our positions to halt the enemy's deep thrusts and envelopment.

(b) Maneuvering of Troops and Weapons To Strike a Deep Thrusting and Enveloping Enemy

When the enemy's main force thrusts through gaps into our positions or envelops our flanks with the intention of carving up our combat formations, commanders should direct all frontline units to use some of their troops to control strategic points or favorable terrain to resist the frontally attacking enemy while the remainder of the forces and weapons use terrain for concealed movement in the direction of the greatest enemy threat. The combat tactics of blocking the head, slicing through the waist and chopping off the rear should be used to throw the enemy's formations into disarray, and a close combination of attacking, blowing up and blocking should be used to destroy one by one the enemy's armor, to kill and wound the enemy's infantry and to wipe out or beat back the deep thrusting and enveloping enemy.

(c) Holding Fast to Strategic Positions and Coordinating with Higher Headquarters To Smash the Enemy's Carving Up and Encirclement

When a fendui is carved up and encircled by the enemy, commanders should resolutely and calmly direct combat, quickly redeploy, draw their troops into fortified strategic points or to favorable terrain to form a circular defense to defend against tanks primarily. They should organize a unified command for the encircled fendui with a different organizational system and for personnel, carry out a vigorous combat mobilization, enhance morale and use vigorous and stubborn actions to attack the enemy and halt his in-depth development of the offensive. When higher headquarters counterattacks, some troops should be left to hold positions while the remainder are organized to launch a ferocious attack against the enemy's rear flanks, acting in coordination with higher headquarters and friendly adjacent units to smash the enemy's carving up and encirclement and to retake the former defense positions.

5) Actions After Repulsing the Enemy Attack

After repulsing the enemy attack, unit commanders should use lulls in the fighting to redeploy rapidly, to revive and improve their firepower support system, to build more fortifications, to emplace more obstacles, to give first aid to the wounded, to draw and replenish ammunition and equipment, to carry out a brief and vigorous combat mobilization and to prepare to resist another enemy attack.

4. Organization and Command of Hasty Defense by Mechanized Infantry Companies (or Platoons)

a. Organization for Combat

The sequence of work in mechanized infantry company (or platoon) organization of makeshift defensive warfare is decided on the basis of the mission, the enemy situation and the time.

When shifting to the defensive when directly in contact with the enemy, a company (or platoon) first fortifies the positions it has taken. Under these circumstances, once a company (or platoon) commander has become acquainted with his mission, he rapidly makes decisions about defense. He may use brief commands issued via radio to subordinate unit and attached unit commanders by way of passing along the mission, or he may pass along the mission in separate chats. When the mission is handed down via radio, communications regulations must be rigorously followed. Later on, time permitting, subordinate units should be organized to conduct an on-the-ground reconnaissance. During the on-the-ground reconnaissance, the commander revises his decisions, further clarifies the mission, readjusts deployments and hands down instructions on coordination of actions.

When shifting to the defensive when not directly in contact with the enemy, after a company (or platoon) commander has received his combat mission, he should first post observers and guards to keep a strict watch on the enemy, and make firm decisions on the basis of the enemy situation, the terrain and the mission. He should spell out for subordinate units the strategic defense positions and combat deployments; he should apportion duties, stipulate the principal matters requiring coordination, and decide on the location and mission of infantry combat vehicles (and armored personnel carriers). When he has been reinforced with tanks, he should designate the firing positions that the tanks should occupy and spell out the tanks' firing mission and their method of coordinating with the mechanized infantry. Next, he should direct subordinate fendui to occupy their positions quickly, to organize firepower and to make preparations within the shortest period of time to resist an enemy attack.

If a company (or platoon) receives a defense mission during combat and there is an emergency situation, it should make preparations while fighting and organize while fighting to withstand the enemy's first assault vigorously, tenaciously and decisively. In this connection, company (or platoon) commanders should first direct fendui to occupy designated positions. In addition, they should clarify the main direction for defense, strategic defense points and measures for supporting the flanks and junction points between units. Then, they should use lulls in combat to readjust their deployments and firepower support system, to build more fortifications and to emplace obstacles and gradually improve their defense system.

When company (or platoon) commanders spell out the deployment and mission of infantry combat vehicles (and armored personnel carriers), they should relate the tactical and technical capabilities of infantry combat verhicles (and armored personnel carriers) and the principles for using them to the mission, the enemy situation and the terrain, and they should focus on resistance to

the enemy's first assault, deploying on concealed terrain suited to control of the main defense direction and the flanks.

(a) Resolute Holding Out Against the Enemy's First Assault

When the enemy carries out a softening up using air power and artillery, all personnel should shelter themselves on favorable terrain such as ditches, ridges, holes, hummocks and folds in the terrain, except for observers, assigned weapons operators, infantry combat vehicle (or armored personnel carrier) drivers, gunners (and machine gunners), who should remain in the positions. Company (and platoon) commander inside the command vehicles (or in a favorable location near the command vehicle) should organize the firing of air defense missiles (or the anti-aircraft machine guns aboard the armored personnel carriers) against low-flying aircraft, and they should personally inspect the damage done to positions by enemy firepower to ascertain the enemy's attack intentions. When the enemy's artillery shifts, infantry fighting vehicles and attached tanks should be directed at the proper time to fire from temporary firing positions at enemy tanks entering at maximum range. If some weapons are wiped out by enemy firepower, the company commander should immediately move the weapons or issue supplementary firing missions to nearby weapons to restore the firepower support system. He should also command fendui at the proper time to occupy positions rapidly and prepare to resist the enemy's attack.

When the enemy launches the attack, commanders should promptly ascertain the direction of the enemy's main attack and issue timely commands to infantry combat vehicles, tanks and the various kinds of anti-tank weapons to concentrate their firepower against enemy tanks and armored combat vehicles that pose the greatest threat to us. Then, they should shift firepower to other enemy armored targets to destroy them one by one. Infantry weapons should fire accurately and ferociously to cut off contact between the enemy infantry and tanks and to throw his combat formations into disarray. They should move firepower from time to time and use flexible tactics to coordinate all combat actions to cause huge casualties, to wear down the enemy and to smash resolutely the enemy's first assault to preserve the stability of their own defense.

2) Halting and Annihilating an Enveloping and Encircling Enemy

When it is discovered that the enemy intends to use gaps in our defenses or an exposed flank to carry out an envelopment and encirclement, company (and platoon) commanders should firmly but calmly direct combat, directing mortars (or artillery) to slow down the enveloping and encircling enemy on the one hand, and commanding fendui on the flanks (including infantry combat vehicles and the weapons carried by armored personnel carriers), on the other hand, to use flanking fire to wipe out the enemy. They should ask higher headquarters to have the artillery bombard enemy follow-on echelons to smash the enemy's envelopment and encirclement plans.

When surrounded by the enemy, commanders should make firm decisions, should rapidly readjust deployments and organize firepower, and should concentrate troops to hold fast to strategic positions using accurate and ferocious firepower to stop the enemy from pressing against and carving up our combat

formations and use resolute combat actions to contain and disperse the enemy's troops to create favorable conditions for main forces to wipe out the enemy.

3) Constantly Strengthen and Improve Defense

After smashing the enemy's first assault, company (and platoon) commanders should report at once to higher headquarters the enemy situation in front of them, their own situation and their decisions, and they should keep the battlefield under constant observation. They should act in accordance with the situation and instructions from higher headquarters to readjust combat deployments, change the deployment positions of infantry combat vehicles (and armored personnel carriers), hand down pertinent combat missions to subordinate fendui, provide supplemental instructions for the firepower support system and for the coordination of actions, build more fortifications, emplace more obstacles, replenish ammunition, send the wounded to the rear and rapidly complete preparations to resist the enemy's additional assaults.

5. Features of the Organization and Command of Nighttime Defensive Warfare*

1) Nighttime Organization of Defenses. When performing on-the-spot reconnaissance, the following should be made clear: directions and stretches of terrain which the enemy can easily attack, surround, or penetrate; areas which enemy tanks can draw close to in a concealed manner and then deploy, or positions for launching an attack which the infantry can occupy; ascertaining our main defensive direction, front, and vital points; locations of all fendui and weapon firing positions; and locations for constructing fortifications and emplacing obstacles.

Giving Oral Combat Orders and Organizing Coordination. Emphasis should be given to combatting enemy night vision and illumination devices; positioning and quantities of audio and illumination equipment, and flares; methods to control lights, fires, and noises.

Combat Support. Emphasis should be given to organizing illumination support. Based on the support plans of higher levels and the quantities of illumination support equipment, missions should be made clear in terms of the number of artillery pieces used for illumination; formation, deployment, and tasks of illumination posts; and timing, methods, and targets for firing illumination rounds. Signals support should pay attention to determining signalling measures, liaison methods, signals used, and visual liaison methods for both before and after combat begins.

Inspecting Defense Preparations. This should stress inspection and determining whether measures for combatting enemy night vision and illumination devices are viable; checking into the night-fire preparations for all types of weapons; making sure everyone is familiar with signals and the bearings of night landmarks. Problems should be solved as soon as they are discovered.

2) Shifting from Daytime to Nighttime Defense. This should be based on directions from higher levels and the daytime defensive combat situation. The enemy's plans for nighttime offensives whould be determined and combat plans should be made clear. Deployment should be rapidly readjusted and defensive preparations should be completed before darkness sets in.

When orders are passed down for resupply or to organize coordination, the following should be made clear: readjustments of weapon positioning for all fendui, along with their missions and support of combat in the security zones; protection of withdrawal routes; measures to combat enemy night vision and illumination devices; timing and methods for our use of smoke and illumination; demarcating zones of fire and control for our main weapons; quantities and methods for emplacing audio and illumination devices and flares in areas where the enemy can easily draw near in a concealed manner.

3) Developing Activities in Front of the Position To Actively Attack the Enemy. To discover the enemy earlier and seize the initiative, we should make use of favorable conditions such as darkness to conduct small fendui activities in front of the position, assaulting and ambushing enemy reconnaissance, sneak attack, and obstacle removal groups. When the use by the enemy of night vision and illumination has been determined, when possible, fire can be organized to destroy them or a request can be made to higher levels.

4) Guarding Against Enemy Preparatory Fire. Commanders should promptly assess or discover the signs of enemy fire preparation, and quickly employ measures to protect against casualties: After an enemy nuclear or chemical attack, reconnaissance should be conducted in the contaminated area and lighting used to delimit the area and passable routes. Under an enemy artillery attack, the commanders should use illumination to observe the battlefield and quickly determine the main direction of an enemy attack.

5) Countering an Enemy Assault. At this time, commanders should determine the enemy's intended main directions of attack and movement based on the succession of flares and colored illumination shells used by the enemy. When enemy tanks lead infantry onto and along an open path, commanders should quickly organize illumination and incendiary obstructions to bathe the assaulting enemy in light, and then use firepower to wipe out the enemy infantry and sever infantry-tank liaison. When enemy tanks use fire to support the infantry and begin to assault us and pass through an open path, commanders should have illumination posts and mortars with the mission of conducting illumination illuminate the enemy formations so that fierce infantry machine gun fire can seal off roads. At the appropriate time, demolition groups will set off explosions to kill large numbers of enemy infantry and repell the assault. When the enemy takes to vehicles to assault us, fendui should make full use of night fire equipment and illumination, open fire suddenly, and attack and destroy tanks and APCs. Anti-tank sections should utilize darkness to bravely carry out a sudden attack against the enemy flanks, thus helping the forward position holdfast fendui annihilate the attacking enemy.

6) Launching a Counterattack to Wipe Out an Intruding Enemy. When launching a counterattack, the counterattacking unit should be moved at the proper time into a standby location where it should prepare. It should use both raids and ambushes in launching a sudden and ferocious attack and work in coordination with defending fendui to wipe out in one fell swoop the enemy that has invaded our positions. When raids and ambushes cannot be carried out, firepower should be concentrated for a ferocious attack on the enemy to sever contacts between

the enemy infantry and tanks; smokescreens should be laid down to confuse the enemy's night sighting devices, and enemy illumination devices should be suppressed and wiped out. Counterattacking fendui should approach the enemy rapidly in concealment under cover of artillery fire and smokescreens, and the tactic of using small groups traveling by many routes should be used to wipe out the enemy one by one. When higher headquarters carries out a counterattack, the unit should lay a smokescreen at the proper time to confuse the enemy's night sighting devices, and it should use tracer bullets to mark targets for higher headquarters' artillery troops. In addition, all fendui should be directed to maneuver vigorously in coordination with the counterattack by higher headquarters. After the counterattack succeeds, the defense system should be restored quickly and the positions searched thoroughly to prevent remnant enemies from hiding in ambush, and units should be on guard against enemy firepower attacks.

When a unit shifts from nighttime to daytime defense, before daylight it should quickly return to daytime defense deployments, withdrawing the guards it had posted and the weapons that had been moved forward. It should make clear the firepower support system and methods for coordinating movements, build more fortifications, camouflage thoroughly and prepare to resist an enemy daylight offensive. It should also report the situation to higher headquarters.

6. Features of the Organization and Command of Urban Defensive Warfare

a. On-the-ground reconnaissance and making decisions. During on-the-ground reconnaissance, attention should be placed on finding out and solving the following: the main buildings, commanding heights and tunnel entrances that we must defend; the location and construction of main buildings in the defense zone and the width of streets, the location of tunnels and underground facilities and the extent to which they may be used; determination of key defense points, the location of buildings, tunnels and frontline positions that must be defended and the location of observation posts; troop dispositions and locations in which weapons are arrayed; status of tunnels and thoroughfares between major buildings; location of second echelon deployments and direction of counterattack; places to build fortifications and emplace obstacles as well as kinds and numbers; and actions to support points at which units adjoin and nighttime combat action plans.

b. When handing down oral combat commands and organizing coordination, emphasis should be placed on spelling out the following: the mission of each fendui; the buildings, street barricades and tunnels, and firing areas at which troops are to be concentrated for determined defense and concentrated firing sectors; the mission of attached fendui, weapons firing positions, firing areas and concentrated firing sectors; make-up of second echelon units, deployment location and direction of counterattack; time limits on completion of defense preparations and location of command; actions to be taken by all fendui and militia when the enemy break into streets, lanes and buildings and when blocking enemy expansion through the streets and lanes or when units are surrounded; actions of all fendui and the militia when defending cellars (or tunnels) and when coordinating with higher headquarters in a counterattack or in wiping out airborne enemies.

c. When organizing various kinds of support, emphasis should be placed on organizing aerial and ground observation, dividing up observation areas by streets and prominent buildings, and relying on the masses to gain an understanding of the enemy situation from many sources, being on guard against enemy surprise attacks, thoroughly organizing guards, and preventing the infiltration of enemy agents on reconnaissance and sabotage missions. When organizing communications support, full use should be made of the city telephone lines and communications facilities inside tunnels. These facilities should be used together with pyrotechnics, lights, sounds, semaphore, pull ropes, megaphones, hand carrying and such rudimentary communications methods and signals (or signs). When organizing logistical support, the amounts of materials and equipment that each fendui should keep on hand should be spelled out together with places for storing it, measures for taking care of it and methods of drawing replacements. In addition, firefighting devices should be made ready and a certain amount of engineering work equipment plus sand, bricks and stones, manufactured components and burlap (or grass) bags should be stored.

d. Precautions Against Enemy Firepower Softening Up. When the enemy launches a nuclear, chemical or biological warfare attack, observers should be directed to continue to carry out their duties inside fortifications, and the unit should quickly go into cellars or tunnels, close protective air-tight doors, and plug ventilating ports that lack filtering equipment. When necessary, they may don protective equipment. When the enemy uses air power and artillery in the softening up, observers and assigned weapons should be directed to fire at low-flying aircraft from high defense fortifications, and fendui should go quickly to shelter in cellars, tunnels or strong buildings.

e. Wiping Out an Attacking Enemy from Buildings and Street Barricade Defenses. When the enemy approaches street and lane intersections and buildings, anti-tank teams should make use of buildings lining streets and tunnels to await the approach of the enemy and then destroy him with firepower from rocket launchers or explosive devices. Every defending fendui should use lower floor defenses in buildings and street barricade defenses to lay down concentrated flanking fire and oblique fire to control areas of approach, killing and wounding large numbers of attacking enemy infantry who have dismounted from vehicles. Behind-the-lines fendui should make use of lower floor defenses in buildings to bring firepower to bear in supporting battle by fendui in the front line of defense.

When the enemy attacks buildings we are defending, defending fendui should be directed to take control of commanding heights and to hold fast from building entrances and windows. Fendui holding fast on lower floors should use ferocious firepower to wipe out enemy infantry approaching the building and resolutely prevent the enemy from entering the building. While holding fast, fendui on higher floors should use firepower to suppress and to destroy out weapons supporting the attack. They should also use intersecting fire to chop up the enemy's battle formations, coordinating both above and below and resolutely annihilating the enemy outside the buildings. If circumstances warrant, squads (or teams) may be directed to use tunnels or other passageways for concealed movement to the enemy's rear flanks from which they can work in close coordination with fendui inside buildings for a pincer attack to wipe out the attacking enemy.

When enemy armed helicopters provide direct support to attacking ground forces, anti-aircraft machine guns and infantry weapons on rooftops, balconies and on the upper floors of buildings should be directed to use intersecting flanking and oblique fire to fire on the enemy armed helicopters. Some recoilless guns and rocket launchers can take up defense positions atop buildings to attack the enemy armed helicopters. Units behind the frontlines should use their firepower to join in aerial firing.

f. Above and Below Ground in Combination To Wipe Out the Intruding Enemy. When the enemy invades our positions and fans out along streets and lanes, commanders should command fendui close to the breakthrough sector to use buildings, street barricades and tunnels to lay down an intersecting firepower network from submachine guns (or rifles) and machine guns at the breakthrough point. At the same time, troops and firepower should be moved quickly to the breakthrough sector to wipe out the enemy occupying the breach and to wall off the breach. Anti-tank teams should occupy favorable ground on both sides of streets and lanes and use their anti-tank weapons in coordination to wipe out the enemy tanks and armored combat vehicles that are fanning out along the streets and lanes. They should also lay land mines and emplace obstacles along streets that the enemy must traverse to prevent enemy envelopment of both flanks and development of an in-depth attack. Mortars should lay down a barrage, and fendui holding fast behind the frontline should use buildings, lower floor defenses, concealed pillboxes and pillboxes in the middle of streets, and street barricade defenses to lay down direct and flanking fire from all kinds of weapons to wipe out large numbers of the enemy. When necessary, buildings in neighboring streets may be demolished to block streets to prevent enemy deployment.

When the enemy penetrates buildings, units should be commanded to use combat equipment inside the buildings to hold fast to important rooms and hall entrances. It is particularly important to hold fast to the mouths of tunnels and to fight room by room to wipe out the intruding enemy. If the enemy has occupied the lower floors of a building and is fanning out toward the upper stories, fendui should be directed to hold fast stubbornly to stairway entrances and to middle and upper story rooms. They should also drill holes in floors in order to fire and throw grenades at the enemy. In addition, they should use firepower to control previously opened up and down passageways in the building to prevent their use by the enemy. If the situation is favorable for us, fendui holding fast on middle and upper story rooms may be directed to send squads or teams to the lower floors via staircases or other passageways in the building. Fendui holding fast in tunnels may move up out of tunnels to produce a pincer and completely wipe out the enemy within the building. Friendly adjacent fendui that are holding fast should use their firepower to control the exits and entries to buildings, to cut off the enemy's avenues of retreat, to block enemy reinforcements, and to assist battle inside buildings. If the enemy has occupied a building, fendui in neighboring buildings should be directed to use their firepower to blockade the doors, windows and approaches to the occupied building and to benefit from the enemy not yet having consolidated his position to direct echelon units to use courtyards, wall cavities and tunnels to launch a counterattack from the rear flanks or from both flanks against the enemy occupied building to capture positions.

g. Holding Fast to Important Buildings and Smashing Enemy Efforts To Cut Up and Encircle. Commanders should immediately ascertain the enemy's intentions and quickly move troops and firepower in the direction of greatest threat to us. They should quickly emplace obstacles in streets and lanes and simultaneously use their firepower to smash enemy intentions to cut up and encircle their units. When a fendui has been surrounded, forces should be concentrated to hold fast to strategic positions, and land mines should be laid and obstacles emplaced around important buildings to prevent the enemy's approach. If circumstances warrant, teams may be sent out through tunnels to maneuver to the enemy's rear flanks to conduct raids and ambushes against the enemy to contain him. When higher headquarters launches a counterattack, these teams should actively coordinate with higher headquarters to smash the enemy attempts at cutting up and encirclement.

h. When the enemy penetrates tunnels, commanders should calmly and adroitly direct their units to make use of combat equipment inside the tunnels in conjunction with obstacles such as blocked passageways, gates, pits and chevaux de frise, directing point blank fire and hand grenades to wipe out the invading enemy and to prevent him from fanning out along the tunnel. Circular tunnels, roundabout routes and intersecting routes may also be used to cut up the enemy and to attack his back flanks in a pincer front and back to wipe out the enemy segment by segment. However, care should be exercised in coordination so as to avoid wounding one's own forces by mistake. If the enemy flees outside, escape routes should be cut off quickly and the escaping enemy wiped out. Tunnel mouths should also be taken over to prevent the enemy from blowing them up.

i. Annihilating Airborne Enemies. Commanders should constantly organize aerial observers to ascertain signs of an enemy airborne landing and places where the landing might occur. When signs of an enemy airborne landing are detected, higher headquarters should be informed at once. When the enemy helicopters arrive, the unit should fire at low-flying aircraft in an effort to wipe out the enemy in the air. When the enemy helicopters touch down, fendui and militia close to the landing area should be directed to occupy advantageously located buildings or plazas from which they can use their firepower to attack and destroy the enemy helicopters and inflict heavy casualties on the enemy. Mortars should lay down suppression fire against the landing enemy. If circumstances warrant, second echelon units may be directed to attack the landing enemy before he has had a chance to occupy favorable terrain or deploy to wipe him out at once.

When enemy helicopters conduct an airborne landing simultaneous with an attack by ground forces, commanders should organize necessary troops to occupy favorable terrain to prevent the enemy from fanning out, and should make sure to prevent the airborne landed enemy from linking up with the invading ground enemy. If the frontally attacking enemy is repulsed and our positions are fairly strong, fendui behind the frontline may be organized to attack the airborne enemy and to work in cooperation with higher headquarters counter-airborne fendui to wipe out the airborne enemy. After the airborne enemy has been wiped out, they should withdraw quickly to their former positions and prepare to guard against an enemy firepower attack.

7. Features of the Organization and Command of Coastal Islet Defensive Warfare

a. When conducting an on-the-ground reconnaissance, emphasis should be placed on spelling out the following: size and nature of beaches, coastal water depths, pattern of tides, and distance from shore of water line during high and low tides; terrain, high ground and embankments within the defense perimeter, tactical value of villages and hamlets and their connection with each other, situation regarding roads, streams and ditches, and the water table; ascertaining major areas at which the enemy might land and numbers of troops he might use, tactics to be used, location of airdrops, number of troops and intention of movements.

b. Emplacement of obstacles should be done in accordance with instructions from higher headquarters, the characteristics of the beach terrain and the pattern of tides at water's edge on beaches at which the enemy may land plus terrain suited to the movement of tanks and armored combat vehicles. Such places should be the principle sites for emplacing anti-landing devices and various obstacles against tanks, hovercraft and infantry.

c. When organizing various kinds of support, sea and air observation and a reporting system must be set up, with the area to be observed and the direction and sectors of principal observation designated; setting up of an assigned weapons system and organization at higher headquarters-designated sites of guards and patrols. In addition, logistical support for protection against and reporting of air raids and the use of nuclear and chemical weapons should be organized.

d. Wiping Out the Enemy at Water's Edge. When enemy minesweepers sweep mines close to our shores and obstacle demolition fendui approach our shores or leave their ships (or boats) to enter the water, assigned weapons should be directed to attack the minesweepers and their transport gear. Anti-aircraft machine guns and assigned machine guns should attack the enemy hovercraft and underwater obstacle demolition teams. When enemy helicopters transport obstacle clearance teams to open passages, anti-aircraft machine guns and assigned weapons should concentrate fire to attack and destroy the helicopters and wipe out the obstacle demolition fendui. When enemy tanks, armored combat vehicles and engineering troops open a passage through the beach, frontline anti-tank weapons should attack and destroy the enemy tanks, and waves of enemy landing craft should be closely watched and all enemies approaching the shore fired on.

When a wave of enemy landing craft approach our shores under cover of fire from ships' guns and helicopters, commanders should find out the situation at once and ascertain the number of enemy troops and the sector for landings. They should direct that directly laid artillery and anti-tank missiles occupy positions at the proper times to strike first at the enemy's lead boat wave and then shift their fire to the follow-on boat wave. Expert gunners should wipe out the enemy landing and exposed personnel in landing craft. Anti-aircraft machine guns should fire at low-flying aircraft.

When the enemy leaves the boats to wade through the water and rush the beach, ferocious firepower should be concentrated to block the landing craft door and

to wipe out the infantry that is disembarking from boats, wading through the water and rushing toward the beach. The projectile charge obstacles should also be detonated at the right time and a fire and smoke screen laid down to blow up, obstruct, burn and confuse the enemy tanks, armored combat vehicles and landing troops. If circumstances warrant, flamethrowers may be used to burn enemy tank observation devices and to wipe out enemy infantry.

When enemy hovercraft attack the shore, they should be bombarded with a creeping barrage in an effort to wipe out the enemy while he is making way. When the enemy hovercraft are slowed by our obstacles or reduce speed and change direction, all weapons should lay down dense intersecting fire to wipe out the enemy hovercraft, and the various explosive obstacles on the beach should also be set off at the right time to blow up the enemy's hovercraft.

e. Wiping Out Airborne Enemies. During battle, commanders should personally scan the sea and the sky for prompt discovery of signs of an enemy airborne landing. They should accurately assess the number of troops involved and the landing points, and seize the opportunities provided while the enemy aircraft are still in the air, hovering, landing or touching down to maneuver troops and firepower quickly, using speed to control speed and ferocity to control turmoil in an effort to wipe out the enemy while he is still in the air or touching down. When an airborne landing is attempted inside our positions or close by them in advance of a seaborne landing, the airborne landing should be dealt with first. When an airborne landing is made on the rear flanks of our positions at the same time as or slightly after an enemy seaborne landing, the seaborne landing should be dealt with first.

8. Features of the Organization and Command of Defensive Warfare Under Frigid Conditions

a. The following should be spelled out during the on-the-ground reconnaissance: depth of snow in front of and behind the frontline, thickness of ice on rivers and lakes as well as ice and snow obstacles that may be used; location of major gullies and the directions in which they run. Ascertaining the main direction of a possible enemy attack. Full consideration of the effect on combat of drifted snow and the severe cold, and accurate decisions about defense based on the on-the-ground reconnaissance.

b. Organization of Combat Support. The long nights, snowstorms and numerous cloudy days of winter are suited to enemy surprise attacks. Fendui should organize observation and reporting and should post observers and combat guards on flanks, at terrain gaps and in directions from which enemy attacks are likely, and they should spell out the direction in which reconnoitering is to be done and the mission it is to satisfy, means of completing the mission and methods for reporting the situation. Duty times should be shortened and shifts should be changed more frequently. When necessary, crack ski teams should be sent on on instructions from higher headquarters to find out enemy intentions and to take the initiative in raiding and attacking the enemy to inflict damage on his offensive movements.

When organizing defense against nuclear and chemical weapons, actions to be taken when signs of an enemy attack are discovered and following an enemy attack should be spelled out. Action should be taken to protect equipment

against the cold. After personnel who have been on duty or who have been engaged in activities in contaminated areas return, snow on their clothing and equipment should be completely removed. During decontamination or detoxification, exposed parts of the bodies of personnel should be rubbed with skin detoxicant and clean snow. When weapons are washed in detoxicants, they should be repeatedly rubbed to lengthen the effective time of the detoxicant. When positions are decontaminated or detoxified, surface accumulations of snow may be shoveled off, snow being shoved away to the thickness that the toxicant has penetrated. Surfaces that have little or no snow may be covered, i.e., they may be covered with clean snow and packed tight with a spade until the toxicants and the radiation contamination have been completely covered. Then the area should be marked.

c. Resisting an Enemy Tank Attack. When enemy motorized infantry dismount from vehicles or put on their skis to attack, advantage should be taken of their not yet having spread out and the milling around to concentrate firepower from mortars and from frontline submachine guns (or rifles) and machine guns against them to pin the enemy down in deep snow and in sectors in which travel is difficult and to wipe them out.

When an enemy attack is stymied or takes serious casualties from our firepower and the situation is favorable for us, we should capitalize on the chaos to send out teams through areas where the snow is shallow and the slopes gentle to make short range attacks in front of positions, attacking fiercely for quick results to wipe out the enemy in his positions.

d. Wiping Out an Intruding Enemy and Smashing an Enemy Encirclement. When an intruding enemy is pinned down in deep snow or at the foot of icy slopes, has taken serious casualties and is stymied in his movements, or when infantry and tanks are out of touch with each other, formations are in disarray, firepower support is difficult, and follow-on echelons are fairly far away, commanders should organize their units for counterattack to cut up and encircle the invading enemy and retake defense positions.

When some positions have been encircled by the enemy, the encircled units should promptly rearrange deployments and use defenses and ice and snow barriers to form a circular defense. They should take the opportunity afforded by ski fendui not being on their skis and ready to attack to use ferocious and concentrated firepower to inflict severe casualties, wipe out the enemy and resolutely defend positions. They should organize nearby fendui or second echelon units to carry out resolute ground attacks against the back flanks of the encircled unit to assist the encircle unit in breaking out of the encirclement.

9. Features of the Organization and Command of Defensive Warfare on Deserts, the Gobi and Grasslands

a. During on-the-ground reconnaissance, emphasis should be on finding out the following: sources of water and areas suited to the extended movement of tanks; sand dunes or high ground on which strategic points may be established; areas suited to the construction of in-depth circular defenses; sectors that can provide protection to unit positions and that are difficult to traverse, and changes to the terrain that sandstorms may create. When deciding on

defense positions, everything possible should be done to select them in places suited to the building of in-depth circular defense. Examples include cracked earth fringe areas that are contiguous to sand ridges and crescent shaped dunes; oases areas with a fairly dense irrigation network, dry river beds and undulating areas with small rises on grasslands and the Gobi. The flanks of positions should be up against natural obstacles such as clumps of bushes, salt marshes or drifting sand.

b. When deploying troops, in order to support the flanks and not have too large terrain gaps, a triangular deployment may be used as a foundation for deploying some infantry in the direction of the greatest threat from the enemy. In order to bolster defenses against tanks, anti-tank weapons should be used as mainstays and the needed number of infantry squads (or teams) may be assigned to make up anti-tank teams arrayed in the direction from which the enemy tank threat is greatest. In addition, forward tank teams may be organized and deployed in front of positions on favorable terrain that enemy tanks are likely to pass through, and clumps of grass, sand dunes and gullies may be used to ambush the enemy.

c. When building fortifications, insofar as possible, various fortifications should be located on sand ridges and sand dunes that are firm and that have a substantial amount of vegetation cover. They may also be located at the base of sand dunes or sand ridges or on dry and cracked ground between dunes on the Gobi. When sand dunes are fairly low, trenches may also be built on the crest or near the crest of slopes. Communications trenches may be built between sand ridges on low-lying ground or on the slopes of fairly low sand ridges. Firing fortifications should usually be built near the tops of sand dunes or on protrusions at the foot of sand ridges or sand mountains. If the defense front follows a crescent shaped sand dune and extends around to face its leeward slope, firing fortifications may be built at the bottom of the windward slope. On grasslands, full use should be made of hills, high ground and natural gullies and embankments for the building of defenses. When the defense area contains high grass and clumps of bushes, strict precautions should be taken against fire. In addition, it is necessary to be careful that defense positions and intentions are not revealed following a fire in high grass or clumps of bushes.

In order to prevent defenses from collapsing and to strengthen defenses, full use should be made of local rushes, bushes, weeds and such readily available materials, tying them together to cover the steep walls of defenses. When emplacing obstacles, in order to make sure that anti-tank mines that have been laid are firm, wood or some available hard material may be placed under the mines. The width and depth of anti-tank traps should be increased. Usually concertina wire is strung in the desert and is placed on the slopes of sand ridges and sand dunes facing the enemy. Some times it may also be placed on flat land. Fendui should be organized to hide quickly or eradicate wheel tracks or other traces that might give away the fendui's location.

d. Organization of Various Kinds of Support. If order to prevent an enemy surprise attack, combat guards should be posted with a strength of one squad or one reinforced squad. They should be posted at a distance from which they can support the defense positions without being caught by an enemy surprise attack but from which they can protect them and from which they may be readily

withdrawn. For a company, this is usually about 1 kilometer. For a battalion, the distance is usually somewhat more under most circumstances. However, they should not be posted beyond the range of battalion artillery cover. When using radio communications, damage to radio equipment from sandstorms should be prevented. A sufficient number of dry cell batteries should be kept on hand so that when the temperature suddenly changes causing damage to batteries, they may be changed quickly.

Storing and Controlling Water and Protecting Water Supplies. Units should use every container capable of storing water to store large quantities of water. Water storage containers should be buried over a wide area where they are not likely to suffer a direct hit from enemy artillery fire. At the same time, they should be readily available for use. When a defense area has a water source, it should be completely camouflaged to protect it, and it should be inspected regularly to prevent the enemy from destroying or contaminating it. When defending places with a high water table, wells may be dug in concealed areas behind the lines. Units should have rigorous standards for water use and institute water discipline, paying particular attention to conserving water.

Before a unit enters the combat zone, it should instruct personnel in the prevention of illness. It should inoculate and vaccinate and take other reliable prevention measures against contagious diseases in nearby areas. It should pay attention to stocking sufficient amounts of medicines for frequently occurring sicknesses, and during summer it should guard against wound infections and take action to guard against poisonous insect and poisonous snake bites.

e. When enemy tanks lead an infantry attack, advantage should be taken of the favorable opportunities present when tanks are crossing sand ridges and sand dunes where movement is difficult to concentrate anti-tank firepower to attack and destroy the enemy armor. When enemy tanks intend to following along between dunes to invade behind the lines of our positions, anti-tank weapons on both flanks of dunes should be concentrated to deliver intersecting flanking fire first destroying the enemy tanks that pose the greatest threat to us. At the same time, mines should be laid quickly in the sectors in which enemy tanks are moving to prevent the enemy from invading. Nearby infantry fendui should be directed to use sand dunes, sand ridges, dips in the terrain, clumps of bushes and such favorable terrain for cover and then either wait or move to hit and blow up, destroying the enemy's tanks, wiping out the enemy infantry and smashing the enemy attack.

f. When smashing an enemy envelopment and encirclement, troops and firepower should be organized to move at the right time to quickly place obstacles in areas that the enemy must cross to force the enemy into unfavorable terrain where these is shifting sand, bushes, salt marshes and gullies and wait a change to wipe out the enemy and to smash the enemy's plans for envelopment and encirclement.

V: Role and Support of Reinforced Fendui During Infantry Fendui Offensive and Defensive Combat

I. Offensive Combat

During offensive combat, fendui can be strengthened by a certain number of fendui from other service arms. Therefore, infantry fendui commanders must be familiar with the principles of using the fendui from other service arms by closely organizing, fulling displaying the power of the fendui of all arms, mutually supporting, and closely coordinating to insure the successful completion of the battle mission.

A. Use of Artillery Fendui

During offensive combat, the artillery attached to an infantry fendui, called reinforcing artillery, are commanded by the infantry commander, who can make recommendations to the artillery about the use of firepower.

1. Mission

Mortars and 107mm rockets are used to neutralize and destroy the enemy's effectives and firearms, to blind the enemy's observation and fire, and to knock out the enemy's light defense works and antipersonnel obstacles; the antitank missile, 85mm field gun, and recoilless rifle are used to destroy enemy armored targets and knock out enemy strong fortifications and firing points.

Besides carrying out the planned fire mission, the supporting artillery should, based on calls made by the fendui being supported, give fire support to its battle.

2. Organization of Combat

a. Listening to Reports and Suggestions (see the part on coordinating movements)

b. Determining Artillery Combat Deployment

Based on the enemy situation, the terrain, the mission and the number of artillery, the guns' performance, and the artillery commander's suggestions, the infantry fendui commander should determine the combat deployment of the artillery. When a battalion of neutralizing artillery is attached to an infantry battalion, it is usually put under the direct command of the infantry battalion and is deployed 3 or 4 kilometers from the enemy's forward positions. When only regimental 100mm mortars are attached, the battalions usually use them in a concentrated fashion and deploy them 2 or 3 kilometers from the enemy's forward positions. When antitank missile fendui and 85mm field guns are attached to the battalion, they are usually used and controlled in a concentrated fashion by the battalion, which deploys them on the flanks or rear of the first echelon in order to display their firepower and conceal their positions. When the higher level's neutralizing guns are attached to the battalion, the battalion's 82mm mortars are usually attached to the main

attack company. When 82mm mortars are attached to the company, the company uses them in concentrated fashion. The artilery position is deployed at the rear of the company's second echelon or at the rear or the flank of the company in order to display its firepower and to put it in a position convenient for concealment, camouflage, and movement. The observation post is placed as close as possible to the infantry fendui commander's position or is deployed with him. A battalion's 82mm recoilless rifle fendui is usually attached to the first echelon company. The company can take a part or the greater part of its attached recoilless guns and attach them to its infantry platoons, or it can use them in a concentrated fashion. Before launching the assault, they are deployed inside the infantry fendui's battle formation, where they are in a position convenient for concealment and movement.

Based on the situation, the infantry fendui commander can also make clear the artillery's reserve position.

c. Assigning the Artillery's Mission

The infantry fendui commander, while assigning the missions of all his fendui, usually assigns the mission of the artillery fendui. Mission content usually includes: artillery position locations, the targets and places to be fired at, the time, lines, and methods of moving the artillery position, methods of supporting infantry and tanks, and the time limit for completing fire preparation.

d. Organizing Infantry-Artillery Coordination (see the part on coordinating movements)

e. Guaranteeing Safety

To insure coordinated actions by infantry and artillery and to prevent accidental injuries, the following should be done:

(1) Make clear the terrain position of the artillery fire sector (target), accurately prepare fire data, correct fire deviations, and, according to signals or coordination times, shift fire in a timely manner. .

(2) Determine a safety limit and make clear its specific positions in the terrain. The mortar's safety limit is usually 200 meters, and in view of the situation, it can be suitably increased or shortened. The artillery fire shift time is calculated as the time that the last round of artillery shells (a shell cluster) lands on the ground. The infantry must guard against moving ahead of time, and the artillery must guard against extending the firing time.

(3) Infantry and artillery commanders must both personally observe the movements of infantry and tanks and the results of fire, report on the situation, and on their own initiative take effective measures to prevent accidental injuries.

3. Engaging in Battle

a. Artillery Fire Preparation Time. Neutralizing artillery attached to a battalion mainly destroys enemy defense facilities at the battalion's point of

attacks, neutralizes enemy effectives and weapons, and at the necessary time can open routes through obstacles; or it conducts blinding fire at the enemy's command and observation posts and covers the advance of infantry and tanks toward the front of the enemy position. The mortar fendui attached to the company usually does not take part in artillery fire preparation. When a battalion takes part in artillery fire preparation, it does so according to the fire plan. Sometimes, route-opening missions can be undertaken: when the recoilless rifle fendui takes part in destructive fire, under cover of fire at the opportune time it can move forward, occupy a position on favorable terrain, and fire according to plan. When not taking part in destructive fire, the artillery should occupy positions, make good fire preparation, and based on orders, destroy newly discovered or surviving enemy armored targets and firing points, Sometimes it can cover obstacle-destroying teams that are opening routes.

b. Assault Time. Artillery and mortar fendui, based on signals, shift their fire to neutralize in-depth targets, blind the enemy's observation and fire, and cover infantry and tank fendui that are breaking through the enemy position. During combat, the infantry commander should give the artillery its mission, swiftly direct the artillery to newly discovered targets that need to be neutralized, observe the results of fire or help the artillery to make corrections, and at the suitable time direct it to shift position. Recoilless rifle fendui, with part of the guns reinforcing the assault fendui on its advance, wipe out enemy firing points and armored targets. The remaining guns (missiles), at the original place or at changed positions, carry out fire support and cover the assault by infantry and tanks.

c. After Breaking into the Enemy's Position. Using fire, the artillery and mortar fendui should neutralize or blind the shallow and in- depth enemy effectives and weapons, curb the enemy's mobility, and cover the infantry and tanks who are surrounding and annihilating the enemy at his strong points. When reserves are being added to the battle, these fendui should use their main fire to neutralize and blind the enemy in the direction in which the reserves will enter the battle so as to cover their entry. When the enemy makes a counterassault, they sould, based on the infantry commander's instructions, in the direction of the enemy's counterassault use blocking fire to cut the connections between the enemy's infantry and tanks, delay enemy movements, and coordinate with the infantry and tanks in resisting the enemy's counterasssault. When the enemy flees they should block the routed enemy's vanguard. If artillery fire at a higher level is doing the blocking, they should concentrate their fire on inflicting casualties on the enemy infantry. In close coordination with infantry and tanks, the antitank missile, 85mm field gun, and recoilless rifle fendui should flexibly adopt varied firing methods, first of all concentrating their fire on the enemy's armored targets and firing points that pose the biggest threat to us. Afterward, they should shift their fire to other targets, so as to support the infantry and tank battle. When the recoilless rifle fendui suffer heavy casualties and are unable to carry out their mission, infantry fendui commanders should transfer personnel to help in completing the mission.

B. Use of Tank Fendui

1. Missions and Methods of Use

Missions

During offensive combat the missions usually carried out by tank fendui that are directly supporting infantry are: support the infantry assault to break into the enemy position; coordinate with infantry in attacking and annihilating the enemy at strong points; coordinate with infantry in resisting the enemy's counterassault or in strengthening the positions already gained; open routes through antipersonnel obstacles; and pursue and annihilate the retreating enemy.

Types of Use

--Tanks leading infantry assaults: The tanks are in front of the infantry, and the infantry in suitable battle formation follows behind the tanks. This form is generally adopted when the terrain is open, visibility is good, there are fairly few enemy antitank obstacles, and the terrain is conducive to tank movement. The distance between the infantry and tanks is usually 25 to 50 meters.

--Tanks giving fire support to an infantry assault: In the rear or on the flanks of the infantry battle formation, tanks lend fire support to the infantry assault. This form is generally adopted on terrain unfavorable for tank movement and when visibility is poor, there are fairly many enemy antitank obstacles, and it is difficult to open routes through them. To insure safety, tanks should fire their guns from a distance more than 200 meters behind the infantry, and as the situation warrants bound forward sector by sector in order to give uninterrupted fire support to the infantry battle.

--Infantry riding on tanks: Infantry riding tanks is usually adopted to close fast with the enemy, to cross contaminated sectors, or to pursue and annihilate a routed enemy, or when undertaking a deep-thrust mission. Each tank usually carries one infantry squad. When the infantry is riding on the tanks, the infantry and the tank should each be clear about the mission, the requirements, and the method of liaison.

2. Procedures and Content of Organizing Combat

a. Giving Briefings and Listening to Reports and Suggestions (see the part on coordinating movements)

b. Missions Given to Tank Fendui

When the infantry fendui commander gives the tank fendui its mission, he should lay particular stress on making the following things clear: the tank fendui's form, mission, and distinction of troop strength; the opportune time to move out, the route, and the deployment area or firing position; the time to arrive at the deployment area or to occupy the firing position; and the time limit for battle preparation.

c. Organizing the Coordinated Movements of Infantry and Tanks (see the part on coordinating movements)

3. Actions at Each Stage of Combat

--Artillery fire preparation time: The infantry fendui commander should, with a coordination plan, direct the tank fendui to occupy its firing position, conduct demolition fire, and destroy enemy armored targets and firing points.

--Time of assault: Based on the coordination plan, the infantry fendui commander directs the tank fendui to swiftly move in front of the infantry's battle formation and to lead the infantry's assault; or to occupy favorable terrain and give fire support to the infantry's assault. When the tanks' route is blocked, the tanks should make use of nearby terrain to give fire support to the infantry's reopening of the route, or in accordance with the higher level's instructions, go around using a nearby route. After the enemy's front is broken through, he should, as the enemy situation and terrain warrants, direct the tank fendui to support the infantry in consolidating and enlarging the breach and in launching an in-depth attack.

--When attacking and annihilating the enemy in his strong points: The infantry fendui commander should direct the tank fendui to lead the infantry in making an attack on the enemy's flank or rear flank. When the terrain is complex and unfavorable to tank movement, he should direct the tanks to seize favorable terrain and give fire support to the infantry in storming and capturing the enemy's strongpoints.

--When resisting the enemy's counterassault: The infantry fendui commander should direct the tanks to swiftly seize favorable terrain and with their fire destroy the enemy's armored targets, or with a bold and powerful assault coordinate with the infantry in wiping out the counterassaulting enemy. When the enemy is fleeing, he should, as the situation warrants, direct the tanks with infantry riding on them to pursue and attack the enemy, or to take a short cut to pass the enemy, occupy important points, cut the enemy's line of retreat, and coordinate with the main force in wiping out the routing enemy.

C. Use and Engineering Support of Engineer Fendui

--Use and missions of engineer fendui: When an engineer fendui is attached to an infantry battalion, it is usually used in a centralized fashion in the direction of the main attack to support the battle actions of the main attack fendui. When attached to an infantry company, it is usually used in a centralized fashion. It is given the following missions: on its own it ascertains, or helps the infantry to ascertain, what field works the enemy has built at the front and the placement of obstacles; it removes the obstacles adversely affecting the movements of infantry and tanks, and helps the infantry to open routes in the enemy's obstacles at the front; it takes part in and guides the infantry to carry out engineering operations; it moves in the direction of the enemy's counterassault or rout and sets up obstacles or engages in demolition operations; and it helps the infantry to prepare engineering equipment and guides engineering training before battle.

--Coordination with engineer fendui: (see the part on coordinating movements)

--Engineering support at the time of battle preparation: Based on the missions it is given, it draws out or makes the needed engineering equipment, which mainly includes: demolition equipment, mine- removal equipment, and obstacle-surmounting equipment (such as ladders, springboards, and ropes). If it is charged with the mission of opening routes or laying mines on the move, or if it is to use new weapons or equipment, prebattle training should be organized.

Engineering Support During Battle

--When closing with the enemy: Based on weather, season, and natural scenery, manufactured or equipment at hand should be used to effect tight camouflage. The main structures are personnel bunkers, firearm firing field works, and interrupted trenches. The engineers are charged with the missions of opening (repairing) paths and removing obstacles in order to insure that the fendui closes with the enemy.

--When occupying the assault start position: The infantry fendui should make full use of terrain in constructing necessary field works. This means mainly constructing personnel bunkers, weapons firing field works, and interrupted trenches. Based on the situation or the higher level's instruction, they can be constructed secretly in advance. The degree of perfection of the various kinds of field works should be decided by the time remaining to construct them.

--When opening routes: Obstacle-breaking teams, composed mainly of infantry with engineers as the backbone, should be formed. In an obstacle-breaking operation, the basic method is usually the manual demolition method (the manually delivered demolition method and the 320 demolition method), and the supplementary method is the manual collection and arrangement method (either secretly or by force). Also, antipersonnel obstacles can be destroyed. During the course of opening routes, besides getting fire cover from the higher level, the commander should organize the fire cover of his own fendui, and constantly regulate the coordinated movements among the fendui and personnel assigned the duty of regulating it. Also, fire control should be organized to prevent the enemy from blocking the route. When the higher level is opening routes, the fendui should organize fire cover and, as the situation warrants, give support with part of its forces.

--When fighting inside the enemy's position When encountering obstacles put up in advance or just at the time by the enemy, based on the situation, as much as possible, they should be bypassed. If they cannot be bypassed, then fire cover is to be organized and the obstacles are to be removed by force so that passage can be effected. To consolidate the positions already occupied or to resist the enemy's counterassault, the commander should dispatch engineer and infantry fendui to destroy the roads and bridges that the enemy would probably pass over, or to shift obstacles and move mines. The original field works should be swiftly rebuilt and made usable. When the enemy is fleeing, based on the situation, on the roads the enemy must pass over a demolition operation should be carried out or mines laid to delay the enemy's movements and to cooperate with the pursuing and attacking fendui in completely annihilating the enemy.

D. Use of Chemical Defense Reconnaissance Fendui (Teams) and Flamethrowing Fendui

1. Use of Chemical Defense Reconnaissance Fendui (Teams)

During aoffensive combat, they are usually concentrated in and controlled by the battalion and the company, which use them flexibly. Their main missions are: carry out chemical and radiation reconnaissance and contamination checks to ascertain and indicate the situation regarding contaminations on the line of march, and timely guide the fendui to protect themselves.

Coordination with the chemical defense fendui (see the part on coordinating movements)

2. Use of Flamethrowing Fendui

In squads (teams) the flamethrowing fendui are attached to infantry platoons (squads). Their main mission is to coordinate with the infantry in wiping out the enemy's strong firing points and the concealed or exposed enemy. When using flamethrowing fendui, the infantry fendui commander should, based on the combat performance of the flamethrower, put a team (two or three flamethrowers) in the infantry's combat formation to carry out its mission. He should make clear to the flamethrowing fendui its mission and should organize coordination.

Coordination with flamethrowing fendui (see the part on coordinating movements)

E. Use of Antiaircraft Machinegun Fendui

An antiaircraft machinegun fendui is usually concentrated in and used by the battalion. A part of it can also be attached to an infantry company. When being deployed, it is usually deployed in groups to cover the line-shaped targets; or when because of terrain restrictions it cannot be deployed in groups, it can be deployed in a single line. Its missionss are: hit low-flying enemy aircraft, and protect command (observation) posts and the main deployment from aerial attack; wipe out the enemy's airborne (airlanded) troops; fire at targets on the earth's (sea's) surface; and support the battle of attacking fendui.

F. Use of Heavy Machine Gun Fendui

Heavy machine guns are usually attacked to the infantry company (platoon) as a platoon (squad). They are deployed in the gaps between or on the flanks of the infantry's battle formation. With their fire they wipe out the enemy's exposed effectives, neutralize the enemy's firing points or tankmen, and support the battle of infantry and tanks.

G. Communications Support

Communications and liaison during fendui offensive combat must be planned in a unified fashion and organized carefully. With radio usually made primary, full play is given to the role of simple communications, and the various

communications media are flexibly employed to complement each other and to insure that the communications and liaison are accurate, timely, and uninterrupted.

1. Missions and Requirements

2. Missions

The main missions of communications and liaison is to insure the commander's commande of all his subordinate and attached fendui; to insure the coordination among all fendui; and to insure liaison with the higher level and friendly nearby units.

b. Requirements for Communications Support

(1) There must be overall arrangements and insurance of key points in the fendui commander's use of communications personnel and equipment.

(2) The fendui commander must be familiar with the functions and methods of using communications instruments, and he must memorize signals (marks) and radio station call signs.

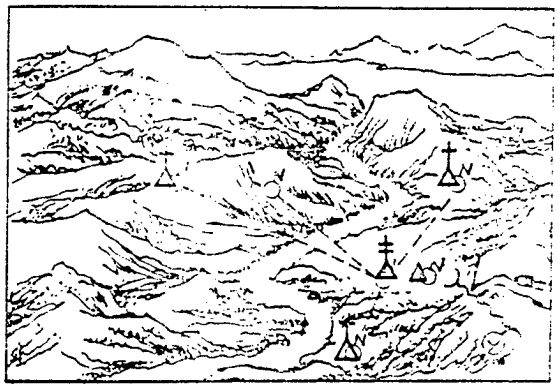
(3) Many communications media are to be used simultaneously to insure communication results. When a predetermined liaison plan loses its effectiveness, other communication media should be flexibly used to make up the deficiency.

(4) Strictly observe the security regulations and communication record keeping and the rules of operation.

2. Organization of Communications and Liaison

a. Radio Communication

For radio communication with one of its battalions a two-watt radio set is sent out to the battalion and put in the regiment's command net. When a battalion is moving in the direction of the regiment's main attack, the regiment and the battalion usually set up dedicated liaison. For liaison with units below it, a battalion usually organizes one or two command nets and one dedicated line. For radio communication between the battalion and the company, the battalion sends a radio set to the company and puts it in the battalion's command net. Radio communication between the company and its platoons and attached fendui is effected by a company command net composed of "861" directors. Coordination communication with friendly nearby fendui in the same system of organization is effected within the battalion's command net. Friendly nearby units that are not in a different system of organization can transmit and effect liaison through the higher level's command net. In radio communication, use should usually be made of the liaison documents formulated by the higher level to effect liaison. The company's "861" direct communications net is shown in the diagram below.



b. Wired communication

When wired communication is to be opened, the higher level is responsible for erecting lines and effecting liaison.

c. Courier communication

Courier communication is the means of communication commonly used by fendui during battle. Couriers are usually assigned beforehand by the commander, and when necessary additional ones can be dispatched. When dispatching couriers to effect liaison, one should get one's priorities straight, decide on the order of inquiry, and make the content of what is transmitted concise.

d. Simplified communication

In organizing simplified communication, various methods should be flexibly used based on communication instrument performance, terrain, weather, visibility, noise, and distance. The company usually assigns a signalman-observer (team), and the platoon usually assigns a fighter to concurrently be a signalman-observer, to be responsible for receiving and sending signals. When necessary the fendui commander will personally send signals.

3. Implementation of Communications and Liaison

a. When Closing with the Enemy. The radios maintain silence, and liaison is effected by simplified communication and by couriers.

b. When Launching an Assault. The signal for assault should be given simulataneously by many communication instruments. After the assault is launched, the focus should be on insuring liaison with the main-attack fendui and the tanks. When reserves enter combat, the focus should be on insuring communications and liaison between the reserves and the fendui covering them as they enter the battle. When there is a pursuit to annihilate a fleeing enemy, the various communications media should combine, and the focus should be on insuring communications and liaison with the pursuing and attacking fendui and the friendly nearby units.

During the course of a battle, the fendui commander should, based on changes in the situation, constantly make adjustments to communications and liaison. At all times he should vigorously maintain liaison with the higher level. When communications men suffer casualties or the radio station is damaged and

loses its effectiveness, the commander should make timely replenishments or remix his forces.

H. Protection Against Nuclear and Chemical Weapons

1. Protective Preparations

When the fendui commander receives his mission and while he is organizing the battle, he should do good protective work against nuclear and chemical weapons, the tasks of which are:

a. Organizing Observation and Report Duties

A fendui's observation of nuclear and chemical weapon attacks is usually concurrently done by its observers. When necessary, NBC backbone elements can be assigned to carry out observation duties alone. The main task of observers are: to discover signs of enemy nuclear and chemical attacks and to receive from and send to the higher level alert signals; after a nuclear attack is made, to determine the place and form of the attack and the direction in which the radiation cloud is moving; and when a chemical attack is made, to determine the direction in which the toxic cloud cluster is moving. When the fendui commander is assigning the observation tasks, he should make clear the key area for observation, the main direction, and the method of reporting.

To be able to swiftly report on the enemy's nuclear and chemical attacks, the fendui should make use of various kinds of communication instruments to send and transmit attack warnings in a timely, accurate, and priority manner. The higher level decides on the issuance and removal of a nuclear attack warning; the commander may decide by himself on the issuance and removal of a chemical attack warning. All personnel must memorize the warning signals for nuclear and chemical attacks in order to insure that protective measures can be taken in a timely fashion.

b. Perfecting Mass Defense Organizations

An NBC group is usually composed of three or four NBC defenses backbone elements. During a battle, usually one or two men act as chemical scouts, one or two men act as radiation scouts, and one man acts as a toxic dosage checker. The chemical scout uses a phosphorous toxicant alarm to conduct chemical reconnaissance in the region (route) of the fendui's movement in order to ascertain the type of toxicant and to mark it. The radiation scout uses a radiation detector to make a reconnaissance of radiation in the area (route) of the fendui's movment, and he monitors how far the fallout settles and when it basically stops settling. To ascertain the dosage rate distribution and its decay over time, the dosage checker, using an individual dosage meter, writes down the recharging, distribution, and recovery of the dosage, and makes statistics on and reports to the higher level the radiation dosage received by personnel. When carrying out a mission in a contaminated region, each platoon (squad) should carry a dosage recorder in order, based on the radiation dosage, to determine the time to stay in, and the methods of moving through the contaminated region.

The fendui should overhaul its individual protective equipment and the equipment for chemical and radiation reconnaissance. When there is insufficient protective equipment, it should promptly request more equipment, or mobilize the masses to make on-the-spot collections and make simple protective equipment. The commander should also supervise and urge the medics to prepare first aid, decontamination, and preventative drugs against chemical attacks, and based on the higher level's instructions, promptly organize personnel to carry out medicinal prevention and inoculations.

2. Protection at Each Stage of the Battle

a. Protection When Closing With the Enemy

When closing with the enemy and an alert signal for a nuclear or chemical attack is received, the commander should, using all communications media, swiftly inform all personnel to make good preparations for protection. When there is the flash of a nuclear explosion, personnel on the advance should make use of terrain to give themselves on-the-spot protection. After the shock wave passes, the commander should swiftly ascertain the losses and contamination suffered by the fendui, and organize self-relief and mutual relief. If the ground contamination is serious or a radiation cloud threatens the fendui, he should at the right moment direct the fendui to put on protective gear and as fast as possible leave the contaminated area; when encountering a sector that has been contaminated, he should dispatch a chemical defense reconnaissance team to advance together with the vanguard at the front in order to ascertain the contamination situation. The fendui should go around a seriously contaminated sector. If the combat mission is urgent or if the fendui cannot go around the sector, he can have the fendui put on protective gear and pass directly over the sector. After the fendui pass through the sector, based on circumstances, they can perform simple and easy decontamination or take off the protective gear and continue the advance.

b. Protection When Occupying the Assault (Attack) Start Position

Before the fendui occupy the assault (attack) start position, the fendui commander should instruct the NBC defense group to ascertain if there are toxicants or radioactive dust in the predetermined occupation area. If protection needs to be taken, he should immediately give the signal to that effect. After the fendui occupy the position, based on circumstances, he should have the fendui decontaminate and send out observers. When it is discovered that chemical engineering obstacles have been set up in the enemy's forward postition, the fendui commander should swiftly report this to the higher level, and as the situation warrants, organize forces to remove the obstacles and instruct the fendui to make good protective preparation to pass through the enemy's contamination area.

c. Protection During Combat

After the attack starts, when the fendui is passing over the chemnical engineering obstacles or it is discovered that the enemy has made a chemical attack on our assault fendui, the commander should direct the fendui to swiftly make use of their protective gear and continue the assault. The combat movements must not be adversely affected because of the protection.

When there is fighting inside the enemy position, the commander should promptly discover signs of an enemy attack, and direct the fendui to close in on the enemy and form a jagged, interlocking pattern with the enemy so that he is unable to use his chemical weapons. When the enemy makes a chemical attack on us, the commander should direct the fendui to swiftly don protective gear. When circumstances permit, he can direct the fendui to outflank the enemy from the windward or crosswind direction.

After the battle is over, the fendui commander should, based on the higher level's instruction, direct the fendui to swiftly withdraw from the battlefield, or to make good preparations for protection and to strengthen observation and alertness and guard against retaliation by the enemy's nuclear and chemical weapons.

II. Defensive Combat

A. Use of Artillery Fendui

1. Missions of Artillery Fendui

Missions of Mortar Fendui. Block the enemy who is approaching and deploying, and neutralize the enemy who is occupying an assault start position; block the enemy who is assaulting our defensive front, cut the connection between his infantry and tanks, and wipe out his infantry; seal off a breach, block the enemy's follow-up echelon from coming in, neutralize the enemy infantry who have charged into our defense position, support our infantry's counterassault, and wipe out the enemy who has charged in; support our infantry in holding fast to key strongpoints and in waging tunnel battles; and control the flanks, joints, and gaps, and prevent the enemy from outflanking or infiltrating us.

Missions of Antitank Gun (Missile) Fendui. Destroy the enemy who is approaching, deploying, and assaulting our defensive front and the enemy's armored vehicles which are penetrating our defense position.

2. Battle Preparation

a. Listen to the Reports and Suggestions of the Artillery Fendui Commander (see the part on coordinating movements)

b. Determine Artillery Deployment

The mortar fendui attached to the battalion is controlled by the battalion; the mortar fendui attached to the company is usually controlled by the company, and with its fire it supports the combat of all fendui. The observation post's position is usually selected to be convenient for coordinating; as much as possible it is sited with the infantry fendui commander; and if the situation warrants a reserve observation post can be selected. The artillery position is usually selected to be within the defensive area, in an area concealed by camouflage that has a good field of fire and that is convenient for the deployment of guns and the construction of field works. When the situation warrants, a reserve artillery position and a temporary artillery position can be selected. The 105mm recoilless guns attached to the battalion are usually controlled by the battalion, and the

recoilless gun fendui belonging to the battalion is usually attached to the company. The infantry company usually attaches the recoilless guns in the form of a squad to the platoon. At times these guns can be used by the company in a concentrated fashion, deploying them in a position that is in the main direction of the enemy tanks' threat and that is convenient for displaying firepower, manuevering, and concealing. The 85mm cannon attached to the battalion are usually attached to the first-echelon company, but somtimes they can be controlled and used by the battalion. When attached to the company they are usually directly controlled by the company, and are deployed in the direction of the greatest threat from enemy tanks (in the rear part or in the rear of the first-line platoon strongpoints), in an area convenient for the display of firepower and for concealment and maneuver. Antitank missiles are usually controlled by the battalion, but part of them can also be attached to the company for the latter's concentrated use. They are deployed in the position's depth on favorable terrain convenient for the display of their firepower. The gap between squads is 50 to 100 meters, and one platoon's emplaced frontage is about 400 meters, generally not less than 500 meters from our defense front. Several mobile positions should be selected, and usually in one position there will be no more than one emplaced fire.

The holding position of vehicles and horses is usually selected to be at the flank or in the rear of the artillery position, where it is concealed by terrain and is convenient for the vehicles and horses to link up and move out with the artillery position.

c. Giving the Artillery Its Mission

When stipulating missions, the fendui commander should lay stress on making the following clear to the artillery fendui: combat differentiation, the combat formation deployment, and the firing mission at each time.

d. Organizing Artillery Fire

Mortar fire in sectors at the front, flank, or joints of our front, where the enemy could approach and deploy for assault, blocking and concentrated fire is planned; for blind angles and ground on which the enemy could approach in a concealed manner, concentrated fire is planned; and for the front and the flanks of key strongpoints as well as the surface positions in the vicinity of tunnel entrances that the enemy could occupy, concentrated and blocking fire is planned.

Recoilless Rifle Fire. In the direction of the enemy's tank threat, from in front of our forward position to its depth there is formed an interlocking fire net for direct fire, oblique fire, and flanking fire. Usually fire will begin within direct fire range, but sometimes concentrated fire can be effected at double the direct fire range. In addition, in the sector in the direction convenient for the movement of the enemy's armored targets, supplementary fire by 85mm cannon and antitank missiles should be planned.

e. Organizing Infantry-Artillery Coordination (see the part on coordinating movements)

3. Use of Artillery in Each Stage of the Battle

a. Preparation Against Enemy Fire

When the enemy's air arm and artillery are making fire preparations, the artillery fendui should be directed to swiftly go into tunnels or hidden field works for concealment, and make good preparations for combat. When the enemy is opening routes through our obstacles, as the situation warrants some antitank weapons should be directed to destroy the enemy's mine- removal tanks in order to stop the enemy from opening routes. When the enemy attacks with nuclear or chemical weapons, artillery fendui should be swiftly directed to take protective measures. After the attack, the losses to the artillery fendui should be quickly ascertained, and the deployment of the artillery that was damaged should be adjusted to restore the organization of fire and make good preparations to resist the enemy's assault.

b. Supporting the Infantry's Resistance to an Enemy Assualt

When the enemy launches an assault against us, the mortar fendui should be directed to perform blocking fire to cut the connection between the enemy infantry and tanks and to wipe out the enemy infantry. When our infantry in small fendui move out of our forward line field works, the mortar fendui should be directed to support the infantry's movements with fire and wipe out the targets that block our infantry's movement, in particular the enemy's flanking fire and oblique fire weapons, and cover the infantry's swift withdrawal. When the enemy advances to our forward line position, the mortar fendui should be directed to shift its fire in order to block the enemy's follow-up echelon, to wipe out the targets that are the biggest threat to us, or to neutralize the enemy's mortars. Antitank guns should be directed to concentrate their fire on destroying enemy tanks and armored combat vehicles that are approaching our forward line position or passing over routes; afterward their fire should be shifted, and all guns brought to bear to destroy the enemy tanks and armored combat vehicles assaulting our forward line position.

c. Supporting the Infantry in Wiping Out the Enemy Who Has Broken Through

When the enemy breaks through our position, the recoilless guns should be directed to employ maximum power to destroy the enemy tanks and armored combat vehicles that have broken through. The antitank missile, antitank gun, and mortar fendui should be directed to block the enemy's follow-on echelon with their fire, destroy the enemy's tanks and armored combat vehicles, wipe out the enemy infantry, and support the infantry in wiping out the enemy who have broken through. When the fendui make a counterassault, it should be made clear to the artillery fendui the direction of the infantry assault, the deployment area, the start time, the artillery's missions, and the methods of support. Before the counterassault begins, the artillery fendui should be directed to make very brief, fierce rapid fire attacks at the counterassault target, and the antitank guns should with accurate and fierce fire destroy the enemy's tanks and armored combat vehicles--all in order to cover the advance of the counterassaulting fendui. When the counterassaulting fendui approach the target, the mortars should be directed to shift their fire so as to block the enemy's follow-on echelon.

d. Supporting the Infantry in Holding Key Strongpoints, and Smashing the Enemy's Outflanking Encirclement

When the fendui's defense position is threatened by encirclement, the artillery fendui should be directed to control with fire the routes and gaps on the flanks and rear of the key strongpoint in order to stop the enemy's movement and outflanking move. When a position has been encircled by the enemy, the mortar and antitank gun fendui should be swiftly directed to perform fire or weapon movement in the main direction of the enemy's threat, and with fierce fire destroy the enemy's tanks and armored combat vehicles, inflict casualties on the enemy infantry, support the infantry in holding the key strongpoint, and smash the enemy's encirclement.

e. Supporting the Infantry in a Battle To Hold Tunnels

When our infantry withdraws to defend a tunnel (gallery), the artillery fendui should be directed to block with fierce fire the enemy who are following at the heels of our infantry, stop the enemy from following, and cover our infantry's entry into the tunnel (gallery). After our infantry enters the tunnel (gallery), the recoilless guns should be directed to coordinate with the infantry combat group in holding the tunnel (gallery) entrance, and stop the enemy from approaching and destroying it. The mortar fendui should be directed to make harassing attacks with cold guns against the enemy who occupies the ground position in order to stop the enemy from constructing field works and setting up obstacles near our tunnel (gallery) entrance, and to support the combat of the fendui holding the tunnel (gallery).

B. Use of Tank Fendui

1. Missions of Tank Fendui

Our reinforced tank fendui is usually deployed inside a strongpoint and used as a tank firing point. Its missions are: coordinate with the infantry in holding the position by wiping out with its fire the enemy armored combat vehicles assaulting us; stop the enemy from developing in our depth and extending on our two flanks, and support the infantry in wiping out the enemy who have broken through; and coordinate with the infantry in holding key strongpoints, contend with enemies one after another, and smash the enemy's encirclement.

2. Battle Preparations

a. Listening to the Tank Fendui Commander's Reports and Suggestions (see the part on coordinating movements)

b. Giving the Tank Fendui Its Mission

When the commander is giving the missions, he should put stress on making the following clear: the site of the tank firing position; the supplementary fire mission; the firing zone (border), the concentrated fire sector and the beginning fire area; and the time limit for completing fire preparation.

c. Organizing Infantry-Tank Coordination (see the part on coordinating movements)

3. Actions in Each Stage of Combat

a. Defending Against Enemy Fire Preparation

When the enemy air arm and artillery are making fire preparation, the tank crews should be directed to enter their tanks or take cover in covered field works, and make good preparations for combat; and the on-duty tanks should be directed to strengthen their observation and, as the situation warrants, with their fire wipe out enemies who are opening routes or fire at low- flying enemy aircraft. When there is a nuclear or chemical attack, the tank crews should be immediately directed to take protective measures. After the attack is over, the situation should be swiftly ascertained and the tanks promptly directed to occupy their firing positions and make good preparations to resist the enemy's assault.

b. Striking at the Enemy's Tanks and Armored Battle Vehicles That Are Approaching and Deploying

When the enemy reaches our tanks' initial firing area, the tank fendui should be directed to destroy the enemy's tanks and armored combat vehicles with sudden and fierce fire, so as to stop the enemy from closing in on our front. When the enemy reaches our concentrated-fire sector, the tank fendui should be directed to deliver concentrated fire, first destroying important targets and then shifting the fire to destroy the enemy's tanks and armored combat vehicles.

c. Coordinating with the Infantry in Resisting the Enemy's Assault

When the enemy launches an assault on us, the tank fendui should be directed to deliver accurate, fierce fire to destroy the enemy's tanks and armored combat vehicles and to wipe out the enemy's infantry. When the enemy approaches and is passing across routes, advantage should be taken of the enemy's formation being crowded and his advance slow by directing the tank fendui to seal off the routes with a large amount of fire and cooperate with the infantry in wiping out the enemy while he is on the routes. When the enemy reaches the vicinity of our front, the tank fendui should be directed to destroy the enemy's tanks and armored combat vehicles and to wipe out his infantry with crisscrossing flanking fire and oblique fire.

d. Supporting the Infantry in Wiping Out Enemies Who Have Broken In

When the enemy breaks into our position, the tanks should be directed to occupy favorable terrain, seal the breach, block the enemy's expansion, destroy the enemy's tanks and armored combat vehicles with accurate fire, and support the infantry in wiping out the enemies who have broken through. When our infantry counterassaults the enemy, the tanks should be directed to coordinate with the infantry counterassault by wiping out the enemies who have broken through.

e. Coordinating with the Infantry in Holding Key Strongpoints and Smashing the Enemy's Outflanking Encirclement

When the enemy is outflanking and encircling us, the tanks should be directed to coordinate with the infantry in holding their position, and with flanking fire and oblique fire, to inflict casualties on and wipe out the enemy, so as to stop the enemy's outflanking encirclement. When necessary, tanks can be moved in the direction of the maximum threat to us in order to block the enemy from expanding on the two flanks and developing his attack in depth; and the infantry can be directed to wipe out the enemy antitank fighters who are approaching our tanks.

C. Use of Engineer Fendui and Engineering Support

1. Use of Engineer Fendui

An engineer fendui is usually concentrated in and controlled by the battalion. Sometimes part of it is attached to the infantry companies in the first echelon's main direction. It is deployed near the command (observation) post for mobile use. Its missions are: conduct engineering reconnaissance; place mines and explosive obstacles; maintain roads of maneuver; carry out demolition operations; camouflage the command (observation) post; and guide the fendui in carrying out engineering operations. When using engineers, the commander should make clear their missions, the work sites, the fendui coordinating the work, the equipment support, and the time limit for completing the work. During a battle, the missions for the engineer fendui must be given in good time so that it will play its proper role.

2. Coordination with the Engineer Fendui (see the part on coordinating movements)

3. Engineering Support in the Battle Preparation Stage

The engineering support during defensive combat should be based on the higher level's instructions on engineering support, the mission of one's own fendui, and the time limit for completing defense preparations. Time should be used scientifically, and manpower and materiel should be used rationally, to give full play to the guiding role of the engineer fendui and to insure the completion of schedule of the engineering mission.

a. Constructing and Adding to Field Works

Trenches and Communication Trenches. Their positions should be determined on the basis of the already set up field works and the terrain conditions. Their alignment should follow the natural curvature of the terrain, and they should be built in a curved-line or broken-line shape. At each strongpoint and key point inside the position two or more trenches should be built, usually at the foot of or half way up the slope of a height, so that they form a concentric shape, either connected or interrupted. Communication trenches are built in places of concealment that are convenient for communications and liaison and for the movement of troops, and in places where lines are short and convenient for operations.

All trenches, tunnel entrances, permanent field works, and strongpoints should be connected by communication trenches. Inside the trenches and communication trenches, there should be facilities for firing, taking cover, waiting, going out, and draining. In sectors where the soil texture is poor additional layers of soil should be added, and in places approaching important sectors and tunnel (gallery) entrances covers should be added.

Weapon Firing Field Works. Based on the firing mission, weapon performance, and terrain conditions, basic firing field works and two or three reserve (temporary) firing field works are built. For all field works, under the premise of displaying firepower, there should be an attempt to make them strong, low, dispersed, and concealed.

Mortar Position. A basic firing position and two or three reserve (temporary) firing positions should be built.

Command (Observation) Field Works. A place should be selected that is convenient for observation, command, communications and liaison, and that also has good concealment and doess not allow enemy tanks to easily approach. Usually, one observation field work, one or two concealed field works, and the necessary communication trenches are built. As needed, assembled-type field works can be added.

In addition, when the fendui is charged with the mission of fortified position defense, the original tunnels (galleries) should be examined and repaired and their internal facilities perfected. When there is an insufficient number, some short tunnels or covered parts can be added.

b. Building Net-Shaped Positions

Net-shaped positions are usually built in important sectors conducive to enemy tank movement at the front, flanks, joints, and gaps of our defense position. In form they are of the crisscross type, the two-way forked type, and the ancient coin type. The frontal width of a net-shaped position is determined on the basis of the terrain situation; in its depth are built three or four trenches, communication trenches, and antitank ditches, and the depth is 100 to 150 meters. Inside the net there should be built weapon firing field works with different fire directions facing inside and outside, concealed field works, and various kinds of facilities for combat life. In front of a net-shaped position and between the nets there should be built and set up various kinds of antitank obstacles. For the movement of troops, there should be built tunnels or communication trenches that are connected to the main position.

c. Setting Up Obstacles

When obstacles are set up, they should be integrated with natural obstacles to form a ringed obstacle system with defense against tanks made primary. The depth of the obstacles in front of the forward positions is usually 300 to 400 meters.

Antitank Obstacles. These are usually in sectors favorable to tank movement that are in front of the forward positions and around strongpoints. Inclines,

antitank ditches, and pits are built; antitank minefields or mixed minefields, as well as rock obstacles and post obstacles, are set up.

Antipersonnel Obstacles. Usually in front of the forward positions and on flanks and gaps that the enemy infantry could easily turn, there are set up wire entanglements, abatises, and antipersonnel minefields.

The depth and density of the obstacles should increase in the direction and sector of the enemy's greatest threat. In accordance with the higher level's unified plan, preparations should be made to blow up the roads, bridges, ferries, and defiles that the enemy will probably use.

d. Camouflage

The fendui should make full use of natural camouflage. On the basis of the terrain's appearance and background colors, vegetation and coverings should be used to camouflage the position and the various kinds of field works. For weapons, vehicles, and other technical equipment, camouflage nets can be used to cover them, and camouflage strips can be wound around them, so as to change their external shapes; and mud can be spread on them to eliminate reflection. Vehicle tracks should be removed. To baffle the enemyu, as the situation warrants a certain number of dummy positions and dummy field works can be built, and dummy targets can be set up.

4. Engineering Support at Each Stage of Combat

After the enemy's fire preparation is over, the fendui should be directed to swiftly ascertain the damage done to the various facilities, and all fendui should be organized to rush-repair the field works. As the situation warrants, the fendui at the front or the engineer fendui should be directed to quickly set up obstacles, so as to seal off the routes opened by the enemy. When the enemy is making an assault on us, the fendui at the front should be directed to detonate the prelaid rigged demolition obstacles in order to blow up the enemy tanks and armored combat vehicles and to wipe out the enemy infantry. When the enemy breaks into our position, the engineer fendui should be directed to quickly lay antitank mines in order to delay the movement of the enemy tanks and armored combat vehicles, and the defending fendui should be directed to use diamond-shaped abatises to plug up the trenches and communication trenches so as to block the enemy from expanding by following the line of the trenches. When we are encircled, all fendui should be directed to hold fast to key strongpoints, fight while adding more defense works, and swiftly place obstacles or use prelaid mine clusters and satchel charges to control roads and thus block the enemy's movement and expansion. When the fendui shift to a tunnel (gallery) combat, they should swiftly set up obstacles near the tunnel (gallery) entrances, and strengthen and repair combat field works, so as to prevent the enbemy from approaching. When a tunnel (gallery) entrance is damaged by the enemy, rush-repairs should be vigorously organized.

D. Use of Chemical Defense Reconnaissance Fendui (Teams) and Flamethrowing Fendui

1. Use of Chemical Defense Reconnaissance Fendui (Teams)

A chemical defense reconnaissance fendui (team) is usually controlled by the battalion (company), which moves and uses it. It is deployed in a position near the command (observation) post concurrent for concealment and movement. It is manly used for chemical and radiation reconnaissance and for contamination checks in order to ascertain the type of toxicant and the contamination situation. It makes contamination checks on personnel, weapons and equipment, and timely guides the fendui to protect itself. When necessary it sets up observation posts.

Coordination with the Chemical Defense Reconnaissance Fendui (see the part on coordinating movements)

2. Mission and Use of Flamethrowing Fendui

Mission of Flamethrowing Fendui The flamethrowing fendui should usually be attached to a first-echelon company. Usually a team (two or three flamethrowers) are attached to a platton (squad) to carry out the mission; sometimes one flamethrower can be used. The team's missions are to wipe out the assaulting infantry of enemy groups, burn and destroy the observation equipment in enemy tanks and armored combat vehicles and other technical equipment, help our infantry's counterassault, and wipe out the enemy occuping trenches, communication trenches, or shelters.

Use of Flamethrowing Fendui It is usually deployed in the forward position trenches, inside the net-shaped position, or in position on the flank or in depth that are convenient for movement. When it is to carry out a mission, the target of the flamethrowing should be made clear as should the line of movement and the action after the flame is thrown.

Coordination with the Flamethrowing Fendui (see the part on coordinating movements)

E. Use of Antiaircraft Machine Gun Fendui

An antiaircraft machine gun fendui is usually directly controlled by the battalion, and it can also be attached to the infantry company in the main direction for concentrated use. It is deployed on favorable terrain near a command (observation) post. Its missions are to hit enemy low-altitude targets, to fight low-altitude enemy aircraft, and to cover command (observation) posts and the high-altitude security for troops in the main deployment; and to hit enemy armed helicopters and airlanded enemies. Where necessarily it can with flat fire wipe out enemy infantry, hit armored combat vehicles, support the infantry in resisting the enemy's assault, and accompany the command (observation) post when it shifts position.

F. Use of Heavy Machine Gun Fendui. A heavy machine gun fendui is usually attached as a platoon to a first-echelon company and is directly controlled by the infantry company commander and platoon leader. Under individual

circumstances, the battalion can also directly control a part of it. It is deployed on terrain convenient for displaying its firepower that is at the front, on the flank, or in depth. Its missions are to wipe out the enemy infantry assaulting on foot or breaking through our defense position; to cover the flanks and joints so as to prevent the enemy infantry from thrusting in deep or outflanking us; to support a counterassault by the second echelon (reserves); and to fire in the air in the fight against enemy armed helicopters.

G. Communications Support. During defensive combat, various communications media should be fully used to set up radio set communications and wired communications, forming careful, reliable communications and liaison that insure uninterrupted combat command under complex and difficult circumstances.

1. Organization of Communications and Liaison

a. Radio Set Communications

For liaison between the battalion and its regiment, there is the radio net organized by the regiment. For liaison between the battalion and its companies and the weapons fendui and combat alert fendui directly controlled by the battalion, there is the battalion radio net. For the battalion's bypass command, the battalion's radio station enters the infantry companies' radio net. Liaison between infantry battalions with the same system of organization is done by the regiment's radio net, and also a battalion can change the frequency and enter the other party's radio net for liaison. For liaison between friendly neighbors with different systems of organization, they can each change frequencies and enter the other party's radio net. For liaison with a supporting artillery battalion, for example when the artillery battalion's observation post is in the same place as the infantry battalion's command post, liaison takes the form of speaking face to face. If they are not in the same place, the supporting artillery battalion can send a radio set or a liaaison man to effect the liaison. For liaison with the tank fendui, for example when the battalion does not have a radio set attached for this purpose, the command tank can be ordered to deploy near the battalion or company command (observation) post, and through combat command can be directly exercised through the command tank.

The higher level is responsible for organizing radio set communications between the company and the higher level, which sends a walkie-talkie (handie-talkie) man carrying a Type 884 silicon two-watt radio set, to the company, and he effects liaison within the higher level's command net (dedicated). The company is responsible for organizing radio set communications between the company and its platoons and attached fendui. Usually a company command net is formed with Type 861 radio sets, a net which includes a radio set for the company commander, the company political instructor, the deputy company commander, each platoon level, the logistics support team, and the attached fendui. Under circumstances in which fairly many channels are allotted and the condition of the equipment permits, in order to overcome mutual interference and enhance the timeliness of communications, the company can set up two nets: one net includes the radio sets of the forward position fendui and its attached fendui; the other net includes the radio sets of the in-depth fendui and the attached mortar fendui.

b. Wired Communications

The regiment is responsible for setting up wired liaison between the battalion and the regiment. For each infantry company, the weapons units directly controlled by the battalion, and the battalion's logistics, the battalion should, based on communications equipment and personnel augmented by the higher level, organize wired liaison. Wired communications with a friendly nearby battalion is usually effected through telephone; when there is abundant equipment, this kind of wired communications can be set up in accordance with the principle of going from right to left. Wired liaison with a supporting artillery battalion is usually handled by the higher level's telephone station.

In a battle of fortified position defense, the wired communications between battalion and company and between company and platoon are effected by communication lines that combine underground cables and field circuits.

c. Mobile Communications

Mobile communications are a widely used method of liaison during a battle of defense. They have an important effect on insuring command. Mobile communications between the higher and lower levels is a method in which, based on need, signal personnel are mutually sent by the levels.

d. Simple Signal Communications

Simple signal communications are an effective supplementary communications medium. The instruments for simple signals are: signal flares, signal lamps, tracers, alarms, and identification panels. When sending simple signals, besides strictly implementing the signals (signs) uniformly stipulated by the higher level, one may, based on need, make necessary supplements. However, the supplementary signals (signs) must not be mixed up with those stipulated by the higher level, and they must be reported to the higher level for the record. For aircraft liaison, identification panels and smoke and fire equipment are usually used to show the place of our forward positions and the direction of defense. By light and smoke signals, airmen indicate "I am your own aircraft."

2. Communications and Liaison at Each Stage of a Battle

When making preparations to defend against enemy fire, the focus should be on insuring that priority is given to transmitting warning signals and on directing all fendui to swiftly take cover, and on insuring unblocked liaison with the higher level, forward position fendui, and antiaircraft duty fendui.

When holding forward strongpoints to resist the enemy's successive assaults, the focus should be on insuring the command of fendui which are in the main direction and which are holding forward strongpoints. At this time, all radio sets should be turned on and be on call; there should be strengthened defense of wired communications circuits; and observers should strengthen their observations and make a point of distinguishing the enemy's signals from ours.

When wiping out the enemies who have broken through, the focus should be put on insuring the command of fendui in the sectors broken through by the enemy and the fendui making a counterassault, as well as on insuring the coordination between the relevant fendui of the counterassaulting fendui.

When holding in-depth strongpoints and smashing the enemy's outflanking encirclement, the focus should be put on insuring liaison with the higher levels, the supporting fendui, the artillery, and the fendui holding the in-depth strongpoints. When part of the position is encircled, radio communications with the surrounded fendui should be strengthened. If liaison is difficult, nearby radio sets can be used or radio sets can be sent to pass on messages. When the position is completely encircled by the enemy, radio sets are the main means of insuring command and of guaranteeing liaison with the higher level, and according to the higher level's instructions, liaison should be swiftly effected with supporting fendui.

When fighting a battle to hold tunnels (galleries), The focus should be put on insuring liaison with the higher level and between all tunnels of one's own fendui. All radio sets should keep watch, and the radio sets on the surface position must give consideration to the radio sets in the tunnels (galleries) and when necessary pass on messages for them. Wired communications will mainly effect liaison by underground cables. For courier communication, use can be made of favorable opportunities at night or the exhaustion of the enemy to dispatch messengers to effect liaison. For simple communication, instruments such as signal flares, tracers, and bugles can be used to effect liaison with fendui outside the tunnels (galleries). When communications and liaison are cut, vigorous action should be taken to effect liaison with the higher levels.

H. Protection Against Nuclear and Chemical Weapons

Organization and Preparation

Organizing observing and reporting duties

Observation posts (personnel) usually perform the duties of observing and reporting attacks by enemy nuclear and chemical weapons. Their missions are: discover signs of an attack by enemy nuclear and chemical weapons; outline and determine the position and distance of the nuclear explosion, and judge the form of the explosion and the direction in which the radiation cloud is moving; judge the place of the chemical weapon attack and the direction in which the toxic cloud cluster is drifting; and promptly, accurately, and with priority issue and transmit alert signals.

Setting up mass defense organizations

In accordance with the higher level's instructions and on the basis of peacetime organizations, set up sound NBC defense first aid, rush-repair, and other wartime mass defense organizations, and make their missions clear.

Increasing the protective capability of field works

Adding protective doors, air-tight doors, and toxic-filter ventilation to the shelters of tunnels (galleries) and other collective protection field works. The original facilities should be rush-repaired, protective screens should be added to escape chutes and trench shelters, and inflammable places outside the field works should be smeared with mud.

Preparing protective equipment

The fendui should conscientiously organize the work of requisitioning, inspecting, repairing, and distributing chemical defense equipment. It should mobilize the masses to widely collect and make simple protective equipment and as much as possible, increase the reserves of protective equipment. Based on need, some protective equipment can be distributed beforehand and depositied in the field works of each strongpoint. In addition, based on the higher level's instruction and on the likelihood that the enemy will use biological weapons, the fendui should timely organize all its personnel to take preventive medicine and get preventive innoculations.

Protection against attacks by nuclear and chemical weapons

When receiving a nuclear attack alert-- Upon the alert's swift transmission to the fendui: the observation post (personnel) and the on-duty personnel should make good preparations for protection and continue observations; the remaining personnel should rapidly go into tunnels (galleries) or concealed field works for their protection; and the chemical defense reconnaissance team and the NBC defense group should at all times make good preparations to carry out their missions. When there is the flash of a nuclear explosion, the observation and on-duty personnel should swiftly make use of field works for their protection. After the shock wave passes, they should promptly organize rush-repairs, first aid, and fire extinguishing. The observers should immediately make observations; the chemical defense reconnaissance team or the NBC defense group should constantly measure whether there is a subsidence of the radioactive cloud and carry out radiation reconnaissance; and the commander should quickly report the situation to the higher level.

When fighting a battle in a contaminated area-- The personnel are to put on protective gear, and as much as possible, make use of covered field works to protect themselves; and the commander should, based on the enemy's situation and the contamination inside the position, flexibly direct the fendui's battle movements so that, as much as possible, the fendui avoids sectors where there is fairly heavy contamination.

When attacked by enemy chemical weapons-- Upon the issuance of the alert signal: the observing (on-duty) personnel are to swiftly put on protective gear and continue to carry out their missions; the remaining personnel are to quickly enter the concealed field works and close the airtight doors or put in place the antitoxicant portieres; and the chemical defense team or the NBC defense group is to be promptly dispatched to conduct chemical reconnaissance or organize first-aid and decontamination.

When the enemy discharges toxicants at the tunnels (galleries)-- Upon the issuance of the alert signal: on-duty personnel should put on gas masks and keep watch on the enemy, and with firepower control the tunnel (gallery) entrances; the sentry personnel in the tunnels (galleries) should quickly close the protective, airtight doors and switch on the toxicant- filter ventilation; the commander should instruct the chemical defense reconnaissance team or the NBC defense backbone elements to make regular checks of the passageways and of the tunnel (gallery) inner rooms; and when they discover contaminated air, they are to direct all personnel to put on their gas masks and to take measures when the source is ascertained; and when the antitoxicant facilities of the tunnel (gallery) are damaged or lose effectiveness, the commander, as the situation warrants, is to organize the fendui to disperse for protection, cut off areas for protection, or put on gas masks for protection.

Chapter Six: Coordinated Movements

Coordinated movements are the movements in coordination together by all service arms, special arms, and special units (fendui) to perform a common operational mission in accordance with the combat objective, time, and place.

Political unity as one, unified tactical thinking, and a high degree of unity and concentration of command are the bases for coordinated movements. Being familiar with the principles of the function and effect of all kinds of technical weapons and equipment, mastering the combined arms tactics of all arms (branches) of the service, and accurately estimating the various objective factors that affect operational actions are the important conditions for organizing coordinated actions well. The foundation for organizing coordinated movements is: 1) the higher level's operational plan and its instructions (plan) for coordinated movements; 2) the mission and decision at one's own level; 3) the enemy's operational plan and his tactical characteristics as well as the terrain in the operational area; and 4) the stong points and operational capabilities of all the subordinate fendui and the augmented fendui of all arms.

The infantry fendui commander is mainly responsible for organizing the coordinated movements of the fendui of all arms and all subordinate fendui within the battle formation at his own level. With regard to his subordinate infantry fendui, he usually organizes the coordinated actions of fendui at the next lower level and the fendui that are independently performing missions, and sometimes he will also organize the coordinated movements of fendui at the next two lower levels in the main direction of operations. With regard to the special arms and the specialized fendui, the coordinated movement of all those directly controlled at one's own level are organized by that level, and the coordinated movements of those attached to the next lower level are organized by the next lower level. Based on the higher level's instruction, he decides through consultation with friendly nearby units on the support at their joining parts and other coordinated movements, as well as decides through consultation with the local armed forces on relevant coordination matters.

I. Principles of Coordinated Movements

When the Navy or Air Force are coordinating with an Army operation, the Army is made primary; when there is a sea landing operation, the Navy is made primary during sea transport (ferry); in coordination among various units, the unit that is performing the main mission is made primary; when local units or milita are coordinating with an operation by the main formation, the main formation is made primary; and when nuclear weapons are used, the actions and firepower of all units should be coordinated with the nuclear firepower, and full use should be made of the latter's shock effect. All arms should vigorously support the battle actions of the infantry and the tankmen, and the infantry should take the initiative to help all the arms overcome their difficulties. When tanks are directly coordinating with an infantry operation, the tanks should vigorously lead and support the infantry battle. The infantry should indicate targets to the tanks, vigorously wipe out the enemy's antitank weapons, and cover the tanks' battle actions. The local units and the militia should vigorously coordinate with the main formation, and the main formation should also coordinate as one with the local units and the militia in waging the battle.

II. Basic Methods of Organizing Coordinated Movements

A. Deciding on the Plan for Coordinated Movements

After the infantry fendui commander makes the decision to give battle, he should decide on the plan for coordinated movements. The methods are:

1. Divide the Battle into Stages or Times. These should be decided on the basis of the following factors: the nature of the battle, the probable actions of the enemy during the battle, and the probable course of development of the battle. The purpose of this is to organize coordination in order of priorities and key points. A battle of attack is usually divided into the stages of moving forward and deploying, fighting to break through the enemy's forward line, and fighting in depth. Sometimes it is not divided into stages, but is directly divided into certain times in accordance with the course of the battle, for example: the time of occupying the assault start position; the time of making fire preparation; the time of opening routes; the time of attacking and annihilating the enemy in his strongpoints; the time that the second echelon enters the battle; and the time of resisting the enemy's counterassault. A defensive battle is divided into the stages of the battle in front of the forward line, the battle to hold the first echelon's position, and the battle in our depth. Also, based on the course of the battle and in accordance wtih the mission, the battle can be divided into the stage of hitting the enemy who is approaching and who is deploying or occupying the attack (assault) area and of defending against the enemy's fire attack; the stage of holding the forward line position and of resisting successive assaults by the enemy; the stage of launching a counterassault to wipe out the enemies who have broken through; and the stage of holding tunnels (galleries). The roughness or fineness of the division of the battle into stages and times should be decided by the convenience for organizing coordinated movements.

2. Anticipate the Battle Situation. Based on the tactical characteristics of the enemy and ourselves, we envisage the basic posture of the two sides at each stage in the battle's development. Sometimes the enemy is made primary and at other times we are made primary, so that in the coordinated movements of all fendui there is a clear, focused nature.

3. Make Clear the Coordination Methods. Based on the decision to give battle and the anticipated situation, the missions and the sequence of actions of all fendui are specified and made clear, the relationships of their coordinated movements and the methods of their mutual support and coordination are determined, and to the greatest extent possible they display their strong points and power, so that they form a united, integral force. Usually the missions and the action methods are stipulated according to the order of first subordination then attachement, first the first echelon and then the second echelon (reserves), first the main attack and then the secondary attack, or according to the order of infantry, artillery, tanks, engineers, chemical defense units...in order to avoid omissions. Thus, there will be close cooperation and coordination as one in the actions of all fendui. If there is a time when the mission of a friendly nearby unit will be affected, the fendui commander should take the initiative to coordinate with this unit.

4. Stipulate Signals (Signs) for Coordinated Movements. When taking action within the higher level's purview, the signals (signs) stipulated by the higher level are usually used. When there are not enough signals others can be stipulated, but they must be reported to the higher level for the record, in order to avoid adversely affecting the battle because of confusion about the signals. When the air arm supports the battle, the fendui commander should make clear the method of indicating the position of his own fendui and the signals (signs) that distinguish our aircraft.

B. Organizing Coordinated Movements

The fendui usually consults the plan for coordinated movements and organizes the coordination on the spot, and, as the situation warrants, can also organize the coordination on the sandtable. Generally, coordination is organized at the same time as oral battle orders are issued, and coordination can also be independently organized after the oral battle orders are issued. When the fendui commander organizes coordination, he usually should first listen to the opinions and suggestions of the lower- level commander and the commander of each reinforced fendui commander. When time is pressing, he can directly make his orders clear. There are two ways of organizing coordination. One way is the one-time centralized organization, namely, the commanders of all the subordinate and augmented fendui are brought together and at one time the organization of the coordinated movements for the course of the entire battle is finished. The second way is the separate, time-by-time organization, namely, in accordance with the sequence of first echelon and second echelon (reserves) or the sequence of infantry fendui and the fendui of the various arms, the organization is done stage by stage and unit by unit.

1. The General Content of Coordinated Movements in a Battle of Attack

When moving forward, deploying and occupying the attack start position, the commander should make the following clear: the time, method, line, alignment, and start area for moving forward, the time and area for deploying, and the time and place for occupying the attack (assault) start position; the missions of the reconnaissance fendui and the guard fendui, and the time, line, and method of communications and liaison for their moving forward; and the time of moving forward and the method of providing cover for the artillery fendui and the antiaircraft machine gun fendui that are tasked with providing cover.

When making fire preparation, the commander should make the following clear: the time to begin and the time to sustain artillery fire preparation, targets to be neutralized and destroyed, and the method of supporting the infantry and tank battle; the time for direct-fire guns to occupy the firing position, the mission of those taking part in artillery fire preparation, and the target to be destroyed; the time and line for the tanks to move forward and make an assault, the number of tanks taking part in direct fire, and the firing position, targets and time to sustain the fire; and when the air arm takes part in the fire preparation, the commander should make clear its targets to attack, the time of the attack, the signals for ground-air liaison, as well as the method of indicating the position of the fendui.

When opening routes, the commander should make the following clear: the times, number, places, and methods of opening routes; the differentiation of missions; the troops and equipment to be used and their organization into groups; the method of indicating routes; the time limit for completion; and the covering mission of the artillery and the first echelon.

When making the assault, the commander should make the following clear: the time for the artillery to shift its fire, the mission and method of supporting the assault by infantry and tanks, and the actions of the first echelon in launching the assault to attack and annihilate the enemy in the forward line strongpoints; the times for the tanks to make an assault and go beyond or reach the first echelon's battle formation, the method of their guiding or supporting the infantry, and the mission, time of advance, direction, and line of the second echelon (reserve).

When the second echelon (reserve) enters the battle, the commander should make the following clear: the current enemy situation; the time, line, area, and mission for entering the battle; the number of augmented weapons to transfer; the methods of support, and relevant coordination matters; the targets that the artillery should neutralize, the times to begin and sustain the artillery fire attack, and the methods of supporting the battle of the second echelon (reserve); the direction for the first echelon to continue to develop its attack and the missions and methods for insuring that the second echelon (reserve) enters the battle; the support by the engineers and chemical defense troops and the missions and coordination methods for insuring that the second echelon (reserve) enters the battle; and the times, directions, and places for command posts and observation posts to shift.

When resisting the enemy's counterassault, the commander should make the following clear: the intent, time, military force, and direction of the enemy's counterassault; the key points for the infantry and tanks to hold and their action to resist the enemy's counterassault; the artillery's mission and method of support, the sector for blocking fire, and the mission and deployment area for direct-fire guns; and the missions and methods of action of the engineers and the chemical defense troops.

When annihilating an enemy tenaciously defending strongpoints, the commander shouldl make the following clear: the enemy's military force, deployment, and intent; the mission, deployment area, and targets of attack of the infantry and tank fendui; the targets and the beginning and sustained forces of the artillery fire attack; the position, mission, and methods of supporting the infantry and tank battle of the direct-fire guns; the composition and mission of the fendui that are to delay the enemy reinforcements; the missions and actions of the fendui of other service arms and the reserve; and the time and signal for launching the attack.

When pursuing and annihilating a retreating enemy, the commander should make the following clear: the direction of the enemy's retreat; the composition and mission of the military forces that are to make parallel pursuits and attacks and tracking pursuits and attacks; the mission of the artillery to block with its fire the retreating enemy; the area in which the engineers are to rapidly set up obstacles; and the positions of the command post and the observation post.

2. General Content of Coordinated Movements in a Battle of Defense

When striking at the enemy who is approaching and occupying the attack start area, the commander should make the following clear: the missions, action areas, and lines of the reconnaissance fendui and the harassing attack fendui; the mission of the guard fendui and its methods of coordinating with other fendui; and the military forces, mission, and position site of the artillery that is occupying a temporary firing position.

When defending against the enemy's fire preparation, the commander should make the following clear: the time to take cover and the protective measures of each fendui; the missions of the observation post (personnel), the antiaircraft weapons, and the on-duty antiaircraft fendui; the military forces and measures for stopping the enemy from opening routes; the sectors, methods, and requirements for the engineer fendui to rapidly set up obstacles; and the times and places to use smokescreens.

When holding forward line positions and resisting successive assaults by the enemy, the commander should make the following clear: the method for the first echelon to resist the successive assaults by the enemy; the military forces and time for the second echelon (reserve) to strengthen the defense of the forward line positions; the times for the artillery to fire and the sectors for its neutralizing and blocking fire; the time and place for deploying antitank weapons and the methods of coordinating them with the infantry; the times, number, and places for the engineer fendui to move forward and rapidly set up obstacles.

When mounting a counterassault to wipe out the enemies who have broken through, the commander should make the following clear: the military forces and intent of the military forces that have broken through; the military forces, direction, deployment areas, and start time of our counterassault; the misison of the holding fendui in the direction of the counterassault, and the military forces and actions coordinating with the counterassault; the starting and sustained times of the artillery fire attack, and the targets to be neutralized or blocked; and the missions and methods of coordinating with the infantry of the antiaircraft machine gun fendui and the engineer fendui.

When in a battle to hold tunnels, the commander should make the following clear: the mission of the fendui holding the tunnels, and the measures and methods for protecting tunnel entrances; the key strongpoints to be guarded by the fendui holding positions on the surface; the mission, the military forces, and the targets and areas to be neutralized or blocked by the artillery supporting the fendui holding the tunnels; and the methods of restoring destroyed communications and liaison. When mounting the counterassualt in coordination with the higher level's reserves, he should make clear all the holding fendui and the methods of coordinating with them.

III. Coordination with Fendui of Each Arm

A. Coordination with Artillery Fendui

The higher level organizes the coordination of the infantry fendui with the supporting artillery fendui. One's own level organizes the coordination with the attached artillery fendui, and the content and methods are:

1. Briefing the Artillery Fendui on the Situation and Listening to Reports and Suggestions

The infantry commander should brief the artillery commander on the enemy's situation, the higher level's intent, the mission of his own fendui, the main attack point or the defense point, the deployment of military forces, as well as the infantry's battle action plan. The artillery commander should report to the infantry commander on the establishment and equipment of the former's fendui, the fendui's capability for completing the mission, its present position, the number of artillery shells it is carrying, the fire mission given to it by the higher level, and the time it will need to complete fire preparation. At the same time he should make suggestions on the artillery's battle formation and deployment, the application of its firepower, and the methods for infantry-artillery coordination, as well as bring up problems which require the infantry's help to solve.

2. On-the-Spot Organization of Coordination

The infantry and artillery commanders should jointly make surveys and organize coordination on the spot. During a battle of attack, a unified operational advance plan should be the basis for coordination with the attached artillery, and the goals (targets), times, and places should be made clear; as should the actions at each time of the infantry and tanks, the missions and supporting methods of the artillery at each time; and the measures and coordination signals (signs) for communications and liaison. The coordination of movements with the supporting artillery is usually made clear by the higher level. The main thing is to understand the higher level's artillery's plan in the direction of the fendui, its firing mission, its method of fire support, its time for sustaining fire, its coordination signals (signs), and other relevant matters.

During a battle of defense, for coordination with the attached artillery, the commander should make clear the common topographical markers, the terrain names, and the numbers of positions and targets; the artillery's actions at each time in its support of the infantry battle and its targets, times, and method of firing; the time and method of shifting the artillery position during the battle; the methods of indicating targets and of effecting communication and liaison; and the signals for calling fire, shifting fire, and stopping fire.

For coordination with the supporting artillery, there should be joint consultation on the mission of supplementary fire, the method of providing fire support at each time, and other coordination matters.

In addition, the commander should understand, in the higher level's artillery's plan in his own fendui's direction, what kind of fire there will be, the times of fire, the period it is sustained, and the signals and rules for it, in order to coordinate with the fire of the higher level's artillery.

3. Close Deployment of Command (Observation) Posts

The infantry and artillery command (observation) posts should as much as possible be deployed together or near to each other in order to effect infantry-artillery face-to-face coordination and to handle promptly and effectively various situations. When they cannot be deployed together, they should be linked by wired and wireless liaison, and simple and easy comunication should be organized. During the battle, the artillery's command and observation posts should as much as possible accompany the infantry's command and observation posts in their shifts of position. When they cannot accompany them in their shifts, an advance observation team should be dispatched to follow the movement of the infantry fendui in the first echelon in order promptly to indicate targets and observe fire effects. When necessary the advance observation team can directly command the fire of the artillery position.

In addition, the infantry should promptly, through the artillery's advance observation team, directly call for fire from the artillery.

4. Integration of the Coordination Plan and Temporary Calls for Fire

The infantry and artillery must strictly observe the rules for coordination, and, in accordance with their missions, times, and places, act in coordination as one. When changes occur in the situation, the infantry should, in accordance with the signals and the methods of indicating targets stipulated beforehand, call for artillery fire. The artillery should pay attention to and observe the actions and signals of the infantry and promptly provide fire support.

5. Promptly and Accurately Indicating Targets

The infantry's indication of targets for the artillery should be concise, accurate, and easy to receive. The content usually includes the firing unit, the position and nature of the target, as well as the firing mission. The methods of indicating targets are usually of the following kinds:

a. Use of Common Topographic Markers. When the infantry and artillery command posts and observation posts are not far from each other, and there are common topographical markers in their vicinity, use can be made of the common topographical markers to indicate targets. For example: "Attention Huanghe River (the artillery's codename)! On a small height 150 meters to the right and 300 meters from the No 2 topographical marker, there is an enemy command post. Neutralize it!"

b. Use of Terrain Bearings When there is no topographic marker near the target, the target can be indicated by terrain bearings. For example: "Attention Huanghe River! There is an enemy antitank missile 200 meters east and 300 meters north of the highway bridge. Destroy it!"

c. Use of Precise Coordinates or Outline Coordinates

d. Use of Tracers

B. Coordination with the Tank Fendui

The higher level organizes the infantry fendui's coordination with the tank fendui. The infantry fendui commander, based on each one's mission and the higher level's instruction for coordinated moveoment, then holds joint consultation on matters concerning the coordination of movements. The coordination with the attached tank fendui is organized by one's own level. The content and methods of the coordination are:

1. Giving Briefings on the Situation, Listening to Reports and Suggestions

The infantry fendui commander gives timely briefings to the artillery fendui commander on the situation of the enemy and ourselves; the higher level's operational plan; the infantry's mission; the deployment of military forces; the main attack point or defense point; and the terrain and road conditions. He conscientiously listens to the tank fendui commander's reports and suggestions, the contents of which are: the position of the tank fendui; its military and political quality; the condition of its vehicles and weapons; its capability for performing its mission; its organization of POL and ammunition replenishment during the battle and of technical support; the mission given by the higher level and the direction and pattern of using the tanks; and the problems that need the infantry fendui's help in solving and suggestions for the relevant coordinated movements.

2. Organization of Infantry-Tank Coordination

Infantry-tank coordination is usually organized at the same time that on-the-spot missions are stipulated and together with the coordination with other arms. When necessary it can be done independently. If time is pressing, the organization can be done while advancing, and after reaching the battle area it can be further clarified and supplemented.

When the infantry commander is organizing coordinated movements with the tank fendui, in the battle of attack he should put stress on making the following clear:

a. The time the tank fendui is to occupy the firing position after it arrives at the deployment area; and the infantry's method of covering the tanks' deployment.

b. The times for beginning and sustaining fire preparation, and the positions of tank routes and the method of indicating them; and the time for tanks to take part in direct fire and the targets to be destroyed.

c. The lines of the tank assault, and the area and time they will overtake the infantry battle formation; the order, formations, and methods of mutual cover of infantry and tanks passing over routes.

d. The methods of surrounding and annihilating the enemy in a strongpoint and of resisting an enemy assault; and of effecting infantry-tank coordination to pursue and annihilate a fleeing enemy.

e. Coordination Signals (Signs)

In a battle of defense, stress should be put on making the following things clear to the tank unit:

a. Methods of supporting the battle of the battle-alert fendui and of covering its withdrawal.

b. Actions to stop the enemy from approaching our defense forward line and to coordinate with the infantry when resisting the enemy assault.

c. Actions when supporting the infantry in wiping out enemies who have broken through.

d. Actions when coordinating with the infantry holding key strongpoints and when stopping the enemy's outflanking encirclement.

e. The methods of communication and liaison and the coordination signals (signs) stipulated.

3. Communications and Liaison Methods for Infantry-Tank Coordination

a. Radio Communications. When the tank fendui gets augmented radio sets, it should send representatives carrying radio sets to the infantry fendui's command post to set up radio communications. When it does not get augmented radio sets from the higher level, radio communications between the infantry and tanks can be passed on through the higher level.

b. Simple Signal Communications. To indicate targets to tanks, usually signal flares, tracers, and smoke shells are fired in the vicinity of the tanks to directly point to the targets; when required to overcome obstacles, stipulated signals can be sent in the direction of the obstacles by signal flares; when infantry are required to ride on tanks, stipulated signals can be sent by semaphore or lamplight from a position convenient for the tanks to observe; and if the tanks want the infantry to move forward, they can issue stipultaed signals by means of their tail lights.

c. Communication by Using the Telephone Jack on the Outside of a Tank. This is mainly used for communications and liaison when the infantry are riding on tanks. After the commander of the tank-riding fendui gets into his vehicle, when he must communicate by telephone with the tank fendui commander (tank commander), he first calls the other tank crew member, who will put the telephone switch in the receive "call" position, after which he can directly communicate by phone with the tank fendui commander (tank commander).

In addition, during the defense wired telephonic communication can be set up. The method for this is: a telephone unit is set up at the driver's position inside the tank, connecting the driver by telephone with the outside, and the driver then communicates with the higher-level commander by means of the telephonic instrument inside the tank.

C. Coordination with Engineer Fendui

When an engineer fendui is attached to or supporting the infantry in the carrying out of its operational mission, the infantry fendui commander should,

based on the higher level's instructions for engineering support, organize the coordination. He should make clear: the mission of the engineer fendui and the method, time limit, and requirement for completing the mission; the content of the coordination and the method for mutual support; the situations that could arise and the plan for handling them; and the methods for communications and liaison and the signals (signs) stipulated.

1. When Placing Explosive-Type Obstacles. The infantry fendui commander should make the following clear to the engineer fendui: the position, scale, form, and type of the obstacles to be placed; the density of and the requirements for the obstacles; the method of operation and its measures and the beginning and completion times for the cover operation; and the method of requisitioning engineering equipment.

2. When Opening Routes. The infantry fendui commander should make the following clear to the engineer fendui: the placement situation (frontage, depth, density, form of placement) of the enemy's obstacles; the position, number, width, and depth of the routes to be opened and the method of indicating them; and the time and means for opening the routes, the methods of coordinating with the infantry fendui, and the measures for the covering operation.

3. When Carrying Out Demolition Operations. The infantry fendui commander should make the following clear to the engineer fendui: the positions, numbers, and degree of destruction of the targets that need demolition; the time, method, action line, and covering method for carrying out the demolition; and the action plans when the demolition succeeds or fails as well as the signals (signs) for coordinated movements.

At the time of the engineer fendui's operation, the infantry commander must organize personnel and fire cover. When the enginner fendui takes fairly many casualties or has difficulty in completing its mission, the infantry fendui must timely take over the work or help the engineer fendui to complete its mission.

D. Coordination with Chemical Defense Fendui

1. Coordination with Chemical Defense Observation Fendui

A chemical defense observation fendui is usually controlled and used by a division, which has it set up a chemical defense observation post that is integrated with the assigned infantry and tank observation posts. When the chemical defense observation post is set up in the infantry fendui's area of action, the infantry fendui should take the initiative to establish coordination relations with it, and they should report to each other on situations. When the observation post is attacked by the enemy, the infantry fendui should cover it.

2. Coordination with Chemical Defense Reconnaissance Fendui

When a chemical defense reconnaissance fendui is attached to the infantry fendui, the commander should listen to its reports and suggestions, and get an understanding of its military and political quality and its capability for

completing its mission; and he should brief it on the relevant enemy situation, terrain, and his own fendui's battle plan, and as the situation warrants make appropriate demands on it. Before the chemical defense reconnaissance performs its mission, the infantry fendui commander should give it a clear briefing on the enemy's situation, the situation of being attacked, the line for moving forward, the focii and requirements for reconnaissance, the methods for communications and liaison and for making reports, the time limit for completing its mission, and the division of work and coordination with the NBC defense team. When it is doing reconnaissance under the treat of enemy fire, he should organize fire cover. When the higher level sends chemical defense reconnaissance to his fendui to support it, he should promptly make connections with the reconnaissance fendui and send the NBC defense team to help it; when necessary he should organize fire cover.

3. Coordination with Flamethrowing Fendui

When an infantry fendui is augmented by a flamethrowing fendui, the commander should promptly get an understanding of its military and political quality, the number and quality of its weapons, POL, and fillings, and its capability for completing its mission. He should listen to its suggestions for its use in the battle. When organizing coordination he shouldl make clear the following: flamethrowing targets, route of movement, and actions after flamethrowing. He should make clear the times and sequence of the actions by the infantry and the flamethrowing men, the method of fire cover, and the signals (signs) stipulated. When the flamethrowing men are approaching the enemy, the covering fendui should neutralize the enemy's firing points with fierce fire to cover the flamethrowing men's swift approach to their targets. The demolition team (man) should make a point of observing the results of flamethrowing, act as the occasion demands, and wipe out the targets. When the flamethrowing by the flamethrowing men proves effective, the infantry should not lose the opportunity to charge at the target and annihilate the enemy. During the battle, the infantry fendui commander should make regular checks on and control the consumption of the flamethrowing POL, and make use of intervals in the battle to timely arrange for replenishment.

E. Coordination with the Air Arm

The infantry's coordination with the air arm should be effected in accordance with the ground-air coordination plan. The infantry fendui commander should make clear to all subordinate fendui the air arm's predetermined targets of attack, the time of this activity, and the method of effecting ground-air liaison; and the subordinate fendui should strictly go by them. The forward line fendui that is being directly supported by the air arm should, whenever necessary, report to the Air Force target-guidance team its specific position and the actual distance between it and the air arm's predetermined target of attack. To prevent accidental casualties to itself, the infantry fendui should maintain a suitably safe distance between itself and the target of the air arm's attack. The safe distance depends on the factor of the weapons used by the air arm, the method of attacking the target, weather conditions, and the technical level of the flyers. The safe distance is usually not less than one kilometer. Based on the safe distance, a bombing safety line should be delineated. The infantry fendui should also makefa point of observing the results of the air arm's attack and not lose the opportunity to make use of them.

Principal Methods of Ground-Air Liaison

1. The Infantry Fendui's Identification of Our Aircraft There are four principals methods for this: The first is based on identification by stipulated Army, Navy, and Air Force identification signals (signs). When our aircraft enters a battle zone, they will usually issue the ground-air liaison signals stipulated for that day (for example, releasing colored smoke traces, firing smoke signal flares, and turning on and off navigation lights or flash lamps) to show that they are our aircraft. The second is based on differentiation by our aircraft's flight forecast. Before our aircraft enter a battle zone, they usually have a flight forecast. Its main parts are takeoff and landing times, aircraft type, number of aircraft, altitude, maneuvering air area, and signals for ground-air liaison. The third is identification based on aircraft type and markings. It is based on the aircraft's course, altitude, distance, and the markings (insignia) painted on the fuselage, wing, and tail. The fourth is to identify enemy and our aircraft by looking at the characteristics of the aircraft's external shape from the angle of observation.

2. Identification of Ground Units by Our Aircraft. Besides identification based on radio reports, this is mainly identification based on visual signals. The infantry fendui can use panels, smoke and light, signal flares, and other visual signals to indicate "I am your own unit," providing its identification to our aircraft. The panels are used in daytime, where, based on the stipulations of the coordination plan, they are "⊤", "↑", "∧", and other shapes to effect liaison. When there are no panels, convenient materials such as white sheets, lime, and flags can be substituted. Smoke is used in the daytime, and fire (light) is used in the nighttime. They are arranged in such shapes as "∴" and "▪▪▪". Usually there are 50 to 100 meters between the shapes. Signal flares can be used both day and night. Usually, before our aircraft arrive, they are fired in an oblique direction to be front or side of the aircraft so that they are easily spotted by the aircraft personnel.

3. Methods of Indicating Targets During air defense, besides indicating targets by radio liaison, the infantry fendui can have mortars fire star shells or smoke shells, and have infantry fire tracers, to indicate to our aircraft the positions of targets. Aircraft can circle in the air above a target or dive at a target to show the position and direction of the target.

IV. Adjustment and Restoration of Coordinated Movements

In a modern battle, many arms take part in it, movement is fast, and the situation changes rapidly. Therefore, coordinated movements are easily dislocated or destroyed. Therefore, the infantry fendui commander must, based on the changes in the development of the battle situation, take positive, effective measures to insure that the movements of all the fendui are closely coordinated. When the coordinated movements are dislocatd or destroyed, he should, based on the higher level's general intent, the enemy's situation, the terrain, the mission of his own fendui, as well as the reason for and degree of the dislocation or destruction of coordination, promptly adjust and restore the coordinated movements.

A. Reasons for Dislocation or Destruction of Coordination

The basic reasons for the dislocation or destruction of coordinated movements are that the operation's subjective guidance and its objective reality do not tally with each other, that there are mistakes in the battle decisions and the coordination plan, or that there is inadequate estimation of the situations that could occur during the battle and thus a lack of proper preparations. The specific reasons usually are: 1) there are excessively high casualties in one's own fendui and they are unable to coordinate their movements according to the original plan; 2) a certain subordinate fendui is unable to complete its predetermined battle mission, or its battle action is seriously out of line with that of other fendui; 3) there is a major change in the higher level's decision or coordination plan; 4) major changes occur in the enemy's situation; 5) the battle actions of a friendly nearby unit suffer a setback, which has a major effect on the actions of one's own fendui; and so on and so forth.

B. Methods and Requirements for Adjusting and Restoring Coordinated Movements

1. Ascertain the Situation and Establish the Reasons

When coordination is dislocated or destroyed, the fendui commander should, by means of personally observing the battlefield and listening to the reports from the lower level and the notifications of the higher level and friendly nearby units, as fast as possible ascertain the posture of the enemy and ourselves and the degree of dislocation or destruction of coordination, analyze and determine its reason and its effect on the completion of the battle mission, and make adjustments and restore the basis for coordinated movements.

2. Base Oneself on the Overall Situation and Take the Initiative To Coordinate

When the higher level's decision and coordination plan change, or when there is a setback in a friendly nearby unit's battle action that causes a dislocation in the coordination of one's own fendui, the fendui commander should establish the concept of the overall situation and, based on the higher level's intent and the general posture of the enemy and ourselves on the battlefield, rapidly adjust the original coordination plan, direct and coordinate the actions of all subordinate fendui, and vigorously coordinate the battle of the fendui or friendly nearby units that are performing the main mission. All the subordinate fendui should resolutely execute orders and instructions, display their dynamic role, and with vigorous battle action take the intiative in cooperation and closely coordinate.

3. Grasp the Opportunity for Battle and Gain Advantages According to Circumstances

When there is a mistake in the decision and coordination plan at one's own level, or a major change in the enemy's situation destroys the coordinated movements, the fendui commander should judge the hour and size up the situation, ascertain the enemy's operational intent and actions, weigh the advantages and disadvantages and the gains and losses, timely revise the

decision and the coordination plan, make use of the enemy's weak points, cleverly change tactics, fight while organizing coordination, and adjust the deployment and actions of all fendui so that they coordinate as one and form an advantageous posture.

4. Grasp the Key Points and Crucial Links

When the actions of a certain fendui are seriously out of line, causing a dislocation in the coordinated movments of the whole, the fendui's commander will observe the overall situation, grasp the principal contradiction, and put the focus of his command on the problems or movements that are important and of decisive significance. He should strengthen his command of the fendui whose actions are out of line, and order it to act strictly in accordance with the coordinated plan, and order other fendui to vigorously cooperate in restoring coordination. When necessary, he should personally follow the actions of the fendui charged with the main mission, so as to maintain the coordination of the main coordinated movements and insure the completion of the battle mission.

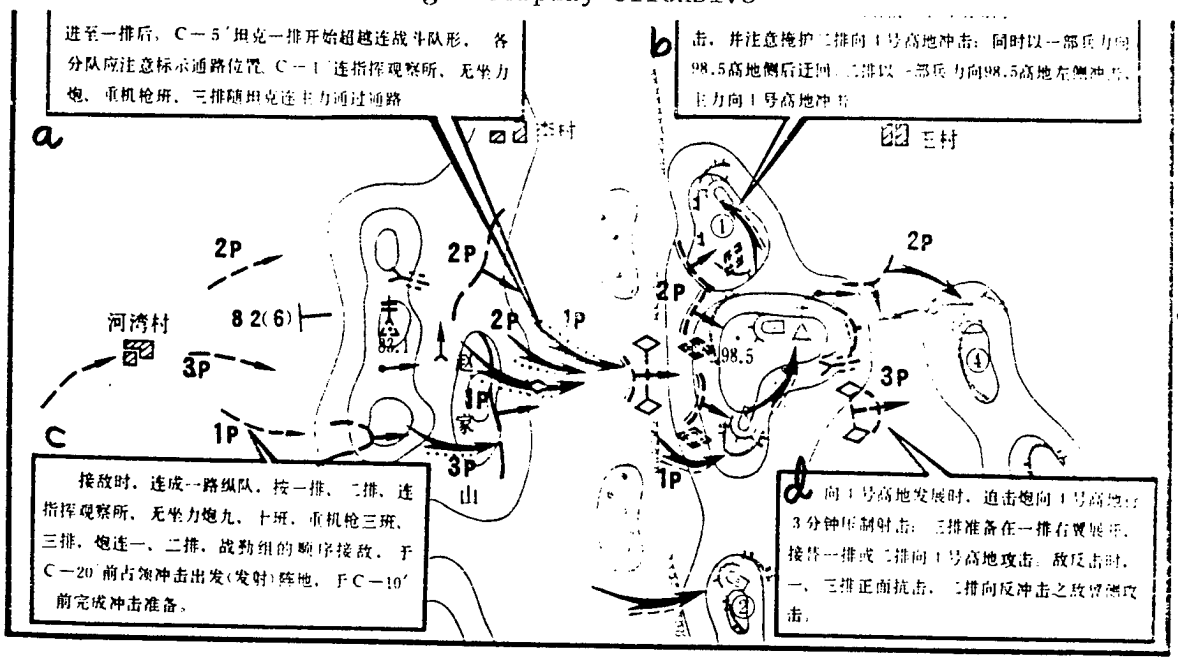
5. Fight Independently and Strive for the Initiative

When the fendui are in an extremely unfavorable plight, the coordination with the higher level and the friendly nearby units is dislocated, and liaison is cut, the fendui commander should be firm and cool-headed, on the one hand vigorously linking up with the higher level and the friendly nearby units, and on the other hand forming all the fendui under his control into one whole, displaying the spirit of fighting independently, striving for the initiative, and doing all one can to avoid passivity, so as to create with vigorous battle actions favorable conditions for the actions by the higher level and the friendly nearby units.

6. Insure Mutual Trust and Strengthen Unity

No matter what kind of complex situations the fendui encounter, the commanders should with their own exemplary actions lead the fendui in deploying and persisting in battle. Between the commanders and between the fendui there should be mutual trust and mutual support. They should strengthen political and ideological work, display our army's glorious tradition of unity in battle, take the initiative to vie for shouldering heavy burdens, overcome difficulties by concerted efforts, and win victory in battle.

Sketch of Coordination During a Company Offensive



a) When making fire preparation, at C-32' the fire preparation begins; the obstacle elimination team simultaneously opens routes, 1st Platoon should cover it with fire or support it with troops, and at C-5' 1st Platoon advances to a place 200 meters outside the enemy's forward line on routes on the two flanks; before C-3' the 2d Platoon advances behind 1st Platoon. At C-5' the 1st Tank Platoon begins to overtake the company's battle formation, and all fendui should show the position of the route. At C-1' the company's command and observation posts, the recoilless guns, the heavy machine gun squad, and 3d Platoon follow the tanks and the company's main force over the routes.

b) When assaulting, surrounding and annihilating the enemy on Hill 98.5, the mortars should conduct blinding fire at Hill 98.5, sustaining the fire for 1 minute; then the mortars should conduct neutralizing fire for 1 minute at Hill No 1. The 1st Platoon should first break through the enemy's forward line and then assault the right flank of Hill 98.5, and it should cover the 2d Platoon's assault on Hill No 4. At the same time a military force goes around the flanks and rear of Hill 98.5. The 2d Platoon with part of its troops assaults the left flank of Hill 98.5, and its main force assaults Hill No 1.

c) When approaching the enemy, the company forms one column in the order of 1st Platoon, 2d Platoon, the company's command and observation posts, the 9th and 10th recoilless gun squads, the 3d Heavy Machine Gun Squad, 3d Platoon, and the 1st and 2d platoons of the artillery company, and the combat service team. Before C-20' it occupies the assault start (firing) position, and before C-10' completes preparations for the assault.

d) When developing toward Hill No 1, the mortars conduct 3 minutes of neutralizing fire at Hill No 1; the 3d Platoon prepares to deploy on the 1st Platoon's right flank, and to take over from the 1st Platoon or 2d Platoon the attack on Hill No 1. When the enemy counterattacks, the 1st and 3d Platoons resist frontally, and the 2d Platoon attacks the flanks of the counterassaulting enemy.

Chapter Seven: TACTICAL CALCULATIONS

Tactical calculations mean the carrying out of quantitative operations on the combat effectiveness and combat actions of the enemy and ourselves as well as the related situations. Their purpose is to get data for direct use in determining situations, making decisions, and formulating battle plans.

I. Role and Requirements for Tactical Calculations

A. Role of Tactical Calculations

By means of tactical calculations we are able to get various data needed by the commander to act as the scientific grounds for his making decisions and formulating battle plans. On the battlefield, because of the intense confrontation between the enemy and ourselves, the situation is extremely complex. When a commander is making a decision, he often has several plans to choose from. To select the optimum plan that will insure the successful completion of his battle mission, he needs to demonstrate it by tactical calculations. When making his decision, by employing tactical calculations he can substantiate and correct with scientific data the estimated results of combat actions based on his qualitative analysis.

When a commander is making a decision he always tries, with the methods of grouping and using different military forces and weapons, to attain the maximum effect of their actions and to pay the minimum price for a greater victory. Through tactical calculations he can determine the indices of the effect of combat actions, like the shock effect of firepower, the time a march can be sustained, and the quantity of the enemy's weapons and ammunition that needs to be neutralized, and in the end calculate the general indices for all factors of combat actions.

In modern battles, more and more technical weapons are being used on the battlefield, making it necessary to use a large amount of tactical calculations. Following the widespread application of quantitative analysis during battle, the scientific basis for making decisions will be turned to fuller account.

B. Requirements for Tactical Calculations

The requirements for tactical calculations are timeliness and accuracy.

In modern battle situations change rapidly, imposing higher demands on the commander's speed in determining situations, making decisions, and exercising command. Therefore, the results of tactical calculations must be obtained within the time limit required by the battle situation. Tactical calculations that cannot be completed in a timely fashion, even though the calculations themselves are correct, are of no significance, because the results of the calculations cannot be used for making a decision.

If it is said that in the past errors in decisions could be corrected in the course of action, then at present the price that must be paid for errors in

decisions is difficult to make up. Therefore, besides being fast and timely, the tactical calculations must be more accurate. The accuracy of the calculations hinges on three main factors: 1) the correctness of the method used to calculate certain numerical values; 2) the accuracy of the original data; and 3) the correctness of the calculations carried out by the one doing the calculations. To achieve these things, the commander must know very well the relevant data in common use and must be proficient in the various methods of calculation.

Because in an actual battle there are many factors that cannot be calculated with precision, when making his decisions the commander not only must consider the calculated data, but also must estimate the other factors that he anticipates will influence the course and outcome of the battle.

II. Methods and Common Data in Tactical Calculations

A. Reference Data for March Column Frontage

Note: Frontage is calculated using one route; for two routes, halve the value.

Type	Frontage (m)	Interval (m)
Foot March:		
Personnel	---	1.5
Pack animals	2.5	5
Horse-drawn weapon cart and towed vehicle attached to a small horse-drawn cart	4.6	10
Towed vehicle attached to 2 horse-drawn carts	8.4	15
Infantry company (including a unit equivalent to an infantry company)	250-300	100
Infantry battalion	2000	500-1000
Infantry battalion HQ and companies	---	50
Motorized March:		
Various towed and transport vehicles	6-7	30-50
Command car (jeep)	3.35(3.85)	30-50
ATC tracked prime mover	5.88	30-50
Type M-2 tracked prime mover	4.973	30-50
T-34 tank	8.1	30-50
Type 59 medium tank	9	50
Type 69 medium tank	9.1	50
Type 62 light tank	7.9	50
Type 63 amphibious tank	8.437	50
Type 63 armored personnel carrier (501 infantry fighting vehicle)	5.51(6.74)	30-50
14.5mm twin AA MG, towed	8	30-50
14.5mm quad AA MG, towed	11	30-50
85mm cannon, towed	13.825	30-50
122mm gun, towed by tracked prime mover	14.8	30-50
122mm howitzer, towed by JF-30 prime mover	12.55	30-50
130mm field gun, towed by tracked p.m.	17.61	30-50
130mm MRL	5.4	30-50
107mm MRL, towed by Type-230 prime mover	8.51	30-50
105mm SP recoilless gun (Beijing A212)	3.8	30-50

Infantry company	250-300	200-300
Infantry battalion	2000	1000-1500
Infantry regiment	12,000-15,000	15,000-20,000
Tank company	540	100
Tank battalion	1500-2000	2000-3000
Tank regiment	9000-10,000	---

B. Formulas for Calculating March Frontage

March frontage of infantry company = distance between men x (number of men - 1)

March frontage of MG or artillery company = distance between men x (# of men - # of military pack train drivers - 1) + length of horse x # of horses + distance between horses x (# of horses - 1)

March frontage of infantry battalion = march axis of infantry company x number of infantry companies + axes of machine gun and artillery companies and battalion headquarters + distance between each unit

March frontage of regiment = axis of battalion x number of battalions + axes of regiment organizations and directly subordinate units + distance between vehicles x (number of vehicles - 1)

March frontage of motorized artillery company = length of vehicle and gun x number of vehicles and guns + length of transport vehicle x number of vehicles + distance between vehicles x (total number of vehicles - 1)

C. Calculations of March Times

The reason for calculating a march time is to determine the time needed for a fendui to move from one area to another area.

The firsthand data for calculation include: the march column's average rate of movement, the length of the line of march (from the start point or start area to the furtherest point in the new area), the road gradient, the march column's frontage, time allowed for large breaks, and the effects of weather.

Steps in and Methods of Calculation

Determine all essential factors in the calculation: 1) measure the march distance; 2) determine the march speed, with appropriate revisions to the normal speed due to the effect of terrain and weather; 3) calculate the column's frontage; and 4) determine the times for large breaks.

Calculating the march time: put the essential factors into the following formulas and perform the operations:

$$\text{March time} = \frac{\text{March distance + column frontage}}{\text{speed per hour}} + \text{rest period}$$

If you only want the arrival time of the column's vanguard, one element (the column's frontage) is left out of the formula.

Time vanguard passes adjustment point = time vanguard passes start point + $\frac{\text{distance from starting point to specified point}}{\text{speed per hour}}$ + rest period

Time needed for entire column to pass a certain point = $\frac{\text{march frontage}}{\text{speed per hour}}$

D. Calculations of Time for Vanguard and Rear Guard of March Column To Pass Start Line (Point)

The firsthand data for the calculations are: the groupings of the march formation, the march columnns' axes, the distance between the columns, the speed of movement, and the time the vanguard of the march formation passes the start line (point).

Calculation formula:

$$t1 = Ti - 1 + \frac{di \times 60}{V}; \quad ti' = ti + \frac{Gi \times 60}{V}$$

Where ti is the time the column's vanguard passes the start line (point);

Ti is the time the column's rear guard passes the start line (point);

di is the distance (kilometers) between one column and another;

V is the average speed of movement (kilometers per hour);

ti' is the time (hour and minute) the rear guard of the column passes the start line (point); and

Gi signifies the column frontage (km).

E. Formulae for Calculating the Time and Distance of a March Encounter

Probable time needed for encounter = $\frac{\text{distance between the enemy and us}}{\text{our speed of movement per hour + enemy's speed of movement per hour}}$

Probable distance of encounter = probable time needed for encounter x our speed of movement per hour

Probable time of encounter = time we start + probable time needed for encounter

The above formulae can only be applied under normal circumstances. In actual combat, it is probable that one side will be slower in beginning its

movement than the other side, or that the two sides will take a break along the way, or there will be a slowing down for other reasons. Therefore, the following formulae should be used for the expected times:

$$\text{Expected time (Note 1)} = \frac{\text{distance between enemy and us + our lost time (Note 2) x our speed of movement per hour + enemy's lost time x enemy speed of movement per hour}}{\text{our speed of movement per hour + enemy's speed of movement per hour}}$$

Probable distance of encounter = our speed of movement per hour x (expected time - our lost time)

(1) The expected time in the formulae means, from the time calculated that the two side's forces begin to approach, the passage of more time after which there will be an encounter.

(2) The lost time in the formulae is the sum of the time delay in starting, the break times, and the times of slowing down.

F. Formulae for Calculating Pursuit and Attack Time and Speed

The firsthand data for the calculations are: the distance that the enemy is from us, the speed of movement of the enemy and us, and the stipulated time limit for pursuit and attack.

Formula for calculating the time to catch up with the enemy:

$$td = D / (Vn - Vp)$$

Formula for calculating the speed of pursuit and attack:

$$Vp = (D + td \times Vp \text{ [as printed]}) / td$$

Where: td is the time (hours) needed to catch up with the enemy;
D is the distance (kilometers) of the enemy from us;
Vn is the speed of pursuit and attack (kph); and
Vp is the enemy's speed of movement (kph).

Example 1. The enemy is 20 kilometers from us, his speed of movement is 10 kilometers per hour, and our force's pursuit and attack speed is 25 kilometers per hour. Find the time it takes to catch up with the enemy.

Solution: $td = 20 / (25 - 10) = 20 / 15 = 1.3$ hrs

Example 2. The higher level wants us to catch up with the enemy within 45 minutes (0.75 hours), who is 15 kilometers from us and moving at a speed of 12 kilometers per hour. Find our force's pursuit and attack speed.

Solution: $Vn = (15 + 0.75 \times 12) / 0.75 = 32$kph

G. Calculation of Times To Cross Narrow Points on Line of March and Sectors That Are Difficult To Pass Through

Sectors that are difficult to pass through are divided by size into two types. The small sector's length is a little shorter than the frontage of the march column; the large sector's length is equal to or a little longer than the frontage of the march column.

When calculating the time needed to cross a sector that is difficult to pass through, the difference between the large and small sectors must be taken into consideration. The firsthand data for calcuating the small sector time are: number of vehicles in the column, distance between vehicles, and speed of vehicles when moving in this sector. The firsthand data for calculating the large sector time are: frontage of march column, length of sector, and speed of movement

Formula for calculating the time to cross a small sector (narrow point):

$$t = ((Nm \times dm) \times 0.6) / V$$

Where: t is the time (minutes) needed to cross a sector that is difficult to pass through;
Nm is the number of vehicles in the column;
dm is the distance (meters) between vehicles;
0.06 is the coefficient for converting hours; and
V is the march speed (kph) when crossing the difficult sector.

Example: There are 54 vehicles in the column, the distance between each vehicle is 75 meters, and the permissible speed of march when crossing the sector that is difficult to pass through is 10 kilometers per hour. Find the time it takes the march column to cross this sector.

Solution: $t = ((54 \times 75) \times 0.06) / 10 =$ about 24 minutes

Formula for Crossing a Large Area:

$$t = (Gk + D) / V$$

Where: t is the time (hours) needed to cross the area;
Gk is the frontage (kilometers) of the march column;
D is the length (kilometers) of the sector that is difficult to pass through; and
V is the speed of movement (kph).

H. Calculating the Ratio of Operational Forces

1. Elements in the Calculation. In general, only infantry, artillery, mortars, tanks, and self-propelled guns are included in the calculation. Within the tactical scope, for infantry the battalion is taken as the unit for calculation; within the campaign scope, for infantry the division is usually taken as the unit for calculation, but in the main direction the battalion is still taken as the unit for calculation. Guns should be calculated with the individual piece as the unit and separated into neutralizing guns and antitank guns. For tanks and self-propelled guns, the individual vehicle is taken as

the unit for calculation, and light tanks are normally not put into the calculation. Self-propelled guns that are put into the establishment of an artillery unit should be considered an artillery element for purposes of calculation.

2. Scope of the Calculation. For our army, we should calculate the establishment at our own level, all the attached troops and weapons, and the support weapons clearly stipulated by the higher level (calculated according to current actual strength). For the enemy army, when we are on the attack we usually calculate the enemy troops in our overall mission in depth within the battle demarcation line at our front. However, when the enemy's reserves could be used to resist our attack, although they have not been deployed within our battle demarcation line, they should be brought into the calculation. When we are on the defense, we generally calculate the enemy's troops and weapons we could encounter within our defensive area (the enemy's losses should be taken out of the calculation).

3. Methods of Calculation. In line with our own unit's (fendui's) combat mission and in accordance with the orders of infantry, artillery, and tanks, we calculate the total numbers of the enemy and us, after which we convert these totals into a ratio. The necessary data is listed in a table as follows:

Item	enemy total	our total	ratio
Infantry (unit)			
Suppressive artillery (piece)			
Antitank guns (piece)		- DATA [blank]-	
Tanks and SP guns (vehicle)			
Remarks			

I. Formulae for Calculating Ratios Between Our Antitank Units and Enemy Armored Units

$$\text{Density of our antitank units (pieces/km)} = \frac{\text{total \# of our antitank units}}{\text{our defensive frontage (km)}}$$

$$\text{Density of enemy armored units (vehicles/km)} = \frac{\text{total number of enemy armored units (vehicles)}}{\text{enemy offensive frontage (km)}}$$

$$\text{Ratio of our antitank units to enemy armor} = \frac{\text{density of our antitank units}}{\text{density of enemy armored units}}$$

J. Method of Calculating Fire Density

$$\text{Density of fire per kilometer of frontage} = \frac{\text{number of shells fired (rounds per minute)}}{\text{defense frontage}}$$

K. Methods of Calculating Number of Shells Fired by Antitank Weapons Within Direct Fire Range, Firepower and Density of Armored Target

Number of rounds of a certain type of antitank weapon fired within direct fire range = combat rate of fire x # of weapons x time taken by each tank to cross line of fire

$$\text{Average \# of rounds fired per km of frontage} = \frac{\text{sum of number of rounds fired by antitank weapons within direct fire range}}{\text{defense frontage (kilometers)}}$$

$$\text{Average density of armored targets per kilometer of frontage} = \frac{\text{sum of armored targets (vehicles)}}{\text{defense frontage (kilometers)}}$$

L. Formulae for Calculating Opportune Time for Occupying a Position

Distance to begin occupying a line (position to reach the enemy) from our forward line (or weapon firing position) = speed of enemy tank assault x time needed for us to occupy a position + shortest range to open fire

Time needed for us to occupy a position = time needed to transmit and receive the order to do so + time needed to move from concealed field works to combat field works + time needed to complete fire preparation

Time needed to move from concealed field works to combat field works = distance of concealed field works from combat field works + speed of movement

Example of Calculation: If it requires 5 seconds to transmit and receive the order, it requires 15 seconds to complete fire preparations, the minimum range for opening fire is 50 meters, the speed of movement along the trenches is 2 meters per second, the shelter is 60 meters from the combat field works, and the enemy tanks are charging at a speed of about 4.2 mps (equivalent to 15 kilometers per hour), then the distance from our forward position to begin occupying a line = 4.2 meters per second x (5 seconds + (60m/2mps) + 15 seconds) + 50 meters = about 260 meters.

M. Calculation of Time Needed To Change Position (Deployment Area)

The firsthand data for the calculation are: the distance from the new position (area, place of deployment), the speed of movement of weapons when changing positions, as well as the time needed to move out and deploy in the new position (new area).

Calculation Formula: $t = (60 \times D)/ V + t1 + t2$

Where: t is the time (minutes) needed to change position;

60 is the coefficient for converting hours;
D is the distance (kilometers) to the new position;
V is the speed of movement (kph) when changing positions;
t1 is the time (minutes) taken in moving out; and
t2 is the time (minutes) taken to deploy in the new position.

N. Calculation of the Probable Radiation Dosage Received by Personnel

The firsthand data for the calculation are: length of contaminated sector, average dosage rate on the line of march, fendui's speed of movement in crossing the contaminated sector, and degree of protection provided to personnel by the means of transport. In addition, in using this method of calculation, one can calculate maintaining a faster speed of movement when crossing a contaminated sector, so that the radiation dosage received by personnel is not higher than the stipulated norm.

Formula for calculating the probable radiation dosage received:

$$D = (P \times L)/(K \times V)$$

Where: D is the probable radiation dosage (roentgens) received by personnel;
P is the average radiation dosage (roentgens per hour) on the march;
L is the length (kilometers) of the contaminated sector;
K is the coefficient for the protective measures against radiation; and
V is the speed of movement (kph) in crossing the contaminated sector.

Formula for calculating the rate of radiation on the line of march:

$$P = (P1 + P2 + P3 + \ldots + Pn)/n$$

Where: Pi is the radiation rate (roentgens/hour) at a given point; and
n is the number of measuring points.

Example 1: The length of the radiation contamination sector is 18 kilometers, the average rate of radiation on the line of march is 78 roentgens per hour, the fendui's speed of movement is 25 kilometers per hour, and the coefficient of protection against radiation is 7. Find the probable radiation dosage received by personnel.

Solution: $D = (78 \times 18)/(7 \times 25) = 8$ roentgens

Example 2: The length of the radiation contamination sector is 17 kilometers, the average rate of radiation on the line of march is 95 roentgens per hour, transport vehicles provide a coefficient of protection against radiation of 4, and the permissible radiation dosage is not higher than 20 roentgens. Find the speed of movement that must be obtained.

Solution: $V = (95 \times 17)/(4 \times 2) =$ about 20kph

O. Estimated Efficacy of Antitank Weapons; number of rounds fired is based on combat fire rate.

Weapon Type	40mm RPG	82mm recoilless gun	85mm cannon	tank gun	ATGM
Effective direct fire range (m)	300	300	950	1070	500-3000
Time for enemy tank to charge past at a speed of 15kph	1'12"	1'12"	3'48"	4'15"	10'
Number of rounds that can be fired	4-5	5-6	12-14	20-21	20
# of rounds needed to destroy 1 tank	3-4	3-4	2-3	2-3	1
# of rounds needed given a 50% average P(H)	6-8	6-8	4-6	4-6	2
# of antitank weapons needed to destroy 1 tank	3	3	1-2	1-2	0.5

P. Calculation of the Number of Mines Needed to Set Up Mine Obstacles

The firsthand data for the calculation are: the width of the frontage covered by the mine obstacles, the density of the mines, and the density of the mine obstacles.

Formula for calculating the number of mines needed: $N = D \times P \times n$

Formula for calculating the width of the frontage covered by the mine obstacles: $D = n/(d \times n)$

Formula for calculating the density of the mine obstacles: $P = N/(D \times n)$

Where: N is the number of mines needed;
D is frontage (km) covered by the mine obstacles;
P is the density of the mine obstacles (the length of a mined area covering one kilometer of frontage; and
n is the density of the mines (number of mines within a 1km minefield.

Example 1: The frontage covered by the mine obstacles is 9.6 kilometers, the density of the mine obstacles is 0.85, and the density of the mines laid in a 1km minefield is 750. Find the number of mines needed:

Solution $N = 9.6 \times 0.85 \times 750 = 6,120$

Example 2: There are 2,850 mines, and we want the density of the mine obstacles to be 0.75 and the density of the mines laid to be 750 mines. Find the width of the mine frontage covered by the mine obstacles.

Solution: $D = 2850/(750 \times 0.75) =$ about 5km

Example 3: The width of the frontage covered by the mine obstacles is 7.5 kilometers, there are 4,760 mines used, and the density of the mines laid is 800 mines. Find the density of the mine obstacles.

Solution: P = 4760/(7.5 x 800) = about 0.8

Q. Calculation of the Areas of the Deployment and Dispersal Regions of Units (Fendui) at Various Levels

Unit (fendui)	Area of Deployment Region		Area of Dispersal Region	
	conventional conditions	nuclear conditions	conventional conditions	nuclear conditions
Infantry regiment	20-30	40-50	80 - 120	
Infantry battalion	5-7	7-9	10 - 15	
Infantry company	0.8-1	1.5-1.8	1-1.5	2-3
Tank regiment	25-30	40-50	100 - 160	
Tank battalion	5-7	7-9	10 - 15	
Tank company	0.8-1	1.5-1.8	1-1.5	2-3
Artillery regiment	6-15	---	100 - 150	
Artillery battalion	1-2.5	---	10 - 20	

Note: The area of an artillery firing position is 1km for a battalion with a gap of 1km between each battalion.

R. Calculation of Road Curve Radius

A road curve radius is the curvature radius at the central line in a curved part of a road. When building highways and determining whether guns and vehicles can directly pass over the highways during a unit's march, engineers often need to determine and calculate the curve radius of the road.

CHAPTER ONE: COMBAT SUPPORT

I. Reconnaissance

Reconnaissance consists of actions taken to obtain intelligence about the enemy's situation, terrain, and other areas relevant to operations. It is an important support for the operational actions of armed forces. The purpose is to get all sorts of reliable intelligence in order to insure that senior officers correctly make timely decisions and command battle.

A. Reconnaissance Measures

Reconnaissance measures are the specific methods of getting intelligence. When infantry fendui conduct reconnaissance, they usually adopt these measures:

1. Observation. Observation is the use of eyesight or equipment that aids observation to monitor and watch a certain region or target. It is a widely used reconnaissance measure, and can be used both when halted or on the march. A place that is concealed and convenient for observing the enemy's movements should be selected for the observation position and, according to circumstances, several observation points can be set up to find out the situation from different directions and positions; concealed close-range observation and listening can also be carried out.

2. Investigation and Interrogation. This mainly consists of finding out the needed intelligence from relevant units and masses at the place in question and from captured enemy personnel. Before interrogation, the identity of the person under interrogation should be made clear. During interrogation, attention should be paid to employing methods that prevent the disclosure of our intent. Intelligence obtained should be analyzed and assessed in an effort to make it as accurate as possible.

3. Collection of Enemy Military Documents. This means searching the areas that the enemy has withdrawn from or passed through as well as the corpses of enemy soldiers to collect enemy documents, maps, diaries, books and newspapers, and all other articles of value and then send them to the higher level for processing.

4. Wiretapping. This means using wiretapping equipment to listen in on enemy conversations and wired communications conversations. When we have a telephone or a wired inductor wiretapping device, we should tap into the enemy's wired conversation; when conditions exist for it, one can also use radio walkie-talkies to listen in on what is said over the enemy's radio handie-talkies.

5. Capture of Enemy Personnel. This means the capture of enemy personnel in order to determine the enemy situation. Usually methods of raid and ambush

are adopted, and it is a reconnaissance measure that is used frequently. When capturing enemy personnel, there should be strict organization, concealed movement, swift capture and swift withdrawal, and the captives should be prevented from causing violence, fleeing, or committing suicide.

6. Fire Reconnaissance. This is reconnaissance by firepower attacks. Its purpose is to force or lure the enemy into counterattacking in order to discover his organization of fire. When carrying out firepower reconnaissance, a good position for concealment and observation should be chosen beforehand. Fire should then be suddenly opened against the enemy. After the purpose is attained, the guns should immediately be moved away and not become engaged in battle.

7. Search. These are search activities carried out to ascertain the situation in complex and questionable land, sea, and air regions. When searching we should make full use of terrain and surface features, make good preparations for battle, make detailed observations, secretly listen, search by stages, advance by stages, and flexibly handle all sorts of situations. When leaving the target, we should make a point of observing the situation in the direction of the advance, select a good line of march, and then swiftly depart.

8. Secret Listening. This means to conceal ourselves near the enemy and listen to his activity. This is usually carried out in a concealed manner at night or when visibility is poor. Through the sound of objects striking each other, fire operations, engineering operations, steps, and the driving of vehicles, we then judge the type, nature, position, and distance of the object.

B. Dispatches and Missions

Observers. They are dispatched by the fendui commander. Their mission is: observe the deployment and activity of the enemy, the signals (signs) covered by the higher level, and the movement of their own fendui and friendly nearby fendui.

Reconnaissance Team. Usually an infantry squad or platoon tasked with reconnaissance dispatches the team, and it can also be dispatched by a company. The distance it is sent out should be decided on the basis of the enemy situation, terrain, and mission. Usually this means maintaining a distance for visual liaison with the dispatching fendui and for effective firepower support. Its mission is to ascertain the enemy and terrain situation in the target or area assigned by the higher level.

Infantry Squad Tasked with Reconnaissance. This squad is usually dispatched by a regiment or battalion or by an infantry company tasked with reconnaissance, and the squad carries out its mission on foot or in vehicles. The distance it is sent out is decided on the basis of the enemy's situation, the terrain, the mission it is given, and the performance of its communication equipment. Its mission is to reconnoiter an area or several targets in one direction in order to ascertain the enemy's situation, the terrain situation, and other situations relevant to operations. It uses all possible and necessary reconnaissance measures to get all sorts of reliable intelligence.

When an infantry squad is tasked with a reconnaissance mission, it can be augmented with engineers, chemical defense soldiers, and communications and observation equipment. When necessary, translators can be attached to it.

C. Reconnaissance Preparations

After the fendui commander receives a reconnaissance mission, he should transmit the mission to others in a timely way; conscientiously study the enemy's situation, the terrain situation, and the methods of completing the mission; determine an action plan; adjust his battle organization; and within the time stipulated by the higher level, make good reconnaissance preparations.

When issuing verbal battle orders, he should stress clarifying: the enemy's situation and the enemy's position and movement characteristics; his own fendui's composition and mission as well as methods for completing the mission; the activities of friendly nearby units and militia in the reconnaissance zone; the composition and mission of the subordinate fendui as well as their methods of carrying out their missions; departure and return times, order of advance, route of travel, topographic markers and assembly points; and the methods of communication and liaison, both signals (signs) and passwords.

After the mission is stipulated, the commander should swiftly organize the fendui to make good material and equipment preparations and predeparture preparations, inspect the preparations made by all fendui, and then report to the dispatching commander.

D. Conducting Reconnaissance

Reconnaissance While Moving on Foot. The commander should direct the fendui to make use of terrain in a clever manner, to use various formations in a flexible manner, to alternate taking cover and advancing, and to be on strict guard against enemy ambushes. Before the fendui move out, he should send a reconnaissance team ahead, and the distance it is sent should be convenient for maintaining liaison. During movement, the commander should constantly observe the enemy situation and the terrain, search and advance. The commander then should lead the other personnel behind the reconnaissance team to make point-by-point observations while following up, organize firepower to cover the reconnaissance team's movements, and maintain uninterrupted liaison with the higher level. When approaching the target of reconnaissance, he should order the fendui to take cover and occupy favorable terrain, should supplement the stipulated mission, and should further clarify the position of the reconnaissance target, the line of approach, and the method of completing the mission. When the target of reconnaissance is complex, he can dispatch additional reconnaissance teams, making clear the direction of advance and the observers, as well as the methods of coordination and liaison, and stipulating the time and place of return for each reconnaissance team after it has completed its mission.

Reconnaissance While Riding in Vehicles. The commander should organize the fendui to get out of their vehicles in favorable terrain at a suitable distance from the reconnaissance target. After the fendui get out of their

vehicles, he should immediately send out a reconnaissance team to approach the target while the fendui cover its rear and flanks with firepower. At the opportune moment he should direct the vehicles to follow up by stages.

1. Reconnaissance of Terrain

a. Reconnaissance of Hills

Before moving to a hill, the commander should direct the fendui to occupy favorable terrain and to take cover and observe, after which he should organize the fendui to cover the reconnaissance team's advance and search on its approach to the hill. In particular he should carefully observe places that are convenient for the enemy to take cover in and deploy and, after ascertaining the situation, direct the fendui to pass through them swiftly.

The main things to ascertain about a hill are: elevation, slope, area, features, mutual relationship with the terrain around it, and effect on troop movement.

b. Reconnaissance of Defiles (Mountain Passes) and Roads

When a defile (mountain pass) is to be reconnoitered, the commander should first direct the reconnaissance team to reconnoiter and search its entrance and the terrain on its two sides, after which he should direct the fendui to go into it and reconnoiter. If the defile (mountain pass) is fairly short, he can direct the fendui to cover the reconnaissance team's search at the entrance and, after the reconnaissance team passes through, to occupy favorable terrain on one or two sides of the defile (mountain pass) and cover the reconnaissance team's search and advance by stages. When coming out of the defile (mountain pass) he should first observe what is outside it, and if there are no enemies again organize the fendui to advance.

The main things to ascertain about defiles (mountain passes) are: width, length, and slope; height and slope of the precipices on the sides of the passage; and the terrain around the defile (mountain pass).

When a road is to be reconnoitered, he should direct the fendui to go along favorable terrain on the two sides of the road, covering each other in alteration, and searching while advancing. The main things to ascertain are: width of road; quality of road; maximum slope; minimum curve radius; dangerous sectors of road; degree of cover; rain or snow situation; whether there are rivers, bridges, and culverts and their capacity for passage; whether there are obstacles set up by the enemy; whether there has been destruction by the enemy and if so the degree of destruction; and whether there are detours.

c. Reconnaissance of Jungles and Land with Tall Plants (Grass)

Before entering jungle or land with tall plants (grass), the commander should first direct the fendui to occupy nearby favorable terrain, to make good preparations for battle, and to observe the fringes. Then he should organize a reconnaissance team to reconnoiter under cover by the fendui. The fendui are then to follow behind the reconnaissance team along one or two sides of the road, or are to cover by stages the search and advance of the

reconnaissance team. When moving in forests, he should organize the fendui to cover each other in alternation, making a point of observing the ground surface and the tops of trees, and they should maintain liaison in the direction of advance and with each other; when passing through a clearing in a forest, he should direct the fendui to advance by following the fringes of the clearing as much as possible. When moving on land with tall plants (grass) he should direct the fendui to suitably narrow the gaps and distances between them, maintain liaison, combine observation and listening, and search and advance. When coming out of land with tall plants (grass) or jungle, he should first organize observation and search of what is outside and then swiftly come out.

The main things to ascertain about jungles and land with tall plants (grass) are: its type, height, density, and area, and its effect on the movement of armed forces.

d. Reconnaissance of Inhabited Areas. When in the vicinity of an inhabited area, the commander should first direct the fendui to occupy favorable terrain swiftly and in a concealed manner that is near the inhabited area, to observe and listen quietly to what is going on inside and outside the village, and in particular to note whether there are suspicious signs at the village's entrance and in fairly high buildings in the village. He should select well the lines on the edge and the positions to temporarily stop on the approach to the inhabited area. Then he should direct the fendui to approach it in a concealed manner and reconnoiter it, and as much as possible interrogate the residents there to find out the situation inside the village. After entering the village, he should organize the fendui to go along the two sides of streets and lanes, cover each other in alternation, and search and advance by stages. They must guard against enemy ambushes. When crossing streets, after carefully observing the buildings on the two sides and at their front, they should cross swiftly.

When a fairly small village is to be reconnoitered, the commander can send part of his military force to occupy favorable terrain outside of the village in order to observe the situation around the inhabited area and to cover the fendui when they go into the village to reconnoiter it. The commander should organize the fendui to carefully search a village that the enemy has stayed in, find out from the residents where the enemy has gone, and search the documents and materials the enemy has left behind and the worn-out and old articles he has abandoned.

The main things to ascertain about a village are: its area, the strength of its buildings, the situation of its residents, its capacity for materiel supply, its roads, its water resources, and the terrain around it.

e. Reconnaissance of Rivers and Bridges

Before approaching a river or bridge, the commander should first organize the fendui to occupy favorable terrain and to observe in detail whether there are enemies defending on the two banks of the river. Then he should direct the fendui to cover the approach of the reconnaissance team to reconnoiter the river banks and bridgehead.

The main things to ascertain about a river are: its width; its depth; its current velocity; the nature of the riverbed; and whether there are steep cliffs, ferries, or docks on its two banks. Also the places to wade or swim across it should be selected. In winter, ice thickness and whether vehicles, personnel, and livestock can cross over it should be ascertained.

The main things to ascertain about a bridge are: the nature of the bridge, its length, its width, its carrying capacity, and whether it has been damaged and whether there are obstacles on it.

f. Reconnaissance of Underground Rooms and Tunnels

When underground rooms or tunnels are to be reconnoitered, the commander should first ascertain the positions and number of exits of the underground rooms or tunnels and, based on the situation, send a small part of his military force to occupy favorable terrain near the entrances and exits and control them. The remaining personnel are to approach, in a concealed manner, the entrances and exits, listen quietly for suspicious signs in the underground room or tunnel, and after ascertaining the situation, enter and reconnoiter.

After enterinrg one of the underground rooms, the commander should organize his personnel to cover each other in alternation by making use of corners formed by two walls and search the rooms one by one. When entering a tunnel to reconnoiter, he should direct the fendui to go along one or two sides of the tunnel, make use of places where it turns, observe by stages, and search while advancing. Particular attention should be paid to overcoming various kinds of obstacles and being on guard against sudden attacks by the enemy. If the search is being made along different directions, he should make clear the methods and the signals (signs) for liaison in order to prevent accidental injuries.

The main things to ascertain about underground rooms and tunnels are: degree of solidity, height, width, length, and facilities.

2. Reconnaissance of the Enemy Situation

a. Reconnaissance of Enemy Obstacles

When approaching enemy obstacles, the commander should direct the fendui to occupy favorable terrain and closely observe the situation at the enemy's defensive forward position, and then he should organize fire cover after which the reconnaissance can be carried out. During reconnaissance, use should be made of various kinds of equipment, and the methods of observation, survey, and assessment should be adopted to swiftly ascertain the nature type, number, and depth of the obstacles as well as the gaps between them. As the situation warrants, the reconnaissance position can be changed to carry out multidirectional reconnaissance, and the situation obtained by reconnaissance can be marked on a strategic map prepared in advance.

b. Reconnaissance of the Enemy's Defensive Forward Positions

When reconnoitering the enemy's defensive forward positions, the commander should as much as possible avoid enemy outpost positions, make use of gaps or joints in the enemy's defense to approach the enemy's forward positions in a concealed maner, and organize fendui to occupy favorable terrain. When the enemy's situation and the terrain conditions are favorable, he can direct a group to infiltrate the enemy's flank, rear, or gaps to ascertain the enemy's deployment. Before the reconnaissance he should send out men to observe, guard and organize fire cover. During reconnaissance the methods of observation, analysis, and assessment should be used. The main thing to be ascertained is the position of the enemy's forward position, mainly, the specific positions of his tanks, infantry fighting vehicles (armored personnel carriers), antitank weapons, and firing points, which should be marked on a strategic map. When necessary, firepower reconnaissance can be organized.

c. Reconnaissance of an Advancing Enemy

When reconnoitering an advancing enemy, reconnaissance is usually done in the direction of the main attack that the enemy will probably make against us. Reconnaissance is made along the flank of the enemy's path of advance. Use is made of covering terrain and bad weather to occupy one or several observation points. Observation, interrogation of inhabitants, collection of data, capture of scattered enemy personnel, and on-site surveys while disguised are the methods used to quickly ascertain the situation of the advancing enemy.

The main thing to ascertain when making a reconnaissance are: the strength of the enemy forward detachments, the number of tanks, the routes and method of movement of the enemy's advance detachment, the places and times it will pass through, and the objectives (areas) it could seize and occupy; the designation, strength, and composition of the enemy's main force, and the direction, routes, and places it will pass through, and the areas it could reach.

d. Reconnaissance of the Enemy's Rear Area Supply and Communication Facilities

When reconnoitering the enemy's rear area supply and communication facilities, the commander should make use of terrain to approach in a secret and concealed manner the enemy's rear area supply transportation lines or his communications command centers, and use the methods of observation, capture of personnel, disguised reconnaissance, and interrogation of inhabitants, with the cooperation of the militia and the people, in order to assess the situation.

When reconnoitering the enemy's rear area supply facilities, the main things to ascertain are: the position of oil pipelines, field refueling stations, water supply stations, and supply stations; objects of supply; methods of supply; as well as the state of the roads for transport and supply, the means of transportation, defensive strength, security measures, pattern of movement, and the surrounding terrain.

When reconnoitering the enemy's rear area communication facilities, the main things to ascertain are: the disposition of communication centers (stations); the type and number of main equipment; the main direction of support; composition of the communications network; routes for hidden movement to the main circuits and the military strength, security, and terrain around them.

e. Reconnaissance of an Airborne Enemy

When reconnoitering an airborne enemy, usually we occupy in a concealed manner observation posts near the region that the enemy could make an airborne landing and observe and secretly listen. When signs of an enemy airlanding are discovered, the commander should immediately report this fact to the higher level and then uninterruptedly keep an eye out for the enemy. When it is discovered that the enemy is making an airborne landing, as circumstances warrent, the fendui should seize favorable terrain or observe the airlanded enemy in a concealed manner.

When reconnoitering an airborne enemy, the main things to ascertain are: the region, time, type, strength, and weapons of the enemy's airborne operation, which should be promptly reported to the higher level.

When circumstances permit, fendui should take the initiative to contact local armed forces and closely cooperate with them or with the support of friendly nearby units, capture personnel in order to better ascertain the situation.

II. Security

Security means the security measures taken to prevent enemy raids and reconnaissance.

A. Type of Security

Security is divided into combat security, march security, and quarters security.

Combat security means the security to cover the combat actions of the armed forces.

March security means the security to insure the safety of the armed forces on the march. Usually when they are marching toward the enemy guards are sent to their front, when they are marching away from the enemy guards are sent to their rear, and when there is an enemy threat to their flank guards are sent to their flank.

Quarters security means the security to insure the safety of the armed forces' quarters. The size of the security force is decided by circumstances, for example, a squad guard, platoon guard, company guard, or battalion guard.

B. Dispatching, Missions and Augmentation for Security

Point Squad

Usually the point squad is dispatched by a march security fendui or a moving fendui. The distance it is sent out is decided by the enemy situation, mission, terrain, performance of communication equipment, and weather conditions; usually on foot it is 500 to 700 meters, and in vehicles it is 2 to 4 kilometers. When marching away from the enemy the distance can be appropriately increased. At night it is usually 200 to 300 meters on foot and 1 to 2 kilometers in vehicles. The point squad can be augmented with engineer, chemical defense, and reconnaissance teams, and it can be given maps, compasses, telescopes, and other equipment.

a) Forward Point Squad: Its mission is to search and guard the front of one's fendui, discover the enemy, prevent the enemy from reconnoitering and raiding, and insure that the fendui being guarded is not suddenly attacked by the enemy; when encountering the enemy, its mission is to swiftly seize favorable terrain and cover its fendui as the latter deploys and enters battle; and to correctly grasp the direction and line of march, ascertain the terrain along it, and indicate the line of march.

b) Flank Point Squad: This point squad's mission is to search and guard the flanks of the fendui being guarded, discover the enemy, and insure that the main force is not attacked in the flank by the enemy. When stopping to guard the flanks, it should, based on higher level instructions, occupy favorable terrain in the sector that could be attacked by the enemy and cover the safe passage of the main force.

c) Rear Area Point Squad: This point squad is responsible for guarding the rear, blocking the enemy who is in hot pursuit, preventing the enemy from following the tracks of the main force, and insuring the safe march of the main force; and in accordance with orders, to destroy roads and bridges, set up obstacles, remove route markings and traces of the unit's movement, and help in the work of collecting personnel.

Point Company (platoon)

The point company (platoon) is dispatched by the regiment or battalion. Dispatch distance: when the march is on foot, uisually in daytime it is 2 to 3 kilomters (3 to 4 kilometers for a flank point company (platoon)) and at nighttime it is 1 to 2 kilometers; when the march is by vehicle, usually on daytime it is 8 to 12 kilometers and at nighttime it is 4 to 8 kilometers. When a rear point company (platoon) is sent out by its unit, the dispatch distance when the march is on foot is 3 to 5 kilometers in the daytime and 2 to 3 kilometers in the nighttime.

Their mission is to discover the enemy as soon as possible, prevent the enemy's reconnaissance and harrassing attacks, and insure that the unit (fendui) being guarded is not suddenly attacked or followed by the enemy; and to insure that the main force deploys smoothly and goes into battle. When acting as front point men, the mission is to ascertain the enemy's situation, the terrain, and the road condition; to know well the direction of movement

and indicate the line of advance; and to repair roads and bridges. When acting as flank point men, the mission is to occupy a designated position as scheduled and insure the smooth passage of the main force. When acting as rear point men, they should, in accordance with instructions, destroy roads and bridges, remove route markings, and cover the main force's safe movement away from the enemy.

The company can be augmented with one platoon each of recoilless guns, mortars, and heavy machine guns, and with communications equipment; the platoon can be augmented with one or two squads each of recoilless guns and heavy machine guns. At times the company and the platoon can have engineers and chemical defense reconnaissance teams attached to it.

Single and Compound Sentries

Usually they are dispatched by the quarters, security, or defense fendui. The dispatch distance should be decided on the basis of the enemy's situation and the terrain. Generally it is 260 to 400 meters, but at night it is 100 to 200 meters.

Their mission is to discover the enemy in time and prevent enemy reconnaissance personnel from infiltrating. When on sentry duty, they are to block the passage of information, interrogate and examine pedestrians who are coming and going, closely observe things, and when a situation is discovered immediately report it.

When these soldiers are on foot sentry duty in the direction in which the threat of enemy tanks is fairly large, they can carry one rocket launcher.

Roving sentries

These are usually composed of two to three company (platoon) sentries or two to three soldiers dispatched by the quarters or defense fendui, and one of them is assigned to be the sentry leader.

Their mission is to prevent the enemy from infiltrating, raiding, or sabotaging; to check on the vigilance of security personnel and on the camouflage situation in the region of deployment; and to maintain liaison with nearby sentries. Usually they patrol the gaps between the squad sentries, foot sentries, and hidden sentries and sectors that are easy for the enemy to approach, make sneak attacks, and land by sea, as well as the quarters and defense regions.

Hidden sentries

They are dispatched by the company (platoon) sentries or the quarters or defense fendui. They are usually composed of two to three men with one of them designated as the sentry leader. The dispatch distance is usually about 300 meters from the security line, a distance that can be appropriately shortened at night.

Their mission is to discover the enemy, monitor while hidden the enemy's movements, and prevent the enemy from making a surprise attack. When necessary they watch for an opportunity to capture enemy personnel.

They can be augmented with night observation equipment and communications and liaison equipment.

Sentry squads

They are usually dispatched by the security, defense, or quarters fendui. The dispatch distance for a sentry squad dispatched by the company (platoon) is usually 600 to 800 meters; for a sentry squad dispatched by the battalion or quarters unit it is 1 to 2 kilometers (at night it can be appropriately reduced). The width of the security zone can be 600 to 800 meters.

Their mission is to discover the enemy, prevent the enemy from making a surprise attack, stop the enemy's infiltration, insure the safety and rest of the unit (fendui) being guarded, and its smooth deployment and going into battle or its transfer at the appropriate time.

A sentry squad can be augmented with recoilless guns, heavy machineguns, and communication equipment.

Infantry Company (platoon) Sentries

Company (platoon) sentries are dispatched by the quarters regiment (battalion) or the battalion sentries. The dispatch distance is usually 4 to 6 kilometers from the unit (fendui) being guarded. Sometimes the company sentries can also dispatch platoon sentries, and the dispatch distance is about 1 kilometer. The width of the security area is 2 to 3 kilometers for a company and 1 to 1.5 kilometers for a platoon. If the terrain or visibility is restricted, the width can be appropriately shortened.

Their mission is to discover the enemy as soon as possible, prevent enemy surprise attacks, and insure the safety of the quarters of the unit (fendui) being guarded; stop the enemy from reconnoitering or infiltrating the quarters area of our unit (fendui); and when the enemy attacks, firmly hold the security position and cover the unit (fendui) being guarded when at the opportune time it deploys and goes into battle or smoothly shifts its position.

A company can be augmented by one recoilless gun platoon, one mortar platoon, one heavy machine gun platoon, and communications equipment; a platoon can be augmented by one to two each recoilless guns and heavy machine gun squads and by communications equipment. When a company (platoon) switches from guarding a march to guarding quarters it can be augmented by an engineer squad and a chemical defense reconnaissance team.

Company (platoon) on Security Duty in a Defensive Battle.

A company (platoon) on security duty in battle is usually dispatched by the regiment (battalion) in the first echelon from its reserve, and is under the direct command of the regiment (battalion). It is dispatched in important directions such as the front of the defensive position or an exposed flank. The dispatch distance should be decided on the basis of the enemy's situation, the terrain, and the weather. It is usually about 2 kilometers from the

defensive forward position. The width of the security area is 2 to 3 kilometers for a company and 1 to 1.5 kilometers for a platoon.

Its mission is to observe the enemy's movement intent as early as possible, stop the enemy from reconnoitering, and prevent the enemy from making a surprise attack; and to force the enemy to deploy too early, to delay, wear down, and deceive him, and cover our main force's smooth entry into battle.

Antitank missiles, recoilless guns, heavy machine guns, engineers, and communication equipment can be attached to the company; recoilless guns, heavy machine guns, engineers, and communication equipment can be attached to the platoon; the company (platoon) can also get fire support from the higher level.

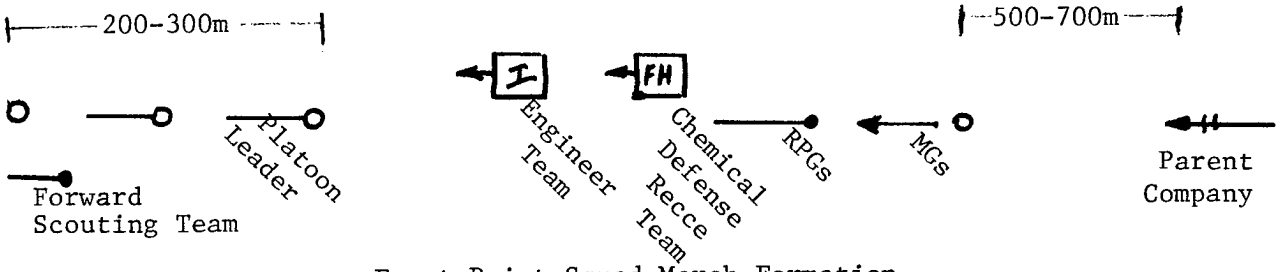
C. Organization and Command of Security Duty

1. Organization and Command of Point Companies (Platoons)

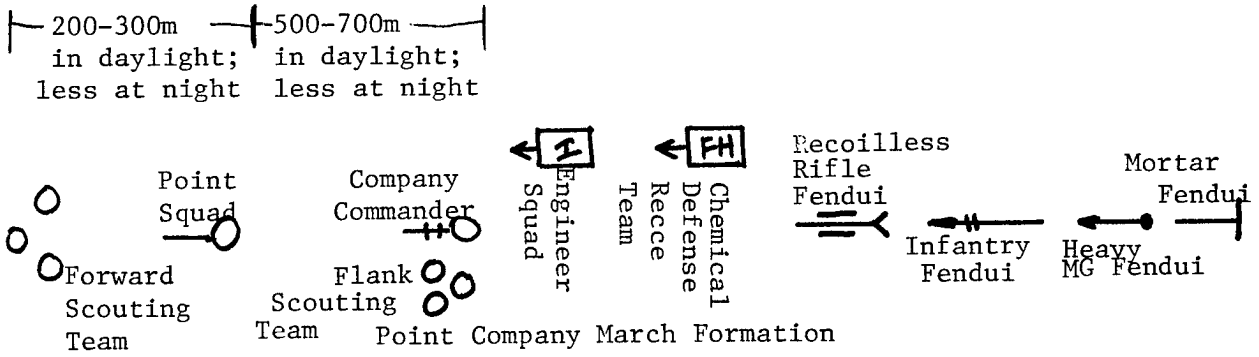
Point men are a kind of march guard undertaken by fendui at the company level and below. They play an important role in insuring a unit's smooth march and in timely discovering and dealing with various situations.

(1). March Formations

The arrangements of march formations should be decided on the basis of the enemy's situation, the mission, and the state of the road. The requirements are that the formation be suitable for swift deployment, favorable for fighting against enemy tanks and armored battle vehicles, and ggod for command and coordinated movements. Usually the march order is front point squad (see top diagram below), company (platoon) commander, engineer squad,



Front Point Squad March Formation



Point Company March Formation

chemical defense and reconnaissance team, engineer squad, infantry platoons (squads), heavy machine gun platoon and mortar platoon (see lower diagram). When acting as rear point men on a march away from the enemy, the march is arranged in the opposite order. When on a march while riding vehicles, the weapons should be allocated to the platoons and companies in accordance with the predetermined battle plan, for their concentrated use under the premise of not adversely affecting the battle, and also there should be separate distribution within each vehicle. The vehicles should be distributed on the basis of the mission, the number of attached fendui, and the condition of the vehicles.

Reference Plan for Distribution of Vehicles in a Point Company

Vehicle No 1: point squad, engineer squad, and chemical defense and reconnaissance team, 23 to 25 men

Vehicle No 2: infantry squads (2) and recoilless gun squad (1) of 1st Platoon, 30 men, 1 gun

Vehicle No 3: company headquarters, heavy machine gun squad (1), and recoilless gun squad (1), 21 to 23 men, machine gun (1), and gun (1)

Vehicle No 4: recoilless gun squad (1) and heavy machine gun squad (1), 20 men, machine gun (1), and gun (1)

Vehicle No 5: infantry squads (2) and recoilless gun squad (1) of 2d Platoon, 21 men and gun (1)

Vehicle No 6: infantry squads (2) and heavy machine gun squad (1) of 2d Platoon, 28 men and machine gun (1)

Vehicle No 7: infantry squads (2) of 3d Platoon, 21 men

Vehicles No 8, 9, and 10: mortar fendui, 55 men, 6 guns

Vehicle No 11: mess squad, 12 men and cooking utensils

Vehicle No 12: Infantry squad (1) of 3d Platoon, 10 men

Explanation:

1. Attached to point company: 4 recoilless guns, 3 heavy machine guns, 6 mortars, 1 engineer squad, and 1 chemical defense reconnaissance team.

2. The vehicles on the chart are Liberation CA-10 vehicles added to the company by the higher level.

3. Riding and carrying standards: 30 to 35 men per vehicle; each recoilless gun or heavy machine gun occupies 4 men positions.

4. If there is no No 12 motor vehicle, that infantry squad can ride in the No 7 or No 11 motor vehicle

b. March Preparations

After the company (platoon) commander is given his mission, he should, on the basis of understanding the higher level's intent and the mission of his own fendui, quickly call together the commanders of all his fendui and give them their missions, analyze and assess the situation, determine the march plan, and complete on schedule the march preparations.

(1) Determining the March Plan

The commander should, on the basis of analyzing and assessing the situation, determine the march plan, the important parts of which are:

--the order of march and the missions of all the platoons (squads) and attached fendui.

--the composition and missions of the point squad and the search team.

--the situations that could be encountered and the plans for dealing with them.

--support measures

When formulating the plan of march, he can mark the important parts of the plan on a map (see following map).

(2) Issuing March Orders and Organizing March Support

The method of issuing march orders is usually that of issuing them before the march to the commander or to all personnel of a fendui. When time is pressing, after making clear the composition of the point squad and the order and line of the company (platoon) march, he should immediately stipulate the start times; other things can be made clear and prepared for while on the march. The parts of the march order that are issued are:

--the positons and activities of the enemy and the areas where the enemy could be contacted.

--the mission and march composition and order of the company (platoon).

--the line and course of the march.

--the times for starting out and arriving at the designated area, the areas for adjusting, and the places for taking long breaks.

--the areas where the enemy could encounter or ambush us and the movements of all fendui.

--the areas of activities of front reconnaissance fendui and of militia and guerrillas, and the method of liaising with them.

--the compositions and missions of the front point squad and the search team, and the distance between them and one's own fendui, and the organization of antiaircraft duty weapons and observation reporting duty.

--defensive measures against enemy attacks with nuclear, chemical, or biological weapons.

--camouflage measures.

--methods and signals (signs) for communication and liaison.

--the time limit for completing preparations.

c. March Command

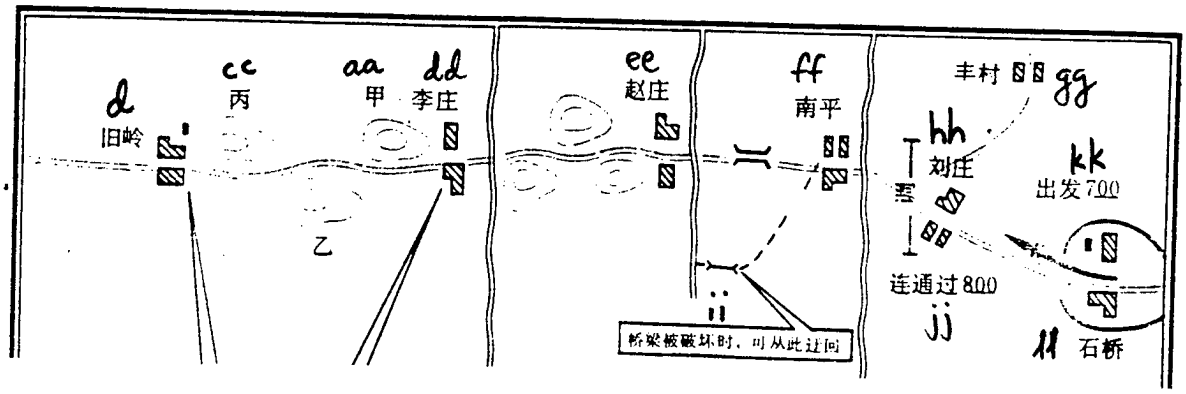
In accordance with the higher level's order to start, the company (platoon) will send out guards, who will advance in column on one side or two sides of the road. During the march, the company (platoon) commander should, without interruption, understand along the way the enemy's situation, the terrain, and the road condition, and should correctly exercise command.

(1) Know the march direction and maintain liaison.

During the march, the company (platoon) commander should correctly grasp the direction of advance. He can let those familiar with the local situation act as guides. When on the march in complex terrain or at night, he can send one cadre to strengthen the command of the point squad, or can form a guide team from among the cadres and backbone element to accompany the point squad and lead the way. When on the march by map (by azimuth) or on the march in vehicles, the commander should master the methods of marching and for details refer to points of military topography.

When he receives from the higher level a change in the line of march, the commander should immediately ascertain the new line of march, make clear to the point squad its mission, and direct the point squad to search and advance in accordance with the new line. During the march the commander should revise the march plan in accordance with new situations and then make clear to each platoon its mission. As circumstances warrant he can adjust the march deployment and replace the point squad.

Sketch Map of a March Plan



aa. Hill A bb. Hill B cc. Hill C d. Jiuling Village dd. Lizhuang Village ee. Zhaozhuang Village ff. Nanping Village gg. Fengcun Village hh. Liuzhuang Village ii. When the bridge is destroyed, the march can make a detour here. jj. The company passes here at 0800 hours. kk. Start at 0700 hours 11. Shiqiao Village

Plan for a Meeting Engagement

1. When we discover the enemy front and the enemy has not yet discovered us, we can set up an ambush on hills A and B, and strive by every means to wipe out the enemy's reconnaissance or security fendui.

2. If we discover the enemy first and seize Hill B before the enemy, then if the enemy force is fairly small we should hold Hill B with 1st Platoon and take the initiative to attack the enemy's flank and wipe him out, and if the enemy's force is fairly large we should firmly hold Hill B.

3. When we and the enemy deploy at the same time, we should swiftly organize firepower to delay the enemy and with our main force seize Hill B. If the enemy withdraws to Height C and defends it, then we should hold Hill B with the 1st Platoon and with our main force attack the flank of Hill C. 4. When the enemy occupies Hill B before we do, we should strive by all means to capture it. If we are unsuccessful we should withdraw to Hill A and defend it and then coordinate with the main force to wipe out the enemy.

Plan for Countering an Ambush

1. Tighten the search of the areas around the villages of Zhaozhuang, Lizhuang, and Jiuling.

2. Once we are ambushed by the enemy:

When a small force stumbles into the enemy's ambush ring, we should immediately organize firepower to neutralize the enemy, the small force should seize favorable terrain, and the main force should turn the enemy's flank and strive by all means to wipe him out.

When the main force stumbles into the enemy's ambush ring, we should have a small force swiftly seize favorable terrain, and the main force should wait for the opportune moment to charge the ring in a favorable direction. If it is unable to break out of the encirclement, it should hold the favorable terrain.

During the march the commander should be adept at using the media of simple communications, on-foot communications, and radio communications to maintain liaison. When we have not yet engaged the enemy in battle, he should make simple communications and courier communications primary and maintain radio silence. When we engage the enemy in battle, the commander should make radio communications primary and supplement it with the other communication media. If complex terrain, forks in roads, or other places that one easily takes the wrong path are encountered, the point men should timely send liaison personnel to their parent unit.

(2) Movement When Passing Through Complex Sectors of an Area

When an Inhabited Area or Jungle Is Encountered. The commander should direct the point squad or an additional search team to make a search. After the situation is ascertained, he should direct his fendui to pass through or go around the sector. When on the march in vehicles, he should direct personnel to get out of their vehicles and make a search. The situation they discover should be timely reported to the higher level.

When Encountering a Defile or Mountain Pass. The commander should direct the forward point squad or an additional search team to carry out searches and occupy key points on the two flanks so as to cover the passage of the parent fendui; as the situation warrants he should send out a new forward point squad. After the fendui passes through, the squad (team) occupying the key points should withdraw from them and return to their parent unit. If the defile is fairly long, he should organize the point squads to cover in turn the advance of the fendui.

When Encountering a Bridge or River. The commander should direct the point squad to ascertain the situation, occupy favorable terrain, and cover the passage of the fendui. When it is necessary that the fendui ford a river, he should send out engineers to ascertain at the place where it must go on foot, the river's width, and depth, current velocity, the nature of the riverbed, and the situation on the two banks. After they make their report to the higher level, he should organize the crossing by the fendui. After the fendui crosses, he should mark or leave behind liaison personnel at the ford. If the river cannot be forded, the troops should look for and hurriedly make equipment so that the fendui can swim across it or be ferried across it, and this should be reported to the higher level.

(3) Dealing with Situations

When Encountering an Area Mined by the Enemy. The commander should direct the point squad to occupy nearby favorable terrain, direct the engineer squad to swiftly ascertain the scope and nature of the mined area, and report the situation to the higher level. In accordance with the higher level's instructions, the fendui will either go around it or open a route through which it will pass.

When Encountering a Contaminated Region. The commander should direct the chemical defense reconnaissance team to ascertain the situation. Then he should report it to the higher level and, in accordance with the latter's instructions, the fendui will either go around it or don protective gear and pass through it.

When Encountering an Enemy Air Raid. The commander should direct the fendui to swiftly disperse and take cover. If the fendui is already exposed as a target, he should organize firepower to shoot at low-flying enemy aircraft; after the air raid, he should ascertain the losses, report to the higher level, and then continue the advance. When the fendui encounters a blockade by the enemy's air arm or artillery, the commander should swiftly ascertain the scope of the blockade, report to the higher level, and either try to find a route to go around the blockade or make use of intervals in the enemy's fire

to swiftly pass through it; after the fendui passes through it, the commander should ascertain the losses, reorganize, and continue the advance.

When Encountering the Enemy. Based on the situation the commander should be resolute and decisive, immediately taking measures to gain the initiative by striking first such as deploying before the enemy does, seizing favorable terrain before the enemy does, and opening fire before the enemy does. He should swiftly ascertain the situation and report it to the higher level, after which he should act in accordance with the higher level's instructions.

When Encountering an Enemy Surprise Attack. The commander should calmly and resolutely direct the fendui to seize favorable terrain nearby, and he should swiftly assess the situation and report it to the higher level. At the same time, the fendui should vigorously fight to change its unfavorable posture and when possible smash the enemy's surprise attack after which the commander should act in accordance with the higher level's instructions.

When Entering an Area in Which the Enemy Could Have Laid an Ambush. The commander should direct the point squad to intensify its search. At the same time he should send out flank point squads (teams) to conduct close searches of the complex terrain on the flanks. If they discover suspicious signs, he should immediately ascertain the situation. When we discover the enemy's intent to ambush us when we are fairly far away from him, the commander should immediately report this to the higher level and strive by all means to change the line of march and go around the enemy's ambush area; if it is possible to go around the ambush area, the fendui should move secretly and swiftly to launch an attack on the enemy's flank or rear and smash his ambush plan. When a company (platoon) enters the edge of the enemy's ambush area or a small force stumbles into the ambush ring, the commander should be resolute and decisive, immediately directing the fendui to seize favorable terrain and resist the enemy, and he should report to the higher level. If the enemy force is fairly small, we can adopt the tactics of encircling or outflanking him, making a swift and violent assault, thrusting deep and breaking his force up to annihilate the enemy; if the enemy forces is fairly large, the fendui should, in accordance with the higher level's instructions, coordinate with the main force in annihilating the enemy or, covering each other in turn, swiftly disengage from the enemy's ambush area. When a large part or all of a company (platoon) has stumbled into the enemy's ambush ring, the fendui should swiftly deploy and counterattack. At the same time a force should seize favorable terrain and resist the enemy's assault. The main force should wait for the opportune movement to select a favorable direction to launch a determined assault to open a breach. In accordance with the higher level's instructions, the company (platoon) will either coordinate with the main force in wiping out the ambushing enemy or take turns in covering each other as it breaks out of the enemy's ambush ring. Once a company (platoon) is cut off and encircled, it should conduct a tenacious independent operation and take the initiative to coordinate, holding fast to favorable terrain and vigorously coordinating with the main force to wipe out the enemy or to break out of the encirclement ring.

When It Is Discovered That the Enemy Has Conducted an Airborne Operation Near Our Road of Advance. Fendui should swiftly seize favorable terrain, report to the higher level, and act according to the higher level's instructions.

When the Rear Point Company (Platoon) Is Being Followed by the Enemy for Pursuit and Attack. It should, in accordance with the higher level's instructions and with the cooperation of the militia, destroy roads and bridges or set up mines and other obstacles to delay the movement of the enemy's tanks and motorized infantry, time by time occupy favorable terrain, take turns in covering each other, and fight while withdrawing. When the terrain is favorable or when marching at night, it can also ambush the purusing enemy. Waiting until after our main force has safely moved away, it should swiftly shake off the enemy, draw in, form a march formation, and follow in the rear of the main force. Or it should, in accordance with the higher level's instructions, make a feint and lure the enemy away from the direction of the main force's march, and then shake off the enemy and act in accordance with the higher level's instructions.

(4) Actions When Acting as Flank Point Men

Flank point men carry out their mission either by the method of stopping and covering or by the method of moving and covering. When a company (platoon) is tasked with guarding the flanks on a stopover, it should swiftly and in a concealed manner arrive at the designated area on schedule, occupy favorable terrain, organize security, deploy troops, organize firepower, build field works, and make camouflage. If it is suddenly attacked by the enemy, it should resolutely wipe out the enemy, hold its position, support the safe passage of the main force, and then, in accordance with the higher level's order or a predetermined plan, withdraw from the position.

(5) Actions When on a Long Break or on Arrival at the Assigned Area

When the fendui is taking a long break, the commander should direct the point squad and the antiaircraft duty weapons to occupy nearby favorable terrain for security purposes. He should dispatch observers to enhance ground and air observation. The rest of the personnel should go into the assigned area, disperse, take cover, and rest, and also make good battle preparations.

b. Organization and Command When Acting as Company (Platoon) Sentries

Infantry company (platoon) sentries guard the quarters of the infantry company (platoon) with the objective of insuring the safety of the quarters of the unit (fendui).

(1) Deployment of Troops, Organization of Direct Security

When a company (platoon) is tasked with guarding quarters, the commander should, based on the higher level's intent, his fendui's mission, and the terrain conditions, first of all correctly select the guard position and then carefully organize the deployment of the guards.

When Deploying Troops. Based on the enemy's situation, the terrain, our mission, and our weapon performance, the commander should concentrate his forces, hold key points, use points to control the area, disperse and deploy weapons, make concentrated use of firepower, and deploy the main force and weapons on the main security axis. He should disperse and deploy the

necessary forces and weapons so that they can control the important sectors that are convenient for the enemy tanks, infantry battle vehicles, and infantry to approach and outflank us in depth, and also control the important sectors convenient for us to swiftly move forces and weapons. In deploying forces in the security position, the company (platoon) sentries, usually there is a rear triangular or front triangular deployment, and also can be a one-line deployment. Usually the command position is selected on favorable terrain that is convenient for observation and command.

The mortar fendui is usually used in a concentrated mode, and is deployed in depth in covered terrain in the security position that is convenient for its display of firepower. At any time it can inflict casualties on every infantry with fierce fire in support of individual fendui combat. The artillery observation post should be on favorable terrain near the infantry command position that is convenient for command and liaison. Recoilless guns are usually controlled by the the company (platoon). Sometimes the company (platoon) can attach some of them to an infantry platoon (squad) for deployment in the direction of the enemy's tank threat and for use in destroying the enemy's tanks and infantry battle vehicles (armored transport vehicles). Heavy machine guns are usually attached to an infantry platoon and are deployed on favorable terrain convenient for display of fire at the forward position and in depth, so that at any time with their fire they neutralize or wipee out enemy infantry or shoot at low-flying enemy aircraft. Engineers are controlled by a company (platoon) and deployed near the command position to guide the building of field works and the setting up of obstacles and camouflage. During a battle or when the fendui are withdrawing from a position, they are responsible for temporarily laying or removing obstacles. The chemical defense reconnaissance team is usually controlled by the company (platoon) for flexible use, and is deployed on terrain near the command position that is convenient for observation and concealment. It is mainly used to set up chemical observation sentry posts, combat chemical and radiation reconnaissance, and guide the infantry fendui to decontaminate and remove contamination. Company (platoon) communications and liaison should be based on the higher level's relevant instructions and the number and performance of the ocmmunications equipment with the stress on organizing direct security support for the platoon (squad) in the main direction. Usually the dispatching unit organizes support for liaison with the higher level.

To discover the enemy as soon as possible and to prevent an enemy's surprise attack, when deploying his forces the commander should closely organize the following direct security.

(a) Squad sentries are sent to places near the front or sides of a road and to important sectors that the enemy could approach in order to monitor the enemy's movements and prevent his surprise attack.

(b) Foot sentries are sent to places on important intersections and vital lines of communication that are convenient for observation, firing, and concealment and that are where pedestrians pass in and out. They have the mission of sealing off information and interrogating pedestrians who come and go in order to quickly discover the enemy.

(c) Hidden sentries are sent to places in complex terrain that the enemy could approach in a concealed manner and that are convenient for us to observe, secretly listen, and take cover, in order to observe from concealment the enemy's situation, to closely monitor the enemy's movements, and when necessary to watch for an opportunity to capture enemy personnel.

(d) Roving sentries are sent to the gaps in the security provided by the squad sentries, foot sentries, and hidden sentries and into sectors that are convenient for the enemy to approach in order to insure the safety of the flanks and the gaps.

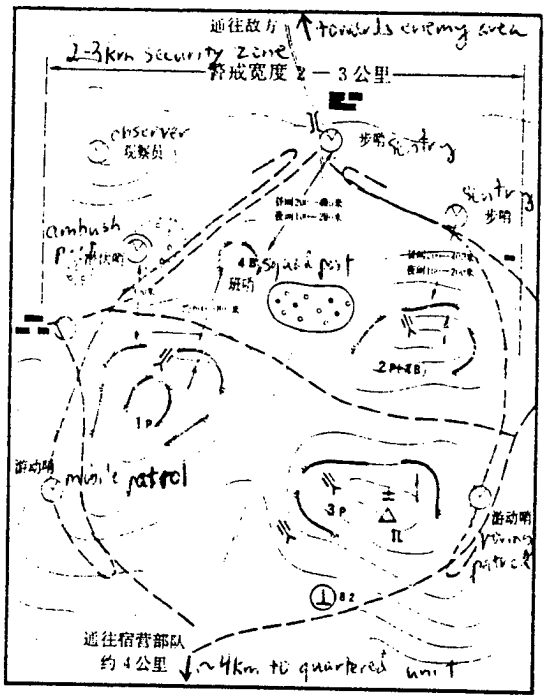
(e) Observers are sent to favorable terrain near the command post or convenient for concealed observation in order to observe and receive the signals (signs) issued by the sentry posts and to maintain liaison with them. As circumstances warrant, additional observers can be sent to fairly high terrain that is to the front or flank of the security position and that is convenient for observation and concealment in order to enhance the observation of the ground and air situation and discover the enemy as early as possible.

(f) In accordance with the higher level's instruction, an observation squad (team) is sent in the direction that the enemy could maneuver.

After dusk the direct guards that had been deployed in the daytime should, based on the terrain situation, be suitably adjusted and drawn in. The deployment adjustment from night to day should be completed before dawn. No matter whether it is day or night, when there is a change in the security deployment by the company (platoon) sentries, this should be reported to the higher level.

After the security deployment is completed, the commander should organize the fendui to build field works, set up obstacles, and make camouflage. He should also inspect the preparedness for safety duty, and if a problem is discovered he should promptly solve it (see the map below).

Sketch of Company Sentry Deployment



aa. toward enemy bb. security width 2 to 3 kilometers cc. observers dd. foot sentries ee. hidden sentries ff. daytime 200 to 400 meters, nighttime 100 to 200 meters gg. foot sentries hh. squad sentries ii. daytime 200-400 meters, nighttime 100-200 meters j. about 300 meters jj. about 600 to 800 meters kk. roving sentries ll. roving sentries mm. to units in barracks (about 4 kilometers)

(2) Handling Situations

(a) When Personnel Pass In or Out of the Security Line

The personnel who pass in or out of the security line should be carefully interrogated to make clear their status and reason. Those whose behavior is suspicious should be detained or handed over to the higher level for handling.

(b) When Enemy Reconnaissance Vehicles or a Small Group of Enemies Approach or Enter the Security Area

When enemy reconnaissance vehicles or a small group of enemies approach our security area, the company (platoon) commander should cool-headedly, calmly, and carefully observe their movements and quickly report the situation to the higher level. When the enemy enters our security area, the commander should, based on the nature of the enemy's actions and his number, send out an appropriate force (weapons) to occupy favorable terrain in a concealed manner. When conditions permit, the force can go around the enemy's flank and rear to destroy the enemy's reconnaissance vehicles or, with sudden, bold, and powerful movements, annihilate or capture the enemy's infantry.

(c) When Enemy Aircraft Reconnoiter or Raid

When enemy aircraft reconnoiter, the commander should direct the fendui to enhance observation and concealment. When enemy aircraft raid, he should swiftly issue an alert and direct the duty antiaircraft weapons, as circumstances warrrant, to fire at low-flying enemy aircraft. The remainder of the personnel should take cover and make good preparations for battle. When signs of an enemy airborne operation are discovered in or near our security area, the commander should quickly report this to the higher level, notify nearby friendly units and local armed forces, and strengthen observation and security. When the enemy mounts an airborne operation near our security position, the commander should continue to strengthen ground security and immediately report the situation to the higher level. Based on the higher level's orders, he should direct the fendui, taking advantage of the enemy still being in the air or not being stable after landing, to coordiate with nearby friendly units and local armed forces to annihilate him.

(d) When Attacked by the Enemy's Chemical Weapons

When attacked by the enemy's chemical weapons, the commander should quickly direct the fendui to put on protective gear. At the position, besides leaving behind observers and duty weapons to provide on-site protection and continued sentry duty, the remainder of the personnel should immediately make use of terrain or go into field works for their protection, and also make good preparations for battle. After the attack is over, he should quickly send out

the chemical defense reconnaissance team and NBC defense backbone elements to ascertain the contamination situation, organize self-rescue and mutual-rescue activities, and carry out partial decontamination. The commander should then timely report to the higher level the post-attack situation and the results of dealing with it.

(e) When the Enemy Attacks Our Squad Sentries

When the enemy attacks our squad sentries, the commander should determine the intent of the enemy's action and, as circumstances warrant, direct the fendui to occupy favorable terrain and with a mobile force support the battle by the squad sentries, and wipe out (repulse) the attacking enemy or cover the sentries' withdrawal to favorable terrain. At the same time he should report the situation to the higher level.

(f) When the Enemy Attacks Our Security Position

When the enemy attacks our security position, the commander should quickly determine the enemy's force and the direction of his main attack, and timely report this to the higher level. He should swiftly mobilize a force, relying on the position, to resist the enemy's assault and, with the measures of assault, demolition, and interdiction, inflict casualties on the enemy infantry, delay the enemy's movement, race for time, and conver the main force's entry into the battle or its safe movement away from the battle. When our security position is encircled by the enemy, the commander should display the spirit of fighting independently, be good at organizing and using his own forces, concentrate his forces, tenaciously defend key points, inflict many casualties on the enemy with firepower, stubbornly hold fast to the position, and vigorously suppress the enemy. He should also promptly report the situation to the higher level and should not withdraw from the position without an order to do so.

III. Marching, Transporting, Quartering, and Changing the Guard

A. Marching

A march is an organized movement by an armed force on foot or in vehicles along a designated line. Its purpose is to seize the initiative and to create favorable conditions for wiping out the enemy.

1. Types of Marches

Marches are divided, in accordance with the mode of movement, into marches on foot and marches in vehicles; according to time, they are divided into daytime marches and nighttime marches; according to the route and speed, they are divided into normal marches, rapid marches, and forced marches; according to direction, they are divided into marches toward the enemy, marches on a flank of the enemy, and marches away from the enemy; and, according to terrain and weather, they are divided into marches on plains, hills, mountains, mountain forests, deserts, grasslands, and plateaus, and marches under conditions of severe cold and marches under conditions of intense heat.

A fendui usually marches in the march column organized by the higher level, or is tasked with being the column's front, fland, or rear guard, but sometimes it also marches independently.

2. Organization and Preparation for a March

After the fendui receives its mission, it should, within the stipulated time, make preparations for the march in a planned way. When time is pressing, it can organize and prepare while on the march.

a. Transmitting the Mission and Determining the March Deployment

When there is ample time, the commander should convene a meeting of the party committee (branch) or a meeting of the backbone elements to transmit the higher level's march orders and relevant instructions; to analyze the enemy's situation and to study the mission, line of march, and terrain along the way; to determine the march deployment; to formulate a plan for handling all sorts of situations; to make clear the cadres' division of work; and to arrange the main preparatory work.

When time is short, the commander should directly transmit the mission to the fendui and make clear the march deployment.

The march formation should be composed so as to insure that the fendui is able to swiftly deploy into battle formation, and it usually consists of one or two columns. When the fendui is marching independently, the commander should send out a point squad (vehicle) in the direction of the enemy army. When the fendui is marching toward the enemy, the commander should lead the necessary antitank weapon firers and machine gunners at the front of the fendui. When the fendui is marching away from the enemy, the march alignment should be opposite to that when it is marching toward the enemy.

b. Issuing March Orders and Mobilizing

When the commander issues march orders to the fendui, he should make clear:

(1) The enemy's situation;

(2) The fendui's mission, start (passing the start point) time, line and distance of march, points for long breaks, and time and place of arrival;

(3) The lines of march (and distances from one's own fendui) of nearby friendly units;

(4) The march alignment;

(5) The march guards, signals (signs) and passwords for communication and liaison, and the rules for handling gear;

(6) The time and place of assembly, and the time limit for completing march preparations; and

(7) The commander's position on the march.

When marching by vehicle, the commander should make clear the distribution of the vehicles, the commander and the observer (liaison man) of each vehicle, and the time and place for boarding the vehicles.

When making an independent march, he should make clear the composition, mission, line of movement (distance from the fendui), methods for effecting liaison with the point squad (vehicle), and the places where the enemy could be encountered and the actions of each fendui.

Based on actual circumstances, he should politically mobilize the fendui and enhance their morale. When there is a vehicle march, the drivers should be educated to have a stronger sense of responsibility in order to insure the completion of the march mission.

c. Organizing March Support

When an independent march is made, the commander should survey the line of march. Especially for a march at night or under conditions of poor visibility, he should study and become familiar with the terrain features and make good preparations to make use of the terrain in line with the azimuth. When necessary he should organize a guide team or find a good guide, and send out observers to find out the situation on the roads, bridges, rivers, and fords along the march. Based on actual circumstances, he can organize an obstacle-removal team to prepare the main equipment for removing obstacles. For the fendui he should assign air observation sentries duty weapons; designate the measures for camouflage and lighting control; stipulate march discipline; and make clear the actions of each fendui when attacked by the enemy's nuclear or chemical weapons or by his air arm and artillery. He should organize many communication media, combining simple communication, on-foot communication, and radio communication in order to insure uninterrupted communication and liaison.

Materiel and equipment should be prepared well. This mainly includes weapons, ammunition, equipment, gear, supplies, drinking water, and medicinal drugs. The quantity to be prepared should be decided on the principle of what is able to support combat and life and also what does not excessively increase the load on the fighter. Usually a fighter carries 3 days' ration of food (of which 1 day's ration is cooked food), 2 days' ration of horse feed, and the necessary drinking water. When a march is made by vehicle, the commander should, on the basis of the enemy's situation, the mission, and the distance, determine the amount of supplies and material to carry on the march and the support methods, and should make clear the stipulated base number for the vehicles to carry and the refueling methods.

Organization of technical support. When a vehicle march is made, the commander should inspect the technical state of the vehicles, the back-up spare parts, and the tools on each vehicle, so that whenever something is broken it can be repaired. He should make clear the positions set by the higher level for repairing vehicles; when conditions permit, the vehicles can make use of military depots in the localities and local repair units for maintenance.

Organization of collection teams. A collection team is usually composed of a political cadre in a deputy post, a medical officer (medic), and several fighters in fairly good physical shape. It follows in the rear of one's unit, and is responsible for collecting wounded and sick personnel who have fallen behind and then organizing them to follow the unit. Based on circumstances, it will remove route markings.

d. Organizing Quartering Teams

A quartering team can be organized when there is no worry about the enemy's situation. Its personnel are usually managers, mess officers (provisioners), and cooks. A quartering team should set out ahead of others. Its mission is: to prepare rations and forage, fuel, and drinking water at the preset places for long breaks and for quartering (assembling); to investigate the social situation and disease situation; to select and mark the places for long breaks; when quartering to number the buildings or when bivouacing to differentiate the position of each fendui; to make clear the positions of the horse feed lots and the vehicle parks; to send men to the intersections in the quarters area to meet the fendui; and to report the quartering situation to the higher level.

e. Inspecting March Preparations

Before the fendui sets out, the commander should conscientiously inspect the amount of material and equipment it will take along, the method of carrying them on the march, the mules and horses and the packs on them and their saddle gear, and the mass discipline. He should supervise and urge on the fendui to complete on schedule all march preparations, and he should report the preparation situation to the higher level.

3. Command During a March

During a march the commander usually marches in front of his own fendui in order to control the direction, line, and speed of the march and to know at all times the enemy's situation, the terrain along the way, and the state of the road. He should timely organize the fendui to vigorously overcome difficulties, to advance swiftly in a concealed manner along the line designated by the higher level, and to arrive at the quarters (assembly) area on time.

a. Assembling and Starting on Schedule, Maintaining the March Order

The position of the assembly area should be selected for its convenience for entry onto the road of march, keeping clear of highways and road intersections, so as to avoid blocking traffic. When the troops assemble, the commander should send out guards and inspect the personnel, weapons, vehicles, horses, and gear of each fendui. Then he should give the signal for each fendui to set out in succession and on time and to pass through the start point.

During the march the fendui should maintain its march order and consciously obey the commands of the adjusting sentries. Without the higher level's permission, a fendui must not overtake the fendui in front of it, and it must

on its own initiative give way to vehicles and to fendui and personnel performing particular missions. When the march is made by vehicle, one must not at will overtake a vehicle, and one should on one's own initiative give way to command cars, communications vehicles, and medical vehicles. If a vehicle breaks down, it should park on the right side of the road and be rush-repaired. After being repaired, it should immediately follow and return to its parenmt fendui when there is a break; if the road is wide, with the higher level's permission, it can overtake other vehicles to return to its parent fendui. If the vehicle cannot be repaired, the higher level should be asked to supply another vehicle or those riding in it should split up and ride in other vehicles in order to continue the advance. During the march there must be strict discipline, movements must be kept secret, propagation and agitation must be done well, and unity and mutual help must be initiated.

b. Controlling the Route and Speed of the March

The commander should control the route of march by the methods of having the guide (directional team) show the way, asking inhabitants, using maps, marching by the azimuth, using the march route map, and relying on spotting route markings and signals. During a march by vehicle, he should also make a point of giving play to the role of the commander, observer (liaison man), and driver of each vehicle, and make use of the odometers on the vehicles to control the line of march.

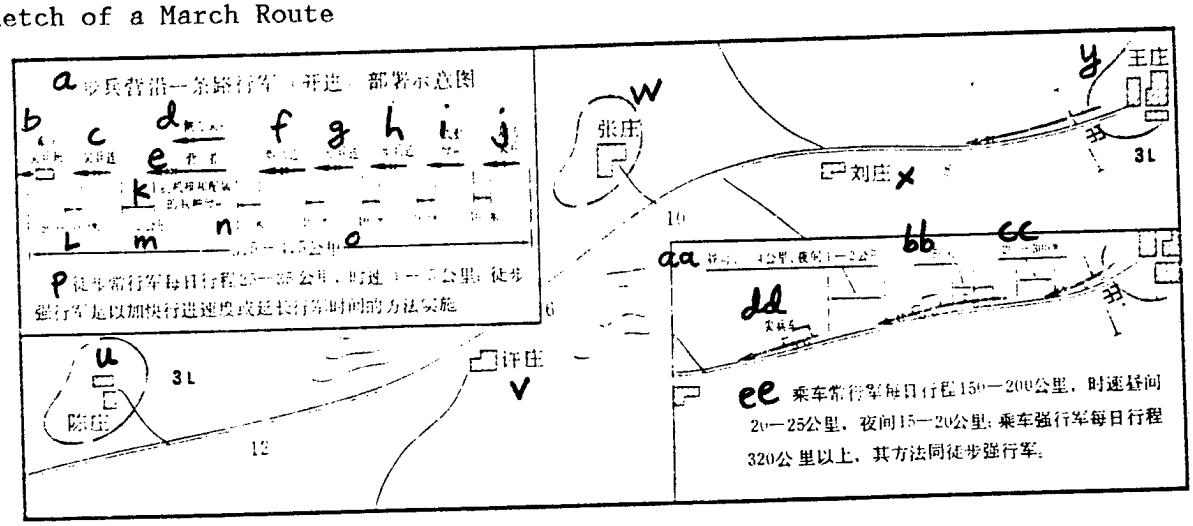
During the march, when arriving at a fork in the road, a turning point, a bridge, a residential area, and other obvious topographic markers, he should determine his location. When it is discovered that the fendui has lost its way or taken the wrong road, the commander should immediately halt the march and not proceed until he has determined where he is.

The march speed should be decided on the basis of the enemy's situation, the mission, the time, the march capability, the state of the roads, and the weather. A normal march is done at the normal distance per day and normal speed per hour. A march on foot covers a distance of 25 to 35 kilometers per day at a speed of 4 to 5 kilometers per hour; a vehicle march covers a distance of 150 the 200 kilometers per day at a speed of 20 to 25 kilometers per hour in daytime and 15 to 20 kilometers per hour at nighttime. A rapid march is a march done at the fastest speed and is adopted when carrying out an emergency mission. The march speed should be increased and the break times shortened. When necessary, the troops should march with light packs. A forced march is done by the method of accelerating the speed and adding to the distance per day. It is usually adopted when making a long-range raid, pursuing and attacking, outflanking, or breaking away from the enemy. The distance per day can be more than 50 kilometers on foot and more than 320 kilometers by vehicle.

With regard to formation spacing, for a march on foot there is usually a space of about 100 meters between one company and another; for a vehicle march there is usually a space of about 200 to 300 meters between one company and another and about 50 meters between one vehicle and another. When making an independent march, the point squad is 200 to 300 meters from its company at nighttime and 500 to 700 meters from it in daytime; the point vehicle is 1 to 2 kilometers from its unit at nighttime and 2 to 4 kilometers from it in daytime.

During the march the commander should, based on circumstances, suitably control the march speed and the formation spacing. At the beginning the march should be a little slow, and afterward be made at normal speed. When the troops are crossing fords, bridges, defiles, and road intersections. Particularly when several units (fendui) are crossing the abovementioned complex sectors at the same time, the commander should personally take charge and control the speed and the formation spacing so as to prevent crowding, blocking, and loss of time. After the troops cross, those in front should swiftly reduce their speed in order to maintain the formation spacing. When troops fall behind, they should catch up by taking big strides and it is inadvisable for them to run.

Sketch of a March Route



a. Sketch of infantry battalion deployment on a route of march (advance) b. front point squad c. point company d. flank point men e. battalion commander f. artillery company g. infantry company h. infantry company i. service fendui j. rear point men k. antiaircraft machine gun platoon and attached service arm fendui 1. 500 to 700 meters m. 1 to 2 kilometers n. 100 meters o. 3.5 to 4.5 kilometers p. A normal march on foot covers a distance of 25 to 35 kilometers per day at a speed of 4 to 5 kilometers per hour; a forced march on foot is made by the methods of accelerating the speed or prolonging the march time. u. Chenzhuang Village v. Xuzhuang Village w. Zhangzhuang Village x. Liuzhuang Village y. Wangzhuang Village aa. daytime 2 to 4 kilometers, nighttime 1 to 2 kilometers bb. 50 meters cc. 200 to 300 meters dd. point vehicle ee. A normal march by vehicle covers a distance of 150 to 200 kilometers per day at a speed of 20 to 25 kilometers per hour in daytime and 15 to 20 kilometers per hour at nighttime; a forced march by vehicle covers a distance of more than 320 kilometers per day, and its methods are the same as those of a forced march on foot.

c. Organizing Breaks

During the march, within the march composition organized by the higher level, the higher level controls in a unified manner the long and short breaks and the rest days on a long-distance continuous march; when an independent march is made, the commander at the march's level handles the breaks, and he decides the length and number of the breaks on the basis of specific circumstances.

There is usually a short break 30 minutes after the march begins, and it is about 15 minutes; afterward, for every 50 minutes traveled, there is a break that is usually about 10 minutes. During a break the troops should be on the side of the road facing away from the road and should maintain their original formation. The fighters should be supervised and urged to straighten their boots and socks and their gear, and the drivers of military pack teams should be supervised and urged to inspect the packs on their horses and mules. On a march by vehicle, there is usally 1 short break of about 25 minutes every 2 to 3 hours. On the break the vehicles should park on the right side of the road, and the personnel should move about on this side, maintaining their original march order. The commander should send out observers and guards, organize vehicle inspections, and adjust inappropriate loads.

Long breaks are usually given when half or more of the day's distance has been covered. The troops should leave the road and go into a designated area. A long break usually lasts about 2 hours. During the break the commander should make clear the time to set out again (reboard the vehicles), send out guards, and when necessary assign duty fendui (weapons) to occupy nearby favorable terrain. The company should designate for each of its platoons the positions for dispersing and taking cover and the places for assembling. With the company or squad as the unit, the commander should swiftly organize it to prepare meals, eat, unload and feed the mules and horses, replenish drinking water, make satisfactory arrangements for the wounded and sick, overhaul vehicles, and put fuel and water in the vehicles. He should supervise and urge the fendui to make the best use of its time on its break. When there is a break at night, the personnel should not leave their unit as they please, their weapons should not leave their sides, and the horses and mules should not be unhitched. When the break is over, he should count the men and inspect the weapons, ammunition, gear, equipment, and materiel, strictly guarding against losses and getting the troops into march order on time.

d. Handling Situations

During the march the commander should make a point of observing and discovering various situations promptly, dealing with them flexibly and decisively and timely reporting them to the higher level.

When Receiving a Forecast of an Attack by Nuclear or Chemical Weapons. The fendui should swiftly make good preparations for protection, space out the distances between them, intensify observation, and rapidly advance. When a warning of an enemy attack with nuclear or chemical weapons is received, the commander should immediately direct the fendui to disperse and take cover nearby, making full use of terrain and their protective equipment. Vehicles on the march should immediately stop, and their riders should, as circumstances warrant, lie down in or under the vehicles or disperse and take cover nearby. After the attack, he should swiftly ascertain the damage and promptly organize first aid and simple decontamination (detoxification), report the situation to the higher level, and act according to instructions. When passing through a contaminated zone, the fendui should take protective measures and either go through it at accelerated speed or go around it.

When Under Enemy Attack or Enemy Illumination. The fendui should immediately disperse and take cover on the spot or make use of terrain to speed up the advance. In accordance with the higher level's order, the commanders should direct antiaircraft duty weapons to occupy a position and fire at low-flying enemy aircraft, and when necessary organize the fendui to concentrate their fire on them. When a march is made by vehicle, he should, based on the circumstances, direct the vehicles to leave the road, disperse, and take cover, or to space out the distances between them, park at the side of the road, and have the personnel get out of the vehicles, disperse, and take cover. If the mission is urgent, the distances between the vehicles should be increased, their speed accelerated, and firepower organized to shoot while on the move. In particular, the fendui must cross bridges and defiles swiftly.

When Passing Through a Sector Blocked by Enemy Artillery or Air. The fendui should try to go around it; when they cannot they should increase the distances between themselves and cross at high speed.

When Encountering Enemy Demolition Obstacles. The fendui should devise a way to go around them or go through the sector after removing them.

When Passing Through an Inhabited Area, Jungle, Defile, Ford, or Bridge Where There Is Apprehension About Enemy Sabotage. The commander should try to go around these places; when that is impossible, he should send a squad (team) to search or occupy favorable terrain and to cover the fendui's swift passage, and at all times the fendui should be prepared for battle. If the fendui encounters a bridge that has been destroyed, the troops should, withe help of the masses of people, lay a bridge or get across by riding in boats or swimming.

When Receiving the Higher Level's Order To Change the March Route. The commander should immediately halt the advance, study how to carry out the higher level's order, ascertain the new line of march, find guides when necessary, and organize the fendui to advance on the new route.

4. Marching in Complex Terrain or Weather. When the fendui is marching in complex terrain or weather, the organization and preparation for the march and the command of the march should be strengthened.

a. Marching in Mountain Forests

Marching in mountain forests is favorable to cover and camouflage. However, visibility is poor and it is easy to go astray; there are many obstacles and the advance is difficult. Therefore, the commander should in particular strengthen reconnaissance, security, and safety measures, make good use of maps, and be prepared to advance by azimuth. When necessary he should organize a directional team or an obstacle-removing team which carries necessary equipment such as choppers, axes, saws, and rope to remove obstacles and open a route.

During the march the troops must make a point of guarding against forest fires, mountain torrents, sickness, and poisonous insects; and they must, as much as possible, advance along roads. When there is no road, the commander should select terrain in which there are few undulations and which has clear

terrain features for the line of march. The troops should go along ridges, not move through many mountain valleys, not go around half way up a mountain, and avoid precipices and cliffs. The commander should regularly check the direction of the march. When a wrong road is taken, in general the fendui must not take an oblique shortcut, but should return on the original road to the place where they first took a wrong turn and continue the advance along the correct line. When going through a mountain pass, going up or down a steep slope, making a fast turn, or when in sectors that are hard to move in, command should be strengthened and speed slowed. When the march is made by vehicle, the distance between vehicles should be increased, the vehicles' speed slowed, and attention paid to inspecting the technical state of the vehicles. When going through a dangerous sector in heavy fog or at night, the vehicles should be driven slowly and, when necessary, someone should be sent out in front of the vehicles to guide their advance.

b. Marching in Grassland, Desert, or Plateau

Grassland and desert are convenient for cross-country marches. However, there is a big drain on physical strength (POL), supply support is difficult, and it is easy to lose one's bearings. Therefore, on a march in grassland or desert, based on the distance and the march capability, the amount of rations and forage and of drinking water should be increased, and standards set for using water. When the march is made by vehicle, the amount of POL taken along should be increased and a sufficient supply of spare tires and necessary replacements carried. Based on different terrains and seasons, measures should be taken against heat, cold, fires, and sandstorms (snowstorms). During the march, particular attention shouuld be paid to knowing the direction at all times. As much as possible the march should be made on roads; and use should be made of clear terrain features such as rivers, lakes, road intersections, and dunes to make comparisons with the spot one is at and the map so as to guard against taking the wrong route.

When the march is made on a plateau, march support should be particularly strengthened. When marching on a plateau, where the air is thin, the speed should be reduced and there should be more short stops for rest. When making the march by vehicle, the commander must always remember that the personnel have to sleep, and he should take measures to prevent air blocks in the fuel supply systems of the vehicles. When first reaching the plateau, he should take timely measures to prevent "mountain sickness."

c. Marching Under Conditions of Severe Cold

A march made under conditions of severe cold is convenient for overcoming river obstacles. However, when the weather is cold it is easy for the men to suffer frostbite; when heavy snow covers the ground it is easy to lose one's bearings; when the snow is very deep it is hard for men and vehicles to move; and when the temperature is very low it is not easy to start vehicles and more fuel is consumed.

Before the march, bedding, gear, and drugs against the cold should be prepared well. The line of march should be surveyed well, and good preparations should be made to march on snowy ground by map and azimuth. Measures against slipping and for camouflage when marching on snowy ground should be

formulated, and tools and equipment prepared to overcome the obstacles of ice and snow. When the march is made by vehicle, the vehicles should be covered; if there are no vehicle covers, windscreen panels should be installed and as much straw as possible laid inside the vehicles. The drivers should put chains on the tires and camouflage their vehicles well. Based on the start time, they should promptly start their vehicles, warming them up beforehand when necessary.

During the march the commander should pay attention to knowing the direction well and to reducing the speed as appropriate. On a foot march he should shorten the time for short breaks and increase the number of long breaks. Short breaks of about 5 minutes each are advisable. He must remember to have the personnel lie down during the breaks. During a march by vehicle, he must take precautions against skidding, and the personnel should regularly move their hands and feet and remember to get some sleep. For long breaks he should select places that have a water source and that are out of the wind. He should do all he can to see that the personnel eat hot, cooked food and drink hot boiled water. When marching on snowy ground in sunlight, everybody should wear sun goggles to prevent snow blindness. Before crossing a frozen river cross-country, the commander should investigate the depth of the ice layer and, based on its load capacity, decide on the method of crossing the river (when the temperature is below minus 10 degrees centigrade and the ice layer is 40 or more centimeters thick, or when the temperature is zero or 10 below zero centigrade and the ice layer is 50 or more centimeters thick, vehicles and armored transport vehicles can usually cross). When passsing through a defile, moving along a mountain halfway up it, or crossing a steep mountain in a snowstorm, the commander should particularly strengthen his march command and supply support to guard against falls and snowslides. He should adopt the method of the front pulling while the rear pushes, or the method of the men helping each other with ropes, to overcome strong headwinds and perilous situations.

d. Marching Under Conditions of Intense Heat

When marching under conditions of intense heat, it is easy for personnel to suffer sunstroke, and marching is fairly difficult for them. Therefore, the commander should try to have them march at night or in the cool of early evening.

Before the march, drugs against heat and posionous insects should be prepared; more drinking water should be carried, and a suitable amount of salt put in it; the uniforms to wear should be decided on the basis of regional characteristics; and making a march by vehicle the vehicle covers should be arranged well.

During the march attention should be paid to the method drinking water, and in the first one or two hours the drinking should be controlled as much as possible. When it is extremely hot, the speed should be slowed, the number of short breaks increased, and the times of long breaks extended. During long breaks, the boiled water should be replenished as much as possible. When the march is in the rainy season, measures should be taken against lightning, slides, floods, damp, plant diseases and insect pests. Before the troops cross a bridge, they should carefully examine it for damage and see if there is a

flood in the upper reaches of the river; when crossing a difficult section, precautions should be taken against the possibility of the bridge collapsing. When encountering a typhoon or tornado, terrain should be used to avoid it. When visibility is extremely poor, particular attention should be paid to the use of various methods to control the line of march.

B. Railway Transport

Transport is a way of moving armed forces by the means of communication. It is usually divided into waterway, railway, and air transport. Based on the geographical position of the units in our region, we will stress the study of railway transport.

1. Organization and Preparation

After the fendui commander receives a mission for the fendui to be transported by railway, he should do the following preparatory work:

a. Transmit the Mission and Train the Fendui in Loading and Boarding

He should promptly convene a party committee (branch) meeting to transmit the mission given by the higher level, to discuss the methods and measures for completing the mission, and to make clear the plan, requirements, and cadres' work division when riding on a train; then he should transmit the mission to and mobilize all members of the fendui.

He should give general education about riding trains to his fendui. Training in trial-loading (unloading) and trial-boarding (debarking) of personnel, horses, vehicles, and materiel should be done. The loading (boarding) is usually done in the order of first the difficult then the easy, first the heavy then the light, and first equipment, materiel, and horses then personnel. All personnel must understand the rules for riding trains and pay attention to things concerning them, and must become proficient in the loading (unloading) and boarding (debarking) movements. The cadres must learn how to organize and direct these movements.

b. Terrain Reconnaissance

After the fendui receives the order for train transport, the commander, based on the higher level's instructions, should organize cadres at all levels to go in advance to the transport-waiting area and the railway station to reconnoiter the terrain, ascertain the route of advance, and find out the situation at the station platform; to find out the train number, the types and number of its cars, the position of the command car, the time to go to the station, and the track the train will be on; and to make clear the places where the personnel, horses, vehicles, materiel, and equipment will be put on the train, set up clear markers so that exits and entrances are clearly distinguished and crowding and confusion are avoided. If they are to board the train at a place where there is no platform, it will be necessary to build a temporary platform. In making the plan for the fendui to ride the train, the commander must conscientiously get a good grip on the work of boarding and loading.

c. Entering the Transport Staging Area

After the fendui receives the order to go to the transport staging area, the commander should count the personnel, horses, and vehicles to see if they are all present, and sort out the weapons, ammunition, and equipment that are being taken along; pass on the riding and loading (boarding) plans to all officers and men; and publicize and explain the rules for riding the train and the things to which attention should be paid and inspect the reinforced equipment needed in the cars. After he completes the inspection of the iron wires, ropes, horseshoe nails, planks, and wooden triangles, he should report to the higher level.

2. Loading and Boarding

a. Boarding of Train by Personnel

When the fendui arrive at the railway station, with the company as the unit they should form a column of threes and go to the platform. Each fendui should line up beside the car it is to enter. When it is time for the fendui to board the train, the cadres should divide up the work handling the three links of boarding, leading the way, and fixing positions. One cadre on the platform directs the boarding of the train (if it is a boxcar, he should be near the steps and two fighters should provide assistance). The fendui should form a single file to board the train. A cadre in front of the file should tell them how to stow their field packs and gear, and another cadre, on the train, should lead the way and assign seats. After all personnel have boarded the train, the boxcar steps should be gathered up and placed traversely inside the cars. The commanders' seat should be near a car door so that they can check on entrances and coordinate command. After the boarding is completed, the commander should count the number of men and weapons to see if any are missing. The car duty personnel should then close the car doors, and no one should be allowed to leave the train unless ordered to do so.

b. Putting Horses on a Train

Before horses are put on a train, the commander should organize personnel to fix the mounting blocks, to install hitching posts and horse troughs inside the cars, and to assign positions for the horses. When the horses are being put on a train, their crossing of the mounting blocks to their positions inside the cars must be tightly organized. One pack animal driver is responsible for the care and feeding of two horses. After all the horses are put on a train, the commander should inspect the tethering ropes to see that they are tightly tied and inspect the car doors to see that they are tightly shut.

c. Putting Vehicles and Guns on a Train

After vehicles and guns come to the platform, they are parked in a line with an interval of 4 to 5 meters between each vehicle. Before the vehicles and guns are put on a flatbed, a gangplank must be laid and reinforced and strengthened. For every vehicle there must be one man who directs its loading, and the vehicle's driver should use a low gear and half clutch to stabilize the vehicle's speed and slow its loading onto the car. The vehicles

put on first must not occupy the positions reserved for those that are put on last. After a vehicle is parked, triangular chocks are to be put under its wheels and, in accordance with regulations, the vehicle is to be tied firmly with iron wires and ropes.

d. Loading Materiel

Materiel must be loaded in a rational manner, with heavy materiel loaded before light materiel and with materiel stacked by type. Rods are used to twist the ropes in order to prevent a loss of tightness. Ammunition, fuses, and detonators must not be loaded together. In this way full use can be made of space and the loading time can be shortened, insuring driving safety and also creating conditions for unloading vehicles.

e. Postloading Work

After everything and everyone is loaded or boarded on the train, cadres should count the personnel, horses, and vehicles to see if they are all present; and should inspect the weapons, gear, materiel, and equipment to see if they are all accounted for, whether the loading and boarding met the requirements, whether the reinforced bindings are tight, and the surplus wooden planks, sandbags, iron wires, ropes, and triangular chocks can be reused. Then they are to report to the commander.

3. Organization and Command While on the Move

While on the move, the commander should send out observers and designate duty weapons to prevent an enemy surprise attack; organize all personnel to study and abide by the train-riding regulations and the relevant things to which attention should be paid, and to take measures to prevent fire, freezing, and sickness and to effect hygiene management. Cadres at all levels must stick fast to their posts, strictly manage the fendui, conscientiously enforce all rules and regulations, constantly give education on discipline on the way, and timely handle the problems that are discovered.

If the train stops on the way, the train commander will send someone to contact the military representative at the railway station. No fendui commander must get off the train without authorization. If the train stops for a fairly long time, the troops can get off the train if they are authorized to do so by the commander; they must observe the range and time he stipulates, and they cannot get on and off as they please. If the train needs to make a long stop for a meal, the fendui, in accordance with the higher level's order, can get off the train to prepare the meal. Without the issuance of a uniform verbal command, they must not get on and off at will. Generally personnel should board the train 20 minutes before it departs, and they should be counted after they reboard the train. The fendui are forbidden to use flags or lights as command signals at a railway station.

Food and drinking water must be supplied on schedule for personnel, and fodder must be supplied on schedule for horses. A medical station must be set up on the train.

4. Unloading (Debarking) and Going into the Assembly Area

When the train reaches its destination, the fendui commander must do the following well: briefly mobilize the troops and explain to them the points to which they should pay attention after getting off the train; organize the sorting out of gear, the counting of weapons and equipment, and the sorting out of saddle gear; direct the fendui in debarking and survey the unloading platform and its exits, the fendui's assembly point, the field mess point, and the line of advance; and during the unloading and debarking have personnel go first, then horses, and finally equipment and materiel, and organize the fendui to debark in an order opposite to the one when they boarded the train, and have one cadre supervise and inspect the unloading and debarking. When the horses are being taken off the train, the more docile ones should go before the more spirited one, and when they are crossing the gangplank the distance between one horse and another should be 2 meters. When a vehicle or gun is being unloaded, the ropes, iron wires, and triangular chocks are removed. The driver then starts the vehicle and drives slowly in first gear as a cadre guides the vehicle off the train. When materiel is unloaded, it should be unloaded in the order of outside to inside and stacked according to type, so as to avoid rush, disorder, and damage.

When the fendui detraining has been completed, the commander should report to the higher level. Based on the order given, the fendui should swiftly leave the railway station and in a concealed manner go into the assembly area, where the personnel, weapons, ammunition, horses, vehicles, and equipment should be counted to see if there were any losses while unloading and debarking or whether there was any disorder in handling the unloading and debarking. At the same time the fendui should make good preparations for battle and await the order to go into action.

C. Quartering

Quarters are where the armed forces stay during a march or after combat. The quarters can take the form of billets or bivouacs, or a combination of the two. A fendui is usually quartered within the higher level's organic structure, but sometimes it organizes its quarters itself. When in quarters the fendui must heighten vigilance, strengthen reconnaissance and security, enhance communication and liaison, and pay attention to camouflage and concealment in order to insure that it can safely rest and swiftly go into battle.

1. Selecting the Quarters Site

The site for the fendui's quarters is usually assigned by the higher level; when it is to be independently quartered, its own level determines the site. The quarters site should be selected on the basis of the enemy's sitation and the terrain by the quartering team beforehand or extemporarily by the commander. In general, the conditions for the site are:

It has good terrain, ample sources of water, and good roads passing in and out, and is convenient for dispersal and concealment, convenient for mobility and swift entry into battle. It keeps clear of large towns, communication hubs, and other obvious targets. It keeps clear of flood channels, oil

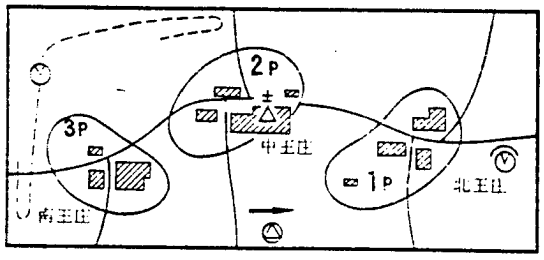
depots, high-pressure power sources, dangerous places that collapse easily and areas of serious contamination or contagion.

2. Organizing, Commanding, and Managing Quarters

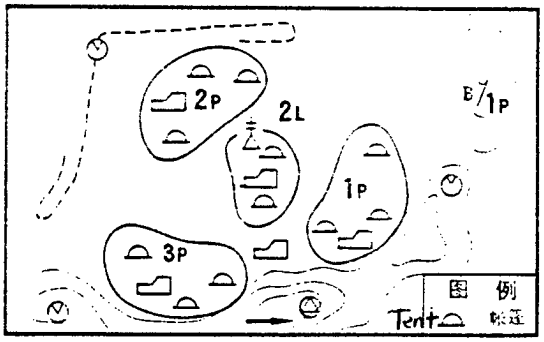
When the fendui is being quartered, the commander should, based on a division of the work, quickly organize and direct the fendui to complete various jobs so that it gets a rest as quickly as possible.

a. Quarters Deployment and Requirements

The fendui's deployment in quarters should be decided on the basis of the enemy's situation, the time in quarters, the form of quarters, and the terrain. If there is no worry or only a little worry about the enemy's situation, and the time in quarters is short, the fendui can disperse and deploy along the line of march (see the top map below), or it can deploy in an concentrated fashion. If there is a fairly big worry about the enemy's situation and the time in quarters is fairly long, the fendui should as much as possible leave the line of march to disperse and deploy where it is convenient for concealment, for security, and for combat action (see the bottom map below). When bivouacing the fendui should make use of terrain and deploy with the platoon and squad as the units; when billeting the fendui should, based on the conditions of the buildings, deploy in a manner convenient for rapid concentration. As much as possible, the lodgings should be distributed in accordance with the fendui's system of organization. When the quarters are a combination of bivouac and billets, the fendui should, based on circumstances, deploy in a flexible manner; infantry fendui are usually deployed on the outer side in the direction of the greatest enemy threat, weapons fendui are usually deployed on the inner side of the quarters site, and the battalion (company) headquarters is usually positioned in a place within the quarters area that is convenient for command. When going into quarters while on a march by vehicle, a suitable number of personnel can be quartered in the vehicles, and the vehicles will usually disperse and park in a concealed manner in a position within the quarters site that is convenient for mobility.



Quarters Deployment Along March Route



Quartering Off of March Route

After the fendui arrives at the quarters site, the commander should quickly make clear the billet or bivouac (lodging vehicles and vehicle parking places) for each fendui; make clear the main tasks for the next day and the preparations that should be made to carry out these tasks, the signals (signs) and passwords for communication and liaison in the quarters and the commander's position; stipulate the emergency assembly area; and lay down the measures for concealment and camouflage and control of lights. Based on circumstances, he should deliniate the antiaircraft dispersal and organize the building of the necessary antiaircraft field works; he should see that the tracks of vehicles and the marks of horses' hooves are wiped out; and he should make clear the actions to take when the enemy attacks with nuclear or chemical weapons on the ground or in the air and when the enemy launches a suprise attack.

The commander should make the best use of his time to comment on and appraise in a concise manner that day's march situation, and he should set forth the requirements while in quarters.

(2) Organizing Reconnaissance and Security

Before the fendui goes into the quarters site, the commander should quickly find out the situation in the quarters area. When there is a worry about the enemy's situation, he should organize a reconnaissance and search of the quarters area to ascertain the situation, and he should see that the water sources are inspected and guarded.

After the fendui goes into the quarters area, he should quickly assign antiaircraft observation sentries and duty weapons. Based on the situation, he should send out squad sentries, foot sentries, roving sentries, and hidden sentries in the direction in which there is a worry about the enemy's situation. Under all circumstances, guards should be dispatched inside the quarters area to take strict precautions against a suprise attack by the enemy or sabotage by enemy agents. The number and distance of the quarters guards who are dispatched should be decided on the basis of the enemy's situation, the terrain, and the time needed for the fendui to deploy. When the fendui is quartered within the higher level's organic structure, it usually does not organize quarters guards on its own, but only sends out direct guards. When the fendui is quartered while on a march by vehicle, the guarding of the vehicles should be strengthened.

(3) Quarters Reports

After the fendui enters the quarters area, the commander should quickly gather information about the march and the quarters, and then make a timely report to the higher level. Report forms are written and oral. Usually a written quarters report (a map of the quarters deployment can be appended) is submitted, but an oral report can also be made. A platoon usually makes an oral report (see the typical example below).

The main parts of a quarters report are:

(a) The time the fendui started that day, the places it went through, the distance it covered, the time and place it reached, the number of men, and the injured and sick situation.

(b) Quarters deployment (troop dispositions and guard deployment) and the emergency assembly area.

(c) Weapons and ammunition, equipment and materiel, the supply situation, and the vehicle wear and tear situation.

(d) A brief account of the ideological situation.

(e) Existing problems and things which require instruction.

(4) Organizing Rest

When the quarters deployment is completed, each fendui should quickly enter its quarters site, remove camouflage, unload, sweep and take hygenic measures, set up cots, set up canopies, put up tents, and dig latrines; make clear the drinking water and the water for other uses; prepare and eat meals, and prepare fodder, walk horses, and feed horses; inspect vehicles and add fuel and water to them; clean weapons and sort out gear; replenish ammunition and prepare equipment; make arrangements for the injured and sick and puncture blisters on feet; and mend boots and socks and dry clothes. The cadres should go to the platoons and squads and inspect and supervise them so that the fendui rests as quickly as possible, and carry out bedchecks and sentry checks.

(5) Doing Mass Work

The commander should at the opportune time make contact with the local government and the masses of people to find out the social situation. He should give the fendui a brief introduction to the enemy's situation, the social situation, the disease situation, and the customs and habits in the quarters area, conscientiously enforcing the party's policy and the three main rules and eight points for attention and launching activities of supporting the government and cherishing the people. Based on circumstances, he should mobilize the masses, seal off information, guard secrets, propagandize (arm) the masses, help in militia training, organize labor tohelp the people, and resolve the masses' difficulties. When leaving the quarters site, the fendui should do good mass work, return the things it has borrowed, fetch water and sweep floors, fill up and level latrines, solicit opinions, and inspect discipline.

(6) Handling Situations

When the fendui is hit by an enemy air raid, the commander should immediately sound the alarm, and the fendui should quickly go into the assigned dispersal area and take cover. In accordance with orders, the antiaircraft duty weapons should be fired at low-flying enemy aircraft. When necessary the commander should organize the fendui to give concentrated fire. After the air raid, as

circumstances warrant, the fendui should continue to stay in its quarters or, based on the higher level's instructions, shift its quarters site. When the fendui is hit by a suprise attack of enemy tanks and motorized infantry, the commander should quickly direct the fendui to seize favorable terrain and tenaciously resist the enemy, and he should also promptly report to the higher level. If there are fairly few enemies, they should be wiped out. If the enemy is superior in number, as circumstances warrant the fendui should either cooperate with the main force in annihilating the enemy or cover each other in turn as they withdraw.

When it is discovered that the enemy has mounted an airborne operation in our quarters area, the commander should immediately report to the higher level, and then direct the fendui to rush to the enemy's airlanding area, seize key points, and, with the cooperation of nearby friendly units and militia, wipe out the enemy while his foothold is still unstable.

When the fendui receives a warning of an enemy attack with nuclear or chemical weapons, it should swiftly go into the dispersal area, take cover in terrain or field works, and use manufactured or readymade equipment for protection. After the attack the commander should see that the wounded are given first aid, fires are put out, and contamination is removed (detoxified). He should report the situation to the higher level and, based on instructions, direct the fendui to withdraw from the contaminated area.

c. Quartering Under Conditions of Complex Terrain and Weather

(1) Quartering in Mountain Forests

When quartering in mountainous areas, the fendui should keep clear of precipises, steep slopes, gorges, and dangerous places where there could be mountain torrents or snowslides. In an empty space inside a forest, the fendui can set up tents or thatched huts and can put up hammocks. Around the tents and thatched huts, the fendui should uproot the thorny undergrowth and weeds, and, based on need, hang up mosquito nets. Measures should be taken against poisonous snakes, insect pests, and fire. Quarters guards should pay attention to controlling high points, mountain passes, road intersections, and defiles in order to strictly guard against an enemy suprise attack.

(2) Quartering in Grassland, Desert, or Plateau

When quartering in grassland, desert, or plateau, the commander should try to select for the quarters site an area that has water and is inhabited, and he should keep away from wind gaps. As much as possible the fendui should be concealed and camouflaged, and measures against enemy air raids should be strengthened. In accordance with the different terrains and different seasons, the fendui should pay attention to taking precautions against fires, sandstorms (snowstorms), and mud-rock flows and to saving fuel and water.

(3) Quartering Under Conditions of Severe Cold

When quartering under conditions of severe cold, the fendui should as much as possible be billeted, and the squads and platoons should try to be billeted in a centralized manner. Attention should be paid to reducing the time that the

fendui stays outside in order to prevent frostbite. One who has been frostbitten must keep in mind warming by fire or washing in hot water, and that the affected part can be scrubbed with snow or cold water and that he can use frostbite medicine. As much as possible the troops should eat hot food and drink hot soup to increase their quantity of heat. When sleeping they should wear cotton-padded caps, earmuffs, and cotton- padded trousers and socks (at times they should also wear overcoats). Two or more men should share the same bunk so as to provide mutual warmth. Attention should be paid to preventing fires and coal-gas poisoning. When bivouacing, as many tents and thatched huts as possible should be put up. A lot of hay should be laid down for shakedown beds. Snow walls can be built and snow caves dug. Attention should be paid to camouflage. Observation must be enhanced to timely discover snowslides and other dangerous situations and immediately issue a warning. When quartering on a march by vehicle, measures to prevent the vehicles from freezing should be taken. For example, if there is no antifreeze in a vehicle, based on circumstances, after vehicles are parked water should be immediately poured into their radiators, or the vehicles should be started at regular times to maintain their temperature, in order to avoid damage to the radiators by freezing.

(4) Quartering Under Conditions of Intense Heat

When quartering under conditions of intense heat, attention should be paid to guarding against heat, sickness, poisonous insects, and fires. When bivouacing, around the tents, thatched huts, and shakedown beds, weeds should be uprooted, some plant ash scattered, and drainage ditches dug. Meals should be prepared based on the characteristics of sweltering heat, and the boiled water supply should be increased,

Typical Example

Quartering Report

Battalion Commander:

Our company of XXX men at X time on X day set out. We passed through Zhangzhuang Village, Sucun Village, and Camp Lijia, traveling a distance of XX kilometers. At X hour XX minutes we arrived at Zhengzhuang Village and went into quarters.

Quarters deployment: The 1st and 2d platoons are quartered in Zhengzhuang Village, the 3d Platoon is bivouaced 100 meters to the west of the village, and the company headquarters is quartered in the village. The 1st Squad is standing squad sentry duty on an unnamed height east of the village. The 3d Platoon has sent two antiaircraft observation sentries and duty weapons to Hill 115. The emergency assembly area is 50 meters east of the village.

During the march the entire company was in high morale and had a vigorous fighting will. No one fell behind. There are no injured or sick personnel, and there are no losses.

There is only one day's food ration left. Please advise when the rations will be replenished.

Company Commander XXX

X Infantry Company

Political Instructor XXX

X month X day XX hours X minutes, Zhengzhuang Village

D. Changing the Guard

The purpose of changing the guard is to adapt to a new situation or to adjust or set up a new deployment in order to increase the stability of the defense or maintain the capabilitg for a protracted offensive. No matter whether it is on the defensive or the offensive, a fendui can always change the guard. The methods of changing the guard are original site changing and overtake changing.

Under the threat of enemy ground or air firepower, the changing of the guard is usually done in a concealed manner at night or in bad weather. When the guard is relieved the two parties should take the overall situation into consideration and coordinate on their own initiative. Matters connected with the relief of the guard should be made clear on the spot.

1. Original Site Changing of the Guard

Before the changing of the guard, the handing-over fendui should brief the commander of the taking-over fendui on the following points: the troop deployment, pattern of activity, and combat characteristics of the enemy at the front; in the region occupied by us, the terrain, main direction of defense and key points, or the main targets of assault, troop deployment, organization of fire, arrangement of positions, situation in field works construction, type and number of obstacles, positions of routes, and living facilities. For a fendui that is being attacked by enemy nuclear or chemical weapons, he should also give a briefing on the contaminated area and the situation in removing contamination. Based on the higher level's relevant rules, the two parties should then specifically decide through consultation: the time, order, and method of handing over and taking over; the lines for passing in and out for the handing-over and taking-over fendui; the positions of the route markings and the adjusting sentries; the time and place that the guides will meet the taking-over fendui; the security measures for supporting the changing of the guard; and the plan for handling various situations.

During the changing of the guard, the taking-over fendui should, at the stipulated time, swiftly go along a concealed route to the area where the guard is to be changed. The fendui should be led by guides sent by the handing-over fendui to the assigned position for the changing of the guard. Each fendui commander should deploy his fendui in the assigned position, and he should send out observers, guards, and duty weapons. The commander of the fendui taking over should direct, at the handing-over fendui's command and observation post, the changing of the guard.

The handing-over fendui should enhance its observation and security to prevent an enemy surprise attack, and it should quickly turn over the stipulated things.

During the process of changing the guard, when the fendui are attacked by enemy air or artillery fire or by his nuclear or chemical weapons, they should swiftly take cover and protect themselves, waiting until the attack is over before cxontinuing to change the guard. At the same time they should organize first aid for the wounded and should eliminate the consequences of the attack. When attacked by the enemy, the fendui should immediately stop the changing of the guard, and both fendui, under the unified command of the handing-over fendui commander, should resist the enemy's assault. After the assault is beaten back, they should resume the changing of the guard.

After the handing over and taking over is completed, the handing-over fendui should, in accordance with the stipulated time and line, swiftly withdraw in a concealed manner to the assembly area. When necessary, and based on the higher level's instructions, individual men can be left behind to help the fendui taking over to become familiar with the situation. The fendui that has taken over should as much as possible maintain the pattern of activity of the original fendui. The fendui commander should personally inspect the deployment and preparations for battle of his personnel and weapons.

After the change is completed, the commander of the two parties should immediately and separately report to their direct superiors.

2. Overtake Changing of the Guard

Overtake changing of the guard is done during an offensive battle. Usually this changing of the guard is done simultaneously, but when necessary it can be done from rear to front.

After the fendui taking over goes into the take over area, led by guides sent by the handing-over fendui, it adopts a dispersed formation and quickly and in a concealed manner occupies a start line for changing the guard that is behind the line occupied by the handing-over fendui and that is convenient for overtaking. Based on the higher level's instructions, it passes over the handing-over fendui's battle formation at the opportune time and develops an attack against the enemy. The overtaking area should as much as possible be selected to be on the flank of the line occupied by the handing-over fendui. When necessary, the fendui taking over can also occupy the start line for changing the guard and on the advance overtake the battle formation of the handing-over fendui to attack the enemy. The handing-over fendui should provide fire support.

During the changing of the guard, when the enemy makes a counterassault on us, the handing-over fendui should base itself on favorable terrain, resolutely resist, and check the enemy's movement. The fendui taking over should, in accordance with orders and under cover of the handing-over fendui, overtake the battle formation of the latter and launch a bold and powerful assault on the enemy.

IV. Antiaircraft Protection

A. Assessing Situations and Dividing into Areas

Based on the higher level's notification and his fendui's deployment and position, as well as the enemy's tactical characteristics, the commander should correctly assess the possibility of the enemy's making an aerial attack, as well as the direction from which the enemy aircraft could come, their air route, type, number, battle formation, and possible means of attack.

For the convenience of command, observation, and target indication, the commander, on the basis of his assessment of the enemy's situation, should, in accordance with the fendui's deployment and the terrain characteristics near its position, divide the air above the position into airspaces in accordance with the points of a compass or the direction of the hour hand of a clock.

B. Setting Up an Antiaircraft Observation Network

To discover enemy aircraft as early as possible, the fendui must set up an antiaircraft observation network, and its commander must promptly notify his own and attached fendui of the higher level's report of the aerial situation. A battalion usually sends out direct antiaircraft observation sentry posts (1 to 2), and a company usually sends out 3 to 4 observers. Also, they are augmented with the necessary equipment for observation, communication, and warning in order to organize multidirectional and simultaneous observation. When sending out observation sentry posts (observers), the commander should make clear to them: the positions of the observation sentry posts (observers), their mission, the key aerial areas for observation, the methods of discovering situations and reporting them, as well as the relevant signals (signs) and the methods of effecting liaison with our air arm when it supports a ground battle.

The content and order of a report on the discovery of enemy aircraft are: direction, type, number, distance, and course. For example: "4 helicopters in No 2 Airspace, distance 5 kilometers, flying in a straight line close to each other."

C. Organizing Antiaircraft Fire

When the fendui organizes antiaircraft fire, it should base itself on the higher level's intent. In every situation the terrain, the performance of weapons, and the mission should be taken into account. With antiaircraft weapons and augmented air defense missiles as the backbone, and with light and heavy machine guns and some submachine guns taking part, an antiaircraft fire network for low and minimum altitudes is to be formed. Its main mission is to hit the enemy's armed helicopters and low-flying attack planes.

Antiaircraft machine gun fendui usually adopt a group deployment, but based on the situation with regard to covering the targets, they can also deploy in in a single line. The gaps between the positions of one squad and another is 15 to 30 meters. The firing positions should be selected so as to be in the main direction from the enemy aircraft will probably come for the attack, or it should be a place near the main target to be covered that is convenient for

observation and display of firepower, convenient for concealment, camouflage, and movement; the position should be as near to the target as possible. When covering a fendui that is starting an advance, usually the network is incorporated as platoons in the infantry fendui's formation for advancing, so that at all times it is prepared to occupy a firing position and hit raiding enemy aircraft.

Heavy machine guns are usually deployed on the flanks of the infantry fendui's battle formation, at gaps or tops of heights, in positions that are convenient for the display of antiaircraft fire and for concealment and movement. HY-5 antiaircraft missile fendui are usually deployed about 500 meters from the target to be covered in the main direction from which enemy aircraft will probably make a low-altitude attack. The launch position should provide a circumferential field of antiaircraft fire that is favorable to utilizing firepower and for concealment and movement, and that is in a place that keeps clear of outside disruption. When these missiles are launched while on a vehicle march, the vehicles should maintain a speed of less than 20 kilometers per hour and the passage of the vehicles should be smooth. When the march is on foot, short stops should be made to launch the missiles.

D. Effecting Good Concealment and Camouflage, Laying Down Antiaircraft Discipline

To deceive and confuse enemy aircraft, besides basing itself on terrain features, vegetation, seasonal and weather characteristics to camouflage personnel and positions, the fendui should cover and block, vertically and levelly, important road sections and targets. The camouflage should make skillful use of terrain, or the camouflage should be of the disruptive pattern type, so that everything is done to prevent being seen by the enemy's ground and air reconnaissance. When necessary dummy targets should be set up and dummy field works built.

To defend against enemy air raids, the commander should clearly lay down the disciplne for air defense. He should maintain order in the position, control or reduce the movement of personnel at the position, strictly control lights, and before a battle prohibit unauthorized firing in order to avoid exposing the position too easily to the enemy's attack.

E. Dealing with an Enemy Air Raid

The commander should personally observe the battlefield and promptly determine the direction, altitude, number, and type of the enemy aircraft entering our airspace. When there is an air raid, he should quickly report to the higher level, issue the signal for air raid defense, and notify nearby friendly units. As circumstances warrant he should at the opportune moment organize the fendui to take cover or to fire into the air to hit low- flying enemy aircraft.

When enemy aircraft are directly supporting their ground battle, the commander should exercise firm, steady, uninterrupted command, so that the fendui both hits the enemy on the ground and deals with the enemy's air attack. At the opportune moment he should direct the antiaircraft weapons and some light and heavy machine guns to hit the enemy's armed helicopters and low-flying aircraft.

When enemy aircraft delay our fendui's movement, the commander should organize the augmented HY-5 air defense missiles and some light and heavy machine guns of the antiaircraft fendui to provide follow-up cover and fixed-point cover. Generally the method of firing in the direction from which the enemy aircraft are coming to attack can be adopted, so that they do not dare to rashly get near the targets of their attack or the sector for carrying out their mission. Sometimes we can set up, near the road on which our fendui is moving, some hidden antiaircraft weapons, and when low- altitude enemy aircraft come to attack they will suddenly open fire and destroy them, thereby guaranteeing the security of the air over the fendui's movement.

After being attacked by enemy aircraft, the commander should steadily, cool-headedly, and quickly ascertain the losses and report to the higher level. He should timely adjust the fendui's deployment, and see that it repairs the field works and strengthens antiaircraft observation and security so that it is prepared to hit the enemy when he again attacks.

Chapter Two: Logistics Support

I. Characteristics of Logistics Support

In modern battle, because of the development of weapons and technical equipment, the elements of surprise and destructiveness of warfare and the mobility of units have greatly increased. The degree of intensity of battle has risen unpredecentedly. In addition, there are the restrictions of terrain, weather, communication, and other conditions, and the blockade of enemy air raids and artillery fire. Fendui logistics will be carried out under conditions of complex circumstances, arduous environments, and heavy tasks. Therefore, new characteristics have appeared in logistics support work.

A. Materiel Consumption Has Greatly Increased and Replenishment of Materiel Is Difficult

In modern warfare, because of the widespread use of advanced weapons and technical equipment, the continuance and degree of intensity of battle have risen, and the amount of ammunition, POL, and other materiel consumed has markedly increased over what it was in the past. The contradiction between supply and demand is more prominent, putting higher demands on the effectiveness for a given period of time of materiel replenishment; in addition, delivering materiel in front of the firing line comes under direct threat from the enemy, and so the capacity for fendui logistics support is limited. Therefore, to timely deliver a large amount of materiel to the frontline and uninterruptedly satisfy the needs of battle will be more difficult.

B. Battle Casualties Have Increased, and the First-Aid Task at the Firing Line Is Heavy

In modern battle, because the enemy can use weapons that cause large-scale casualties and destruction, as well as the fact that the power of conventional weapons has increased, within a short period of time, even in an instant, there will be a large batch of wounded personnel, and the types of wounds will be complex and the condition of the wounds serious. Under circumstances in which battle is intense and the forces for medical first- aid are limited, the fendui should quickly remove the large batch of wounded personnel from the firing line, and this task will be extremely heavy.

C. There Is Great Reliance on the Higher Level's Rear Area Supply

Following the gradual development of the units' weapons and technical equipment in the direction of standardization and seriation, modern battle makes extremely strict demands on the timeliness and accuracy of materiel supply. The possibility to solely depend, as on past battlefields, on on-the-spot supply and the use of what is captured in battle to replenish oneself has been greatly reduced. Therefore, the various kinds of operational materiel for a fendui in wartime must closely rely on the higher level's logistics' uninterrupted supply before they can satisfy the needs.

D. Organization and Command Are Complex

Because of the abovementioned characteristics, making decisions on battle actions must depend on logistics support. Logistics support also needs the effective cover and support of the front. Coordination of front and rear is complex. At the same time, a modern battle is a combined arms battle by all service arms. The fendui will be strengthened by a certain number of fendui from other service arms. The variety of support materiel has greatly increased. Logistics supply relations and internal coordination are quite complex. Moreover, fendui logistics is at the front, and must both carry out logistics missions and at any time take part in battle. Therefore, there has been an increase in the degree of difficulty in organizing and commanding logistics support.

Although the abovementioned characteristics bring unfavorable effects to fendui logistics support work and impose new demands on it, provided importance is attached to enhancing the organization and command of logistics, closely integrating the organization of battle and logistics support, mobilizing all positive factors, fully displaying the intelligence and ability of logistics personnel, and giving full play to the role of existing equipment and materiel, so that the battlefront and logistics act in coordination as one, the commander will certainly be able to overcome difficulties and provide good logistics support.

II. Basic Missions of Logistics Support

The basic missions of combat fendui logistics are materiel replenishment, medical first aid, weapon and equipment maintenance, and life support to strengthen and improve combat effectiveness, all for victory at the frontline. Their main contents are:

A. Requisition, receive, and use weapons and ammunition, POL, supplies, bedding gear, and other materiel, equipment, and funds. Collect and turn over to the higher level waste and old materiel and materiel captured in battle.

B. Take hygienic measures to prevent disease and protect personnel, give first aid on the firing line to sick and wounded personnel and horses and send them to the rear, and insure that "soldiers are strong and horses sturdy."

C. Inspect and guide the use, management, and safekeeping of weapons, vehicles, and equipment; timely send for repair damaged weapons and equipment so that weapons and equipment are normally in a good state of combat readiness.

D. Provide good support in food and drink and devise ways to regulate and improve mess arrangements, so that the officers and men eat their fill of good food.

E. Do good political and ideological work on logistics personnel, strengthen logistics battle training, conscientiously study and sum up support methods, and improve support capability under all conditions.

III. Organization and Command

A. Basic Demands

Logistics command is an important aspect of combined arms command. Logistic support of fendui in wartime is usually carried out under the unified organization by senior officers of battalions and companies. Therefore, the fendui commander must strengthen his leadership over logistics, conscientiously make logistics command an important part of the entire operational command, and organize logistics support well, so that the fendui's battle actions are established on a definite material foundation and victory in battle is effectively insured.

1. Logistics Command Is Effected on the Basis of Battle Decisions

Operational decisions are the basic foundation for correctly commanding and organizing logistics support. Therefore, on the basis of making battle decisions, the fendui comander should make the corresponding support decisions and make clear the dispositions, organization into groups, and missions of logistics. When changes occur in the situation that require a revision of decisions and readjustment of battle deployment, he should at the same time readjust the disposition, organization into groups, and missions of logistics, so that the logistics support suits the changed new situation.

2. Carefully Organize and Plan

Logistics support must be suited to battle actions. The fendui commander should comprehensively understand the logistics situation, carefully consider the entire course of the battle and each aspect of it and, while organizing and planning the battle, formulate a logistics support plan suited to it. When planning logistics support, he should integrate well the need and the possible, the key points and the ordinary, and the current and the subsequent. At the same time, he must foresee the changes in development that could occur, and control a certain amount of reserve support forces, so as to deal with the needs of special circumstances. During battle, he should personally grasp the key points of logistics support, quickly and accurately grasp the changing situation, and decisively and precisely handle it.

3. Closely Organize and Coordinate

When organizing coordinated movements in battle, the fendui commander must put the organization of logistics coordination into the battle coordination plan. In line with the principle that logistics support action should be coordinated with battle actions and that combat fendui should vigorously help logistics to overcome its difficulties, he should organize well the coordination between the logistics and the fendui. At the same time, he should organize well the coordination of the logistics internally and the coordination between the logistics and the attached fendui.

4. Give Full Play to the Role of Logistics Personnel

The fendui's logistics personnel are the main body that completes the support mission. With regard to logistics forces, the commander should scientifically

organize them, rationally divide their work, and make clear the mission and the items to be coordinated, as well as the methods of liaison. He should constantly listen to the reports and suggestions of logistics personnel, and timely give them instructions. At the same time, he should supervise and urge, inspect, and guide the logistics to do well all support work, giving full play to the entire force of logistics so that all logistics support missions are completed.

B. Command Procedures and Content

1. Battle Preparation

a. Receiving the Mission, Finding Out the Logistics Situation, and Directing Logistics Preparation

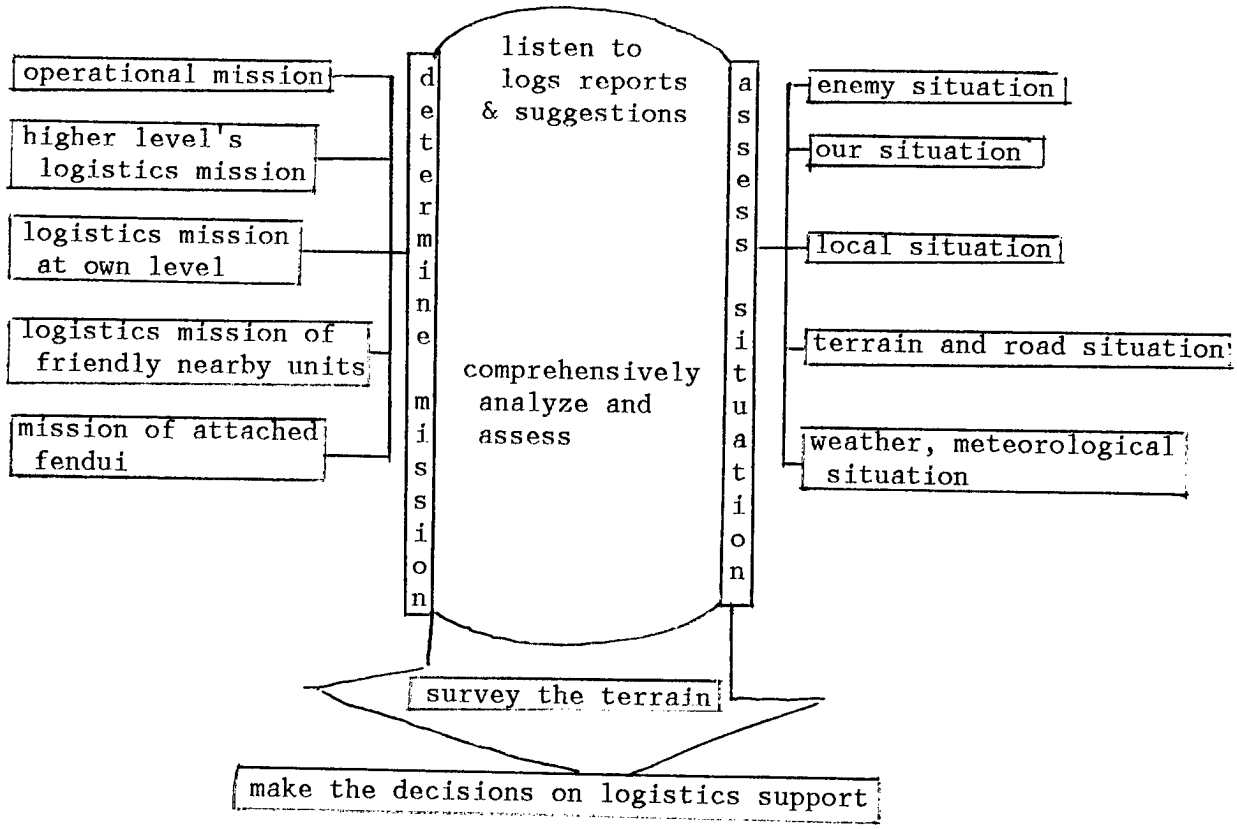
--Through taking part in the higher level's operational meeting, the commander finds out from the regiment's rear area orders the situation with respect to the fendui's logistics support and the higher level's demands, stipulations, and instructions on logistics.

--The commander listens to the logistics commander's report on the logistics situation of his own and attached fendui, and instructs the logistics, based on the fendui's timely carrying out of its mission, to determine a logistics support plan.

b. Making Decisions on Logistics Support and Formulating the Missions of Logistics Support

After listening to logistics suggestions and surveying the terrain, the fendui commander makes timely logistics support decisions (the procedure is seen on the chart at the right), and he gives the logistics fendui its mission and the key points for support.

Procedure Chart for Making Logistics Support Decisions



Its primary contents are: the logistics' positions of deployment and lines for sending materiel to the front; the amount of ammunition, POL, provisions, and other materiel that is carried and the add-on amount; the consumption norm and the methods of replenishment; the composition and missions of all support teams and the main direction of support; the support for attached fendui; the methods of providing mutual coordination and support and the rules for signals (signs) for communications and liaison; and the time limit for completing logistics preparation.

c. Matters Connected With Organizing Coordination Between Logistics and Combat Fendui

The main contents in organizing coordination between logistics and battle fendui before battle are: each stage and time of the battle, the opportune times for logistics to send materiel forward to the combat fendui and the attached fendui, and the lines, places, and methods for this, as well as the combat fendui's cover and coordination for the logistics actions; based upon the development of the battle, determining the opportune time, place, and method for shifting logistics; and the coordinated actions as one by the logistics and the combat fendui when attacked by the enemy's nuclear or chemical weapons.

d. Mobilizing Logistics Personnel for Battle

Matters concerning support to further make clear: organize, inspect, and command the preparatory work of logistics support, and at the appropriate time report to the higher level the situation with respect to logistics preparations.

2. Engaging in Battle

a. The fendui commander should quickly find out and grasp the development of the battle in the main direction and in the main fendui, and the situation with respect to casualties and consumption. At the appropriate time he should then instruct the logistics to provide support.

b. He should organize coordination in an uninterrupted fashion. At the appropriate time he should instruct the combat fendui to cover with fire the logistics' delivery of ammunition top the front and its rush-transport of the wounded. When necessary, he should transfer personnel to replenish or help the logistics teams in carrying out their support.

c. As circumstances warrant he should instruct logistics to report on the support situation and on the problems that urgently need to be solved. He should timely report to the higher level's logistics the current logistics situation. When there is an excessive number of casualties among logistics personnel, the situation is pressing, and his own level lacks the strength to provide logistics support, he should requiest the higher level's logistics to give support.

d. Based on the development of the battle and the changes in the battle deployment, he should at the appropriate time readjust the logistics support forces and make clear to the logistics its new support mission.

e. He should instruct logistics to shift at the appropriate time. Where logistics is far from the battle formation and it is not in a convenient position to provide support, or when logistics is seriously threatened by the enemy, he should instruct logistics to shift to a new position and provide its support.

3. End of the Battle

The commander should notify logistics of the fendui's next mission and action, and organize logistics to make good preparation for supporting the next battle. He should instruct logistics to take part in the work of cleaning up the battlefield, rush-transporting the wounded, collecting captured and damaged materiel and equipment, compiling statistics on the casualties to personnel and on the consumption and replenishment of materiel and the providing of mess support. In a timely fashion he should adjust and replenish logistics personnel who have been depleted in numbers. When conditions permit, he should instruct all logistics teams to make good use of their time to organize specialized training. At the same time, he should organize logistics to sum up the battle and to make good preparations for supporting the next battle.

C. War Service Organization and Missions

Infantry company and battalion logistics must set up and strengthen war service organizations, and specifically and clearly distinguish their support missions. The company usually organizes a first- aid team, ammunition team, and provisions team; the battalion usually organizes an ammunition station [suo 2076], medical aid station, and transport team. Separately under the unified command of the senior officers of the company and the battlaion, with the deputy political instructors being specifically responsible, the quartermasters and managers organize the support. Motorized infantry companies and battalions usually also have a vehicle fuel team for which the motor pool cadres are specifically responsible. The method of organizing war service into groups, and the number of men in them, at each level should be determined flexibly as the basis of the battle situation.

Main Missions and Differentiations of Infantry Company and Battalion War Service Teams

Company War Service Teams

First-aid team--It is responsible for drawing battle first-aid medicinal materials, controlling stretchers, seeking out the wounded and giving them first aid on the firing line, and guiding self-aid and mutual aid, as well as the medical management and methods at the position (in the tunnel).

Ammunition team--It is responsible for receiving, requesitioning, issuing, and replenishing weapons, ammunition, and other equipment and materials; reporting the damage and consumption situations; and searching for and disposing of old and waste equipment and materials.

Provisions team--It is responsible for cooking support, and for forming, when necessary, support teams to accompany squads or platoons that are performing independent missions.

Battalion War Service Team

Medical aid station--It collects and takes in the companies' wounded and sick personnel, and provides supplementary emergency treatment. It organizes their transport to the rear and does hygienic disease-prevention work at the position.

Ammunition and rations station--It requisitions, receives, and issues ammunition, provisions, clothing and equipment, and materiel. It reports to the higher level statistics on consumption. When necessary it joins with the provisions station in organizing unified all-battalion hot meal support.

Transport team--It is set up according to circumstances

Battalion and Company War Service Personnel Table of Organization

		Deputy Political Instructors (batt)	Administrators	Medics (paramedics)	Deputy Political Instructors (coy)	Quartermaster	Medical Personnel	Provisioner	Ordnance Personnel	Stretcher Bearers	Barbers	Medical Soldiers	Mess Personnel	MG Company (ammo carriers)	Artillery Company (ammo carriers)	Total
Battalion War Service	Ammo & Provisions	1	1						机连 1 MG Coy					4—5	5—6	12—14
	Aid Post			2			3			2	机连 1 MG Coy	MG: 机 2—3 Army: 炮 1—2				11—13
	Transport	Based on mission requirements														
Company War Service	Subtotal	1	1	2			3		1	2	1		3—5	4—5	5—6	23—27
	Ammo Team								1	1			3—4			5—6
	Aid Team						1				1	4—8				6—10
	Mess Team					1		1					6—7			8—9
	Subtotal				1	1	1	1	1	1	1	4—8	9—11			20—26

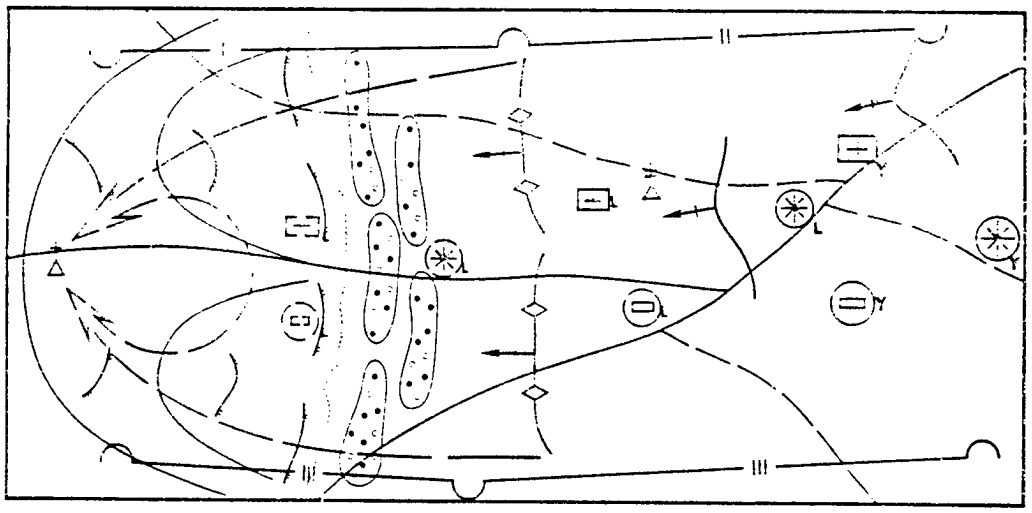
Notes: 1. The number of men in each team may be appropriately increased or decreased in accordance with the battle mission.

2. This chart is an excerpt from the PLA General Staff Department's February 1981 "Handbook for Logistics Staff Officers of Divisions and Regiments."

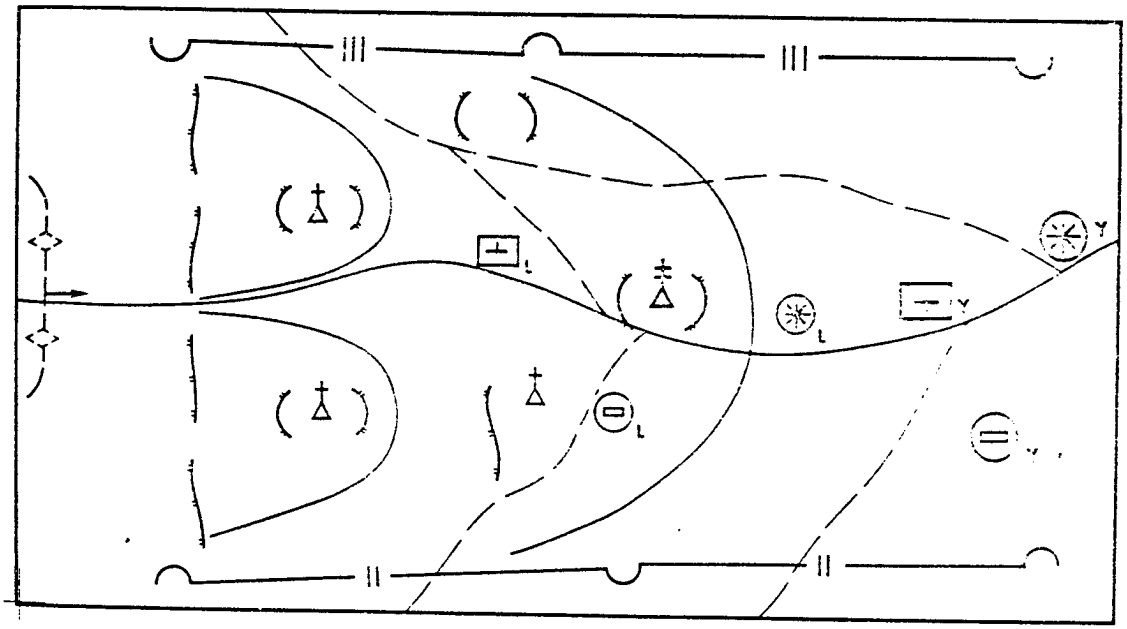
D. Principles and Methods of Logistics Deployment

Principles. The deployment of all fendui logistics teams should be based on the battle mission, operational plan, and terrain and road conditions. Positions should be selected that are convenient for providing support and for command and liaison, concealment and safety. The position should have roads passing in and out and be near water sources, have good hygienic conditions, and have an area sufficient for organizing work. When necessary, field works should be built, there should be tight camouflage, and there should be enhanced security guards in order to prevent enemy surprise attacks.

Methods. In an offensive battle, the first-aid and ammunition teams are usually deployed behind the first echelon near the direction of the main attack; the provisions team is usually deployed behind the company's battle formation or in a concealed position in the attack start area (see the sketch map below). In a defensive battle, all teams are usually deployed near positions (see sketch); when on mobile defense, the first-aid team and ammunition team are deployed near the main position and the provisions team is deployed in the main position.



Sketch of Logistics Deployment for an Offensive Battle by a Reinforced Infantry Company Against an Enemy in Field Position Defense



Sketch of Logistics Deployment for a Defensive Battle by an Infantry Company in Field Position Defense

The fendui's driver squad (pack train driver squad) is usually deployed outside the range of the enemy artillery's direct fire weapons; the driver squad can be deployed on favorable terrain near the region where the fendui gets out of its vehicles.

E. Opportune Times, Methods, and Demands for Logistics Shifts

In wartime, in order to provide uninterrupted support, the fendui commander should, based on changes in the development of a battle, at the appropriate time order logistics teams (squads) to shift to a new position.

Opportune Times for Shifts. Usually they are: when the team (squad) is too far from the battle formation, making support inconvenient; when the fendui's battle mission changes and its deployment is readjusted; and when the team (squad) is threatened by the enemy and is unable to do its work.

Methods and Demands for Shifts. Usually the team (squad) follows behind its own level's battle formation. Under difficult conditions, among the teams (squads) there can be mutual shifts in alteration. The shifts should be made at the opportune time, and should be fast, safe, and concealed. Before the shift, the squads and platoons should be replenished with ammunition and other urgently needed materiel and equipment, and appropriate arrangements should be made to handle wounded and sick personnel, horses, materiel and equipment that cannot accompany the fendui. After the shift is made to the new position, the commander must quickly initiate work to support the fendui as fast as possible, and he should timely report the situation with respect to the shift to the higher level's logistics department.

IV. Support for Attached Fendui

A. When a Special Arm Company is Attached to the Fendui for Battle. The original organic unit is usually responsible for logistics support. When necessary they can mutually redistribute and replenish interchangeable materiel.

The war service teams of the special arms company and the infantry company can, based on the battle mission, be separately deployed. However, they should support each other, make standard rules for liaison signals (signs) and, when necessary, unite to organize security guards and battlefield first aid.

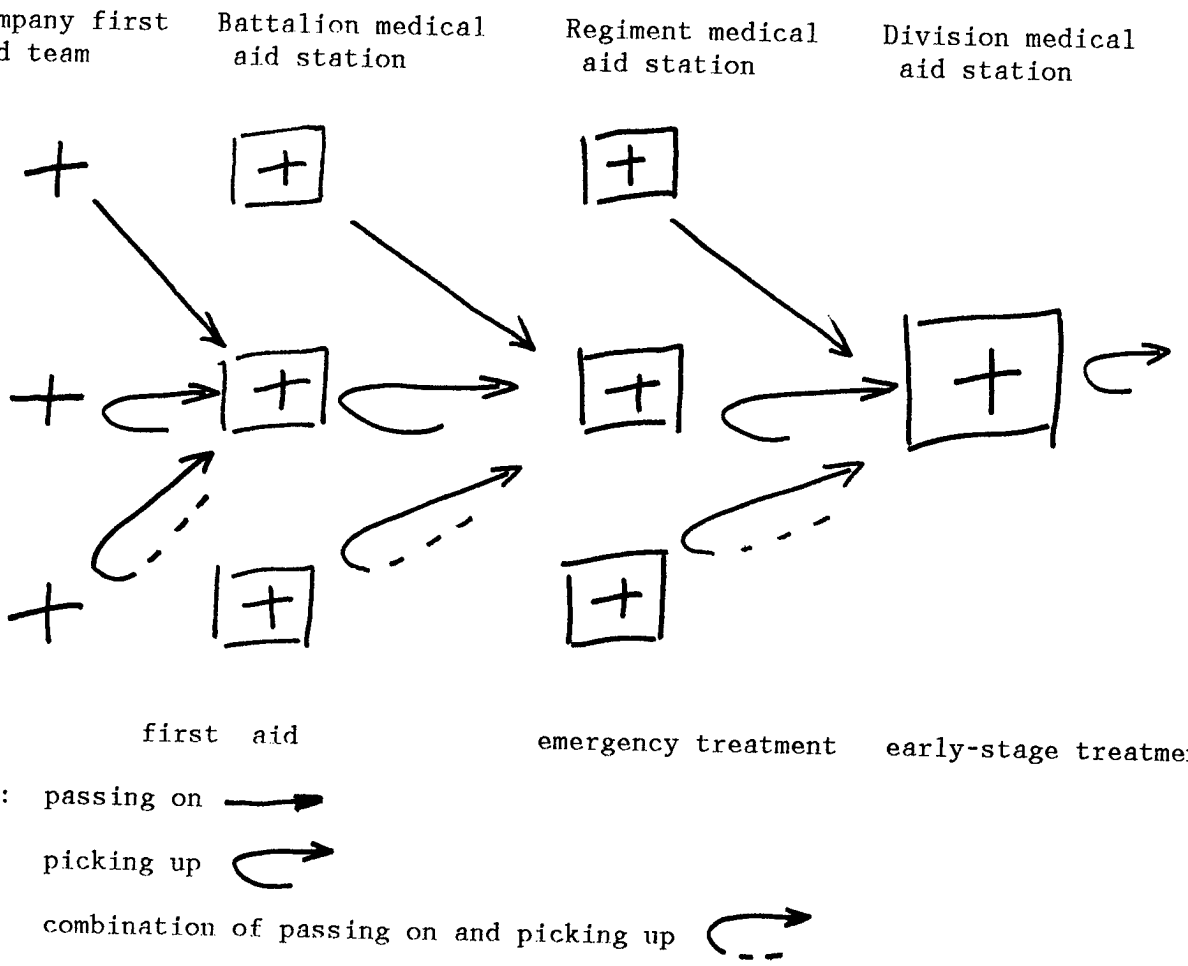
B. When Special Arms Squads or Platoons Are Attached to the Fendui for Combat. The infantry company is responsible for the supply of interchangeable materiel and equipment, mess support, and first aid for the wounded; the accompanying support team organized by the special arms company is responsible for the supply of special-purpose materiel and equipment and for technical support, and it maintains ties with its original organic supply unit.

V. Transport of Wounded to the Rear

Organizational Modes for Transporting Wounded to the Rear The transport of wounded to the rear is divided into two modes: picking up at the front and passing on to the rear. The picking-up mode is that mode in which the higher level dispatches means of transport to pick up and take back the lower level's

wounded. The passing-on mode is the mode in which the lower level uses its own means of transport to pass on its wounded to the higher level's treatment organizations. The picking-up mode is divided into level- by-level picking up and bypassing-level picking up; the passing-on mode is also divided into level-by-level passing on and bypassing-level passing on. For the transport to the rear of the wounded of fendui at the battalion level and below, level-by-level picking up is made primary, and picking up and passing on are combined.

Diagram of Organization for Transporting Wounded to the Rear



Basic Demands for Transporting to the Rear. The transport of the wounded to the rear must be swift and safe. For this reason, the leadership over the work of transporting the wounded to the rear must be strengthened. The use of transport forces must be carefully planned. When the number of wounded to be sent to the rear is excessively large, time is pressing, and the organic means of sending them to the rear are insufficient, transport forces of many quarters must be planned and prepared, and the personnel who have brought ammunition and cooked food to the front must be organized to take the wounded with them when they return to the rear. When there is not enough time to send them to the rear, the wounded should be concentrated in a concealed place and the higher level requested to pick them up. The lightly wounded who can walk should be organized and a responsible person assigned to be in charge of them.

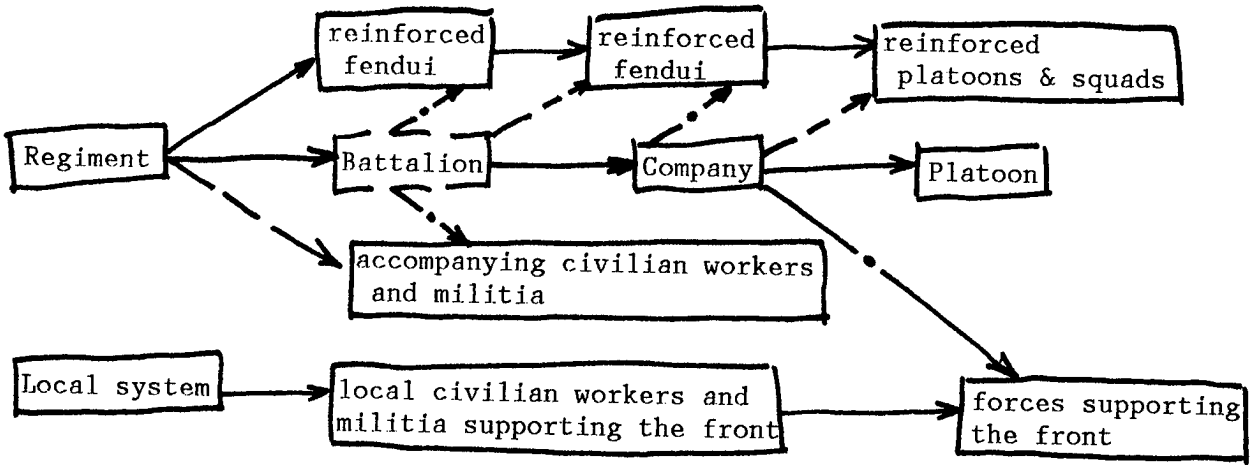
They should take care of each other and proceed to the rear on their own. Under emergency circumstances, personnel of the fendui are to be taken out to help take them to the rear, so that the wounded are swiftly sent to a treatment organization suitable for their wound condition. To insure the safety of the wounded, before they are sent to the rear, the wounded and sick personnel should be inspected to determine whether they are suited to be sent to the rear. With regard to the wounded who are in a coma, are asphyxiated, or who would be in danger on the way back to the rear, and with regard to the sick who are in an acute stage of infection, it is inadvisable to immediately send them to the rear. In principle, the sending to the rear of the wounded who are in shock should be avoided. Personnel should be dispatched to escort the critically wounded to the rear. Special wounded and sick (men with mental disorders, men with infectious diseases, and sick and wounded POWs) should be sent to the rear singly. On the way to the rear, there should be good camouflage. Attention should be paid to guarding against air raids, artillery fire, secret agents, heat, and rain. As much as possible, the suffering of the wounded from jolts and other causes should be alleviated.

VI. Support in Materiel and Equipment

A. Organization of Materiel Supply in Wartime

The organization of materiel supply in wartime must meet the demands for entralized unified command of combined arms operations by all service arms. Based on the supply system, the fendui's materiel is usually supplied to the companies by its organic regiment. When necessary, a temporary war service organization should be set up to act as a transfer link from the regiment to the companies. The special-purpose materiel of an augmented fendui is usually supplied in accordance with the organic system; but interchangeable materiel may, as circumstances warrant, be supplied in accordance with the command system. The attached civilian workers are centrally supplied by the army's logistics, while the local civiliabn workers and militia supporting the front are usually supplied by the local system.

Diagram of System of Organization for Materiel Supply



Key: supply in accordance with the organic system

supply based on command

coordinated relations

B. Materiel Reserves

The PLA's battle reserves are divided into three reserves: carried, transported, and add-on.

Accompanying and Transported Reserves. The materiel in the form of personnel, weapons, vehicles, and horses that are carried with the fendui in accordance with the stipulated standards are called the accompanying reserves; the materiel transported from the division's and regiment's warehouses are called transported reserves. The purpose of setting up accompanying and transported reserves is for the units to regularly maintain a certain quantity of materiel that can be thrown into battle at any time. The allocation standards for the accompanying and transported reserves of all kinds of materiel in units (fendui) at all levels is centrally stipulated by the headquarters.

Add-on Reserves. Reserves of materiel that are added to the accompanying and transported reserves are called add-on reserves. The amount of add-on reserves are usually stipulated by the higher level before battle. The main purpose of the add-on reserves is to satisfy the needs of the units in fighting a battle or engaging in an operation for a fixed time, and to reduce the amount of reserves sent to the front during the course of a battle, so that after completion of its mission the unit (fendui) can still maintain an amount of materiel not lower than the amount of its emergency reserves.

Bases for Add-on Reserves. The amount of a fendui's materiel add-on reserves is usually based on the battle mission, the degree of difficulty of replenishing materiel during the battle, the condition of the stockpiled materiel and the capability for carrying it, the nature of the materiel, the

pattern of consumption in the battle, and the possiblility of the higher level providing supply. Before the battle, the suggestions or applications put forward by the fendui are reported to the higher level for its permission and decision.

C. Consumption Limit

The maximum limit set for the unit (fendui) for the permissible consumption of all materiel within a certain operational time or for a battle is called the consumption limit.

The consumption limit is usually set by the higher level. When the higher level's materiel supply is cut off and the supply cannot be provided according to standard, the fendui commander should set the consumption limit for the existing materiel. The basis for the consumptin limit set by the fendui for the lower level, in the main, should be subject to the overall plan and consideration of the higher level's supply possiblility, the importance and urgency of the mission undertaken by the fendui, as well as the ordinary pattern of consumption.

The consumption limits stipulated and enforced in wartime can make commanders and logistics departments at all levels rationally control consumption in a planned manner. They also reduce the waste of all sorts of operational materiel and adjust the contradiction between supply and demand, so that the limited materiel better insures the completion of operational missions. At the same time, they are an important measure for strengthening the use and management of materiel on the battlefield. Therefore, once a consumption limit is determined, it must be strictly enforced. If there occur changes in the situation, this can be reported to the higher level and, as circumstances warrant, the higher level will make the necessary readjustments to the limit it had stipulated. Before these readjustments are made, no level may at will break the consumption limit stipulated by the higher level.

D. Methods and Basic Demands for Materiel Replenishment

Methods of Replenishment. In the methods of materiel replenishment, the following should be upheld: integration of planned replenishment and requested replenishment; integration of replenishment of materiel by the higher level's sending to the front and by self-drawing. Under emergency circumstances, combat forces and firepower can be designated to cover logistics making a forced replenishment. When necessary, fendui that are adjacent can organize regulated materiel replenishment.

Basic Demands. Materiel replenishment is an important measure for insuring uninterrupted supply. Therefore, the logistics should, based on the different uses of materiel and its consumption patterns, as well as the order of primary and secondary, importance and urgency of the needs of the front, replenish timely, in the correct amount, and accurately, thereby uninterruptedly supporting the needs of battle.

E. Relevant Ammunition Services

1. Opportune Times and Principles for Ammunition Replenishment

Opportune Times. The replenishment of ammunition is usually done at the favorable time of night, bad weather, intervals in battle, gaps in the enemy's blockade, our army's neutralization of the enemy's firepower, routing of the enemy's counterassault, completion of the surrounding of the enemy, and repulse of the enemy's assault. When necessary, troops and firepower can be organized to cover a forced replenishment.

Principles. To insure the uninterrupted supply of ammunition, the commander should, based on the consumption situation, flexibly grasp the opportune times for replenishment and direct the ammunition team to replenish ammunition on the firing line. When organizing the replenishment, he should, in accordance with the principle of concentrating the main forces on supporting the key points, make sure that the replenishment is done in the order of first the urgent and then the less urgent, first in the main direction and then in the secondary direction, and first for the first echelon and then for the second echelon.

2. General Patterns of Ammunition Consumption

Ammunition consumption during a battle follows the changing condition of the battle type, the battle form, the battle mission, as well as the quantity of troops and weapons, the protracted time of the battle, the strength of the enemy, the facilities at the position, and the weather. Under different conditions there are differences in the consumption. Based upon the experiences of battles in the past, the general pattern of ammunition consumption is:

Divided by battle type, an offensive battle consumes more than a defensive one. Divided by battle form, an attack on a position consumes more than an attack on a moving enemy; positional defense consumes more than mobile defense; and a storming attack consumes more than a surprise attack.

Divided by battle mission, consumption in the main direction is greater than that in the secondary direction. Divided by battle time, when on the offensive, under ordinary circumstances, there is greater consumption in a battle at the forward positions than in an in-d ɔth battle (but when the enemy's core position is fortified and he is defending it to the death, there can be greater consumption in the latter than in the former). When on the defense, the consumption in the stage of resisting enemy's assault is greater than the stage in which one is holding fast to a position and fighting with the enemy for it. When a counterattack is organized, the consumption in taking back and consolidating a position will be greater than that in all other stages.

With regard to the types of ammunition, usually there is a lot of consumption of mortar shells, heavy machine gun bullets, and handgrenades. In the future, under circumstances in which the enemy employs in large numbers his tanks, air arm, and airborne forces, there will be quite a lot of antitank weapon ammunition and antiaircraft weapon ammunition consumed.

Because ammunition consumption is influenced by many factors, the patterns of consumption are fairly hard to grasp, and one must set up appropriate stockpiles before one can keep the initiative. The key to setting up appropriate stockpiles is to adopt the methods of empirical calculations and theoretical calculations in carrying out comprehensive analytical operations to correctly estimate the amount of ammunition that will be consumed during a battle. At the same time, the commander must at all times control the replenishing of ammunition.

3. Stipulated Norms for Various Types of Ammunition Carried

Type	Carried with the Weapon Basic Load	# of Rounds
Light Weapon Ammunition		
Pistol	0.5	20
Semiautomatic rifle	0.5	100
Submachine gun	0.5	150
Squad machine gun	0.4	400
Heavy machine gun	1/3	1500
Signal gun	0.5	20
Handgrenade	1	4 per man
Suppressive Artillery Ammunition		
82mm mortar	0.25	30
100mm mortar	0.3	30
107mm rocket artillery	0.6	36
130mm rocket artillery	0.6	57
122mm howitzer	0.625	50
Antitank Weapon Ammunition		
40mm RPG	0.2	4
82mm recoilless rifle	2/3	20
105mm recoilless rifle	---	--
85mm field gun	0.375	45
HJ-73 ATGM	---	--
HJ-8 ATGM	---	--
Antiaircraft Weapon Ammunition		
12.7mm antiaircraft machine gun	0.5	500
14.5mm twin antiaircraft machine gun	2.0	4000
14.5mm quad AA machine gun	1.0	4000
37mm twin AA gun	1.0	400
HY-5 SAM		
HY-61 air defense missile		
Tank Gun Ammunition		
Type-62 light tank	1.0	47
Type-59 medium tank	1.0	34
Type-69 medium tank	1.0	44

4. Basic Load for Ammunition of Various Weapons

Type	Basic Load # of rounds	Basic Load Gross Weight (kg)
Light Weapon Ammunition		
Pistol	40	0.54
Semiautomatic rifle	200	5
Submachine gun	300	6.9
Heavy machine gun	4500	148.5
Squad machine gun	1000	23
Signal gun	40	3.72
Handgrenades	4	3.36
[two blank entries]		
Suppressive Artillery Ammunition		
82mm mortar	120	624
100mm mortar	100	1150
107mm rocket gun	60	1500
130mm rocket gun	95	4275
122mm howitzer	80	2800
[two blank entries]		
Antitank Weapon Ammunition		
40mm RPG	20	84
82mm recoilless rifle	30	264
105mm recoilless rifle	--	--
HJ-73 ATGM	144	1627.2 net
HJ-8 ATGM	--	--
85mm field gun	120	2760
[one blank entry]		
Antiaircraft Weapon Ammunition		
12.7mm AA machine gun	1000	172
14.5mm twin AA machine gun	2000	544
14.5mm quad AA machine gun	4000	1088
37mm twin AA gun	400	800
HY-5 SAM	---	---
HJ-61 air defense missile	---	---
[one blank entry]		
Tank Gun Ammunition		
Type-62 light tank	47	1034
Type-55 medium tank	34	1428
Type-69 medium tank	44	1848
[one blank entry]		

F. Relevant Services for Provisions and Military Supplies

1. Organizational Forms and Methods of Mess Support

Organizational Forms. For the mess support of a fendui in wartime, various different organizational forms should be flexibly adopted based on the battle mission, enemy's situation, natural conditions, and other circumstances. Under current conditions, the company mess is usually made primary. When the company is dispersed to perform a battle mission, cooks can be dispatched to accompany and provide mess support in the squad and platoon.

Basic Methods. Fendui mess support in wartime should, with cooked food support made primary, be a method in which hot meals are combined with field provisions. When conditions permit, cooked food support should be provided by all ways and means; when conditions are extremely difficult, the supply of field provisions should be made an emergency measure to insure that the troops under all circumstances are able to eat their fill.

Opportune Times and Requirements for Sending Cooked Food to the Front

The fendui's commander must select the appropriate times to order logistics to send cooked food to the front. Usually the breakfast is sent to the front before dawn and the dinner is sent after dusk; if field rations are used for the noon meal, they can be sent together with the breakfast. During the course of a battle, when there is a need to send cooked food and boiled water, good preparations should be made beforehand, and they should be securely tied and well camouflaged. For convenience of movement, cooked food should be carried on the back. Based on the enemy's situation, the terrain, road, and other circumstances, use should be made of intervals in the battle to send the cooked food to the front by many routes and in a dispersed manner. At the same time attention should be paid to maintaining mutual liaison in order to prevent taking the wrong route.

3. Daily Ration, Accompanying Load of Provisions for Fendui Personnel and Horses

(kg)	Daily Rations per person	Daily Rations per animal		Accompanying Load (daily) per person	Accompanying Load (daily) per animal
		pack	riding		
Main Rations	0.80	--	--	2	-
Secondary Rations	0.76	--	--	3	-
Field Rations	--	--	--	1	-
Fuel	0.5	--	--	-	-
Horse Forage	--	6.5	6.5	-	2
Horse Feed	--	2.75	2	-	2
Total	2.06	9.75	8.5	-	-

4. Composition and Properties of PLA Army Field Rations (1 day amounts)

Common Rations (Type-761), used by infantry.

--Type-761 compressed field rations: Composed of three packets of compressed field rations (1.5 jin); Small in bulk, good tasting, easy to carry, and convenient to eat; fairly hard to swallow if water is lacking. Can be stored 3-5 years.

--Type-761 dehydrated noodles: Composed of three packets of dehydrated noodles (1.5 jin) and three small packets of soup makings; Can be eaten after steeping in boiling water for 5 to 7 minutes; it approximates regular food, but uses a lot of water. Shelf life of 1-2 years.

--Type-761 dehydrated cooked rice: Composed of three packets of dehydrated cooked rice (1.5 jin) and three small packets of dried salted vegetables; Can be eaten after steeping in

boiling water for 8 to 12 minutes or
steeping in cold water for 20 to 30 minutes; its flavor approximates regular rice, but it uses a lot of water and is bulky. Shelf life of 2 years.

Special Field Rations (Type-762), used by tank fendui and fendui on special missions.

--Type-762 compressed field rations: Composed of three packets of compressed field rations (1.2 jin) and three
small cans of luncheon meat (0.9 jin); The compressed field rations are in the form of soda biscuits; they are
easy to digest and with the addition of the cans of luncheon meat are more nutritious than the Type-761 field rations. Shelf life of 3-5 years.

--Type 762 dehydrated noodles: Composed of three packets of dehydrated noodles (1.5 jin) and three small
cans of quick-dried diced meat in soy sauce (0.84 jin);
Its properties are the same as those of the Type-761, but with the cans of quick-fried diced meat in soy sauce it is more nutritious than Type-761. Shelf life of 1-2 years.

--Type 762 dehydrated cooked rice:
Composed of three packets of dehydrated cooked rice (1.5 jin) and three small cans of egg meat saute.
Its properties are similar to those of the Type-761 cooked rice with the dried salted vegetables changed to the cans of egg meat saute; it is more nutritious than the Type-761 cooked rice. Shelf life of 2 years.

5. Quantity of Clothing and Equipment and Articles of Daily Use Carried by Company Cadres and Fighters in Wartime

Clothing and Equipment	Summer (kg)	Winter (kg)
single uniform (1 set)	0.78	--
underclothes (1 set)	0.36	0.36
wraparound (1)	0.12	0.12
socks (1 pair)--summer	0.075	--
--winter	--	0.075
Liberation-brand shoes (1 pair)	0.6	--
cotton-padded shoes (1 pair)	--	0.975
overcoat (1)	--	2.5
bedsheet (1)	0.3	0.3
quilt with cotton wadding (1)	3.38	3.38
waterproof cloth (raincoat) (1)	1.3	--
mosquito net (1)	0.6	--
backpack rope (1)	0.175	0.175
Total Weight	7.69	7.885

Articles of Daily Use

	Summer (kg)	Winter (kg)
satchel (1)	0.36	0.36
sewing kit (1)	0.02	0.02
enamel mug (1)	0.15	0.15
toiletries (1 set)	0.29	0.29
first-aid kit	0.1	0.1
subtotal weight	0.83	0.83
empty canteen	0.24	0.24
canteen filled with water	1	1
subtotal weight	1.24[as printed]	1.24
ration bag (1)	0.11	0.11
food (2-day supply)	1.7	1.7
subtotal weight	1.81	1.81
Grand Total Weight	11.57	11.57

Notes: 1. The summer uniform (summer cap, summer uniform, underclothes, shoes, socks, and belt) weigh about 1.75 kilograms. The winter uniform (summer cap, cotton-padded uniform, underclothes, shoes, socks, gloves, and belt) weighs about 4.25 kilograms. Neither uniform is counted in the amount carried.

2. The clothing and equipment carried vary according to climate, and also can be appropriately increased or decreased.

3. The baggage of cadres at the company level and above is carried by mess or transport personnel, or are transported by vehicle or horse. A company cadre's baggage weighs 4 to 5 kilograms, and a battalion cadre's 6 to 7 kilograms. The quilt with cotton padding is changed to a woolen blanket, but can be cut out as appropriate (each woolen blanket weighs 2 kilograms).

4. This weight of clothing and equipment was calculated on the basis of the situation in the interior of China, and units in the main temperate and frigid zones took part in the calculations.

6. Allocation of Accompanying Materiel in a Provisions Team During Wartime, showing personnel, quantities, weight, and mode of transport.

First man: one aluminum field cauldron, one cooking utensil, one shovel, one salt bag, (when filled with salt it weighs 3kg), one piece of individual luggage, and one back-carried cauldron stand, 24.25kg, carried on the back.

Second man: one aluminum field cauldron, one bag of dried vegetables (5 kilograms), one piece of individual luggage, and one back-carried cauldron stand, 24kg, carried on the back.

Third man: one aluminum field cauldron, one cooking utensil, one shovel, one salt bag (when filled with salt it weighs three kilograms), one piece of individual luggage, and one back-carried cauldron stand, 24.25kg, carried on the back.

Fourth man: one aluminum field cauldron, one condiments bag (5 kilograms), one piece of individual luggage, and one back-carried cauldron stand, 23.5kg, carried on the back

Fifth man: one aluminum field cauldron, one salt bag (when filled with salt it weighs three kilograms), one piece of individual luggage, one back-carried cauldron stand, and one cooking utensil, 23kg, carried on the back.

Sixth man: two oil drums (when filled with oil they weigh 9 kilograms), two metal buckets, one pick, one piece of individual luggage, and one shoulder pole, 28.5kg, carried on a shoulder pole.

Seventh man: one piece of company cadre luggage; one piece of individual luggage; two metal buckets; a total of nine metal spoons, ladles, and kitchen knives; one lantern; one kerosene bucket (when filled with kerosene it weighs 2.6 kilograms); and one shoulder pole, 29kg, carried on shoulder pole.

Eighth man: three pieces of company cadre luggage, one piece of individual luggage, and one shoulder pole, 25.5kg, carried on shoulder pole.

Ninth man: one rifle, xx rounds of bullets, four handgrenandes, one piece of individual luggage, and four aluminum vegetable basins, 20kg, carried on the back.

Total: 222kg.

Remarks: average load per man is 24.66 kg.

7. Distribution Norms of Field Cooking Utensils in Existing Mess Units

Item	Mess Unit Size >100	60-99	<59
field cauldron	5	4	3
metal bucket	4	4	2
50kg gunnysack	4	3	2
7.5kg bucket filled with oil	2	2	1
food tub	Every squad, company, and battalion HQ has two; every 5 men have one.		

8. Combat Water Supplies for Personnel, Amount of Water Needed by Horses

Normal Water Allocated to Personnel (per man per day, in liters):

--resting or on the defense in areas with sufficient water sources, 10.
--under conditions of mobile combat, 6.
--when operating in areas where water suply is difficult, 3.
--in a battle environment under particularly difficult conditions, 1.5-2, not to exceed 3 days.
--when in battle in sweltering hot areas that have no water, 3 as a minimum limit.
--when marching or bivouacing, 10-20.
--when temporarily in camp on garrison duty, 40-50.
--each clothes washing, once in 10 days and nights, 40.
--each bath, once in 7 to 10 days, 30-40.
--each day and night in winter, 6-8.

Amount of Water Needed for Army Horses (per day per horse)

--under ordinary circumstances, 50.
--when water is difficult to get, 30.
--when water is specially difficult to get, 20.

G. Relevant POL Services

1. Stipulated Accompanying Load of POL

	Accompanying Load (basic units)	Gasoline for
wheeled vehicles	1 Diesel for wheeled vehicles	1 Tank and
self-propelled gun	1 Power machinery	1
Flamethrower	0.2 Inland water ship	1

2. Weight (tons) of One Fendui Basic Unit

	Transport vehicle (CA-10)	Prime mover (CA-30)	Motor vehicle (CJ-750)	Total
Motorized infantry company	--	--	--	--
14.5mm AA MG company	0.32	1.42	--	1.74
100mm mortar company	0.95	--	--	0.95
82mm recoilless gun company	0.79	--	--	0.79
Signal company	0.16	--	0.032	0.192

3. POL Basic Loads and Consumption Rates for Several Kinds of Vehicles

	Basic POL Load (liters & kg)	Basic Range(km) standard calculation	combat range	Total Fuel Consumption @100km (or @hour) in liters
Command car (BJ-212)	85/63	410	300	17
Transport vehicle (CA-10)	215/158	620	400	25
Tractor truck (CA-30)	215/158	360	300	42
Motor vehicle (CJ-750)	22/16	200		8
Type-59 tank (120)	/779	18.5		44
Type-69 tank (121)	/779	18.5		44
Armored car (BA-64)	/74	6		14
Type-501 IFV	460/381.8	500		90

VII. Relevant Transport Services

A. Transport Capacity for Men and Animals

	Load	Range (per day)	March Interval
Manpower, carried on back	not over 30kg	not over 30km	5-6m
Handcart--2 men	not over 100kg	not over 20km	15-20m
--3 men	not over 150kg	not over 20km	15-20m
Horses and pack animals	average 60kg	average 30km	50m
Horse-drawn cart	avg. 400-500kg	avg. 30-35km	200m

B. Carrying Capacity and Speed for Transporting Wounded to the Rear

	Normal Speed (kph)	Carrying Capacity	
		seated wounded	on stretchers
stretcher	3-4	1	1
horse-drawn cart	4-6	6-8	2
truck	10-30	15-25	5-8
small ambulance	10-30	6-8	2-4
APC	10-30	6-8	2-4

VIII. Characteristics and Requirements of Combat Logistics Support at Night and Under Special Conditions

Night combat is favorable to concealing movement, but coordination of movement is difficult; it is not favorable to transporting materiel, effecting communications and liaison, and seeking out and giving first aid to the wounded.

1. Ammunition, POL, provisions, and other materiel must be replenished in a timely fashion, and every effort should be made to complete the replenishment before dusk. The various kinds of materiel and equipment should be classified and put into complete sets, firmly packed, and clearly marked so as to be convenient for night movement.

2. Nighttime first aid must be enhanced. Making use of moonlight, flashes, and flares, personnel should carefully seek out the wounded, carefully examine their wounds, accurately dress their wounds, and move them to safe places. Every effort should be made to take all of the wounded out of the firing line before dawn.

3. When materiel is to be transported at night, the personnel must become familiar with the road conditions beforehand. At road forks, defile roads, bridges, and ferrying points, they must set up clear signs, and must stipulate the signs (signals) for liaison, in order to insure transport safety. Before dawn, the opportune time for replenishing ammunition and other materiel and equipment must be grasped tightly, so that as much as possible the fendui eats cooked food and makes good preparations for switching to daytime battle.

Combat in mountain forest areas: In a mountain forest, terrain is complex and convenient for concealment, but there are few roads and communication is inconvenient. It is not easy to recognize directions and seek out the wounded, and it is easy to be endangered by mountain torrents and forest fires.

1. In accordance with the higher level's stipulations, there should be an appropriate addition to the reserves of materiel and equipment, and management should be strengthened in order to prevent the danger of deterioration and mountain torrents. In areas lacking water, drinking water must be stored and managed properly.

2. Based on the climatic characteristics, the fendui's adaptability training should be enhanced, and frostbite as well as the onset of many diseases and infectious diseases in the localities should be vigorously prevented.

3. When organizing transport in a mountain area, a careful survey of the roads should be made and antiskid equipment and tools should be prepared.

Combat in grassland, gobi, and desert areas: The terrain is open and sparsely populated. There is a lack of water sources, the climate is arid, the temperature is changeable, there are frequent sandstorms, it is easy to lose one's bearings, and it is difficult to raise materiel.

1. In accordance with the higher level's stipulations, one should stock up reserves of materiel and equipment and of water-storage containers, enhance management, and use things economically.

2. Enhance the management of equipment and materiel, and do good work against blowing sand, exposure to the sun, frostbite, and dampness. For materiel left ouside, drafts should be avoided, and measures shoud be taken to prevent the materiel from being buried or blown away. Weapons and equipment should be regularly wiped clean, coated with a small amount of oil, and kept out of dust.

3. One's subordinate personnel should be given education of a regional nature in hygiene and disease prevention. The water used for cooking should be purified and disinfected. Measures should be taken to prevent sunstroke, nosebleeds, day and cracked lips, frostbite, as well as the outbreak of infectious diseases in the region.

4. Enhance the organization and leadership of sending to the front and the rear, specifically assign and explain the tasks and lines, and guard against losing one's bearings and losing contact.

5. Help relevant departments to survey and safeguard water sources, enhance the management of water, and use water in a planned way.

Coastal or island defense: Such combat is affected by tides, communications are inconvenient, there is a lack of fresh water, there is a high degree of confusion, and the battle is sustained over a long period of time.

1. Embrace the management of reserve operational materiel and equipment in accordance with regulations, and use them economically. Water storage containers must be prepared and sufficient water must be stored for living purposes.

2. Have the army and the people organize in a unified fashion medical services support. In wartime they can jointly form first-aid teams to give timely emergency treatment to wounded personnel.

3. Set up technical rush-repair teams, and at the appropriate time organize repairs of damaged weapons and equipment in which parts are replaced or the weapon or piece of equipment is reassembled for.

Combat in areas of severe cold: The temperature is low, there is a lot of wind and snow, and rivers and lakes are frozen. Personnel easily suffer frostbite, equipment is easily damaged, and roads are easily blocked by ice and snow. However, after the ground freezes there are fairly many sectors that can be passed over.

1. In accordance with the higher level's stipulations, lay up ammunition, POL, provisions, and other materiel and equipment; enhance the management of them; and use them economically.

2. Educate all subordinate personnel to become proficient in the methods of safeguarding and taking good care of weapons and equipment in winter and to make use of intervals in battle to wipe their weapons clean. The regulators on automatic weapons should be correctly adjusted. Do not permit personnel to put firearms and optical equipment on stoves (walls with flues for space heating) or fire pits, in order to prevent deformation and deterioration, which would adversely affect their use.

3. Take vigorous measures to see that the work of preventing cold and keeping warm is done well. Enhance education on preventing frostbite, preventing snow blindness, and preventing the common cold, and train the personnel in cold prevention. During a battle, the wounded must be swiftly sought out and quickly rescued, given first aid, and passed to the rear. In giving first aid to the wounded and sending them to the rear, measures must be taken to keep them warm so as to prevent frostbite and shock.

4. Vigorously improve the mess service, and devise ways to supply boiled water and cooked food so as to increase the capability of the officers and men to resist cold.

5. When using mules and horses in winter, they must be refitted with antislip horseshoes, the antislip nails must be frequently changed, and the accumulated matter on the bottom of the hooves must be diligently removed. When they are used on icy roads, one must guard against them slipping and their hooves being inserted into ice fissures. When they cross an ice-covered river, one must guard against their breaking the ice and falling into the water. For resting on a march and for quartering, places sheltered from the wind and facing the sun must be selected. After they have perfomred their mission and worked up a sweat, their saddles must be removed but not their pads. They should then be immediately walked and given a rubdown to remove the sweat, so as to avoid their catching colds or coming down with rheumatism.

6. Enhance measures to prevent vehicles from freezing, and correctly use antifreeze and cold-region POL. Drivers must be given training in driving in ice and snow. When parking vehicles, they must as much as possible be parked within cover or in a place sheltered from the wind and facing the sun. On a march, the vehicles must be equipped with sufficient antiskid equipment. Attention should be paid to preventing skids and danger, to increasing the distances between vehicles, and to controlling the speed of the vehicles. When taking a rest along the way, the drivers must guard against their vehicles being damaged by freezing.

Urban combat: In urban combat, there are some facilities and some manpower and materiel resources that can be used, but command and coordination are not convenient. Full preparations must be made and there must be tight organization to prevent enemy sabotage.

1. In an offensive battle in a city, the amount of ammunition carried, especially artillery shells, must be appropriately increased. When fighting in alleys, the company should go in small groups by many routes, and personnel should be organized to follow up in support to strengthen the first-aid forces on the firing line, and to make use of streets, buildings, and tunnels to give emergency treatment swiftly. Take the wounded to safe places that are concealed and prepare to send them to the rear.

2. In defensive urban combat, lay up, in accordance with the higher level's stipulations, ammunition, provisions, POL, fuel, medicinal materials, and other materiel and equipment. Classify them and form them into complete sets and then deposit them in a dispersed fashion. Add ammunition reserves at the main strongpoints; and timely replenish units that have expended all their ammunition. Make full use of urban defense facilities; strengthen the protection against air raids and against nuclear and chemical weapons; and do good first-aid work.

IX. Knowledge of Relevant Logistics Calculations

The organization and leadership of logistics work in peacetime and wartime cannot be separated from a certain knowledge of logistics calculations. An important basis for a fendui commander's making correct operational decisions and exercising firm command is for him to understand the knowledge pertaining to the relevant calculations and services and to become proficient in calculating and analyzing various data on services accurately and swiftly. Therefore, he must master basic calculating skills.

A. Ammunition Basic Quantity, Ammunition Basic Load, and Ammunition Allocation Base

The ammunition basic quantity is a calculation unit used in the work of ammunition supply.

The ammunition basic load means the quantity of ammunition stipulated to be provided for each kind of weapon, and acts as a basic calculating unit for a given kind of weapon. This stipulated quantity (number of rounds) is called the ammunition basic load.

The ammunition allocation base means the quantity of the ammunition stipulated for allocation to the unit (fendui). Its unit quantity is calculated on the basis of the basic load and the number of weapons the unit (fendui) has. With regard to a certain kind of weapon that a unit (fendui) has, an allocation base equals the basic load (rounds) times the number of this kind of weapon that the unit (fendui) has.

With regard to all of the unit's (fendui's) weapons, an allocation base equals the sum of the ammunition bases of every kind of weapon that this unit (fendui) has.

When using the allocation bases, one must pay attention to the fact that the ammunition bases of different units (like companies or battalions) represent different amounts of ammunition, and that when calculating the bases they must not be added together. The amount of ammunition of a unit's base means the

ammunition for the basic load of all of this unit's weapons, and when making calculations the ammunition bases of the various kinds of weapons likewise must not be added together.

2. Conversion of Ammunition Bases

a. The allocation base equals the total number of rounds divided by (the basic load times the number of weapons).

b. The total number of rounds equals the basic load times the number of weapons times the allocation norm.

c. A company's allocation base equals (the number of weapons in the battalion times the battalion's allocation base) divided by the number of weapons in the company.

3. Calculation of Ammunition Weight

a. The weight of the ammunition for a certain kind of weapon that the unit (fendui) has equals the basic load (kilograms) times the number of weapons times the allocation base.

b. The weight equals the total number of rounds times the weight of every artillery shell.

c. The weight equals the total number of rounds divided by the basic load times the basic load weight.

d. The weight equals the total number of rounds times the weight of each ammunition box divided by the number of rounds in each ammunition box.

B. Relevant Calculations for POL Services

1. POL Base and POL Base Quantity

The POL base is a calculation unit for the laying up and planned supply of POL in peacetime and wartime.

A vehicle's POL base is stipulated on the basis of the capacity of the vehicle's fuel tank. It is divided into a single vehicle POL base and a unit (fendui) POL base. What is equal to the fuel and the auxiliary fuel issued according to standard in the capacity of the main and auxiliary tanks of a given vehicle is called a POL base for a single vehicle. The quantity of POL equivalent to the combined fuel tank capacity of all types of vehicles within a unit (or fendui) using the same type of fuel, along with the standard allotment of rserve POL, is called a POL base for a unit (or fendui). A POL base and a vehicle's distance traveled (hours) have a close relationship. For example, a POL base of a vehicle in wartime is roughly 250 to 300 kilometers traveled. Therefore, by making the POL base the unit of calculation, one can clearly indicate the degree of POL support, making outline calculations convenient.

The POL base quantity is weight or bulk of the fuel in a POL base (usually it means the weight). The three concepts--base, base amount, and weight--are different and they are used separately in different situations. However, in calculations they have a certain relationship, which is shown in the following formula:

base amount x base = weight

2. Calculations of the Required Amount of POL Consumption

The required amount of POL consumption means the estimated amount of POL consumption for a unit (fendui) within a given time or when completing a given mission.

a. The required amount equals the basic POL consumption norm times the POL consumption coefficient times the distance traveled times the number (dispatches) of vehicles.

b. The required amount (base) equals the average distance traveled divided by the average base distance times the POL consumption coefficient.

c. The required amount of POL consumption equals the average amount of POL consumption each day and night times the sustained time (day and night) of the battle.

d. The required amount (kilograms) of POL consumption equals the average amount of POL consumption each kilometer (hours) times the kilometers (motor hours) traveled.

C. Relevant Calculations on Medical Services

1. Battle First-Aid Medical Materials Base

Medicinal materials specially supplied to all levels of treatment organizations for treating the wounded during a battle are called battle first-aid medicinal materials. The base of the battle first-aid medicinal materials is the unit of calculation for allocating battle first-aid medicinal materials. Usually the fendui is divided into battalion and company battle first-aid medicinal materials bases, and each base is the amount used to supply 100 wounded one time. Because the treatment scope and mission of the treatment organizations at all levels are different, there is also a difference in the amount and variety of the battle first-aid medicinal materials base.

Basic Accompanying Loads for Battle First-Aid Medicinal Materials Carried by a Fendui

	Infantry Company	Infantry (Artillery) Battalion
Combat Rescue Materials		
# of men	10	50
Types	7	17
Weight (kg)	2.0	5.5
Standard Combat Materials		
Quantity	1 month's supply	1 month's supply
Types	36	50
Weight (kg)	2.5	12
Medical Equipment		
Types		22.5
Weight (kg)		6.5

1) Data is calculated in accordance with a 0.1 basic load for a company and a 0.5 basic load for a battalion;

2) For every man taking part in the battle there are two three-cornered cloth first-aid kits.

3) Besides the equipment on this table, there are NBC defense medical materials--6 kinds for the company and 6 kinds for the battalion--that the company and the battalion are temporarily not equipped with.

2. Calculations of Reduction of Personnel for Medical Reasons

a. The number of personnel reduced in a battle equals the number of men taking part in the battle times the personnel reduction rate (percentage) in the battle.

b. The number of wounded equals the number of personnel reduced in the battle times the rate of wounded and sick (percentage).

D. Calculations of the Daily Portion of Provisions

The daily portion of provisions is the unit of calculation for the supply of provisions. It is divided into the individual daily portion and the unit (fendui) daily portion. The individual daily portion means, in accordance with the stipulated norm, the amount of supplies in staple and nonstaple foods and in fuel for each man for one day and night; in accordance with the ration norm for one day's portion, the supplies are distributed equally for the personnel and horses of the unit (fendui), and the total amount is a provision daily portion of the unit (fendui). Sometimes, there is only a replenishment of a certain item of provisions and materiel. For example, the supplied amount is the staple food for one day and night, namely, the one day's portion of staple food. The rest are analogous.

Formulas

Provision weight = the basic load x the actual strength x the number of daily portions.

The number of daily portions = the weight of provisions divided by (the norm x the actual strength)

E. Relevant Calculations for Vehicle Transport

1. The transport mission (tonnage) = the total tonnage of the various materiel sent to the front.

2. The transport mission (ton-kilometers) = the tonnage of the materiel sent to the front x the distance (kilometers) from the front

3. Transport capacity (tonnage) = the existing number of vehicles x the vehicle dispatch rate x the single vehicle's loading capacity x [(the number of vehicle dispatching days x the daily distance traveled)/round trip distance]

4. Transport capacity (vehicle departures) = the number of vehicle dispatch days x the number of daily round trips

5. Transport capacity (ton-kilometers) = the number of days out on duty x the loading capacity of a single vehicle x (the daily distance traveled/2) x the number of days out on duty

6. The estimated number of vehicles damaged in battle = the number of vehicles x the day-night damage rate x the number of days and nights in the combat stage

C. Performance of Major PLA Night Vision Equipment

Name	Use	Observation Range (m)	Field (Degrees)
Infra-red sighting lens	Used with Type-69 40mm rocket launcher	200	6.5
Infra-red night driving device	Used by tank drivers	50	30
Infra-red night sighting device	Used by Type-59 medium tanks	800	--
Type-62 infra-red telescope	Used by reconnaissance detachments at division level and above	200-400	6.5
Infra-red alarm device	Used as an alarm on major facilities	100	--
Hand-held laser night sighting device	Used primarily for observation	200-300	10
Type-WD-1 miniature television	Used primarily for observation	700-800 personnel; 1,000 vehicles	5

1. Tactical and Technical Performance of Type-63 Tracked APC

General Data

Combat Weight	12.8 tons
Operators	2
Infantry troops carried	13
Average per unit pressure	0.593 kg/sq.cm
Vehicle length	5,476 mm
Vehicle height (without AA guns)	2,110 mm
Vehicle width	2,978 mm
Track center distance	3,095 mm
Clearance	433 mm

Speed and Mobility

Dirt road	30 km/hr
Highway	35-40 km/hr
Maximum speed	60 km/hr
Fuel consumption per 100 kms traveled (highway)	80-90 ltrs
Maximum distance (dirt road)	500 kms
Maximum negotiable grade going up	32 degrees
Maximum negotiable grade going down	30 degrees
Maximum inclined driving grade	25 degrees
Width of traversable trench	2 m
Fording depth (more than 1.5 meter float)	1.5 m
Height of traversable palisade	0.6 m
Maximum speed through water	6 km/hr
Maximum speed through water-laced paddyfields	25 km/hr

Armament

12.7 AA machineguns	1
Ammunition	1,050 rounds
Field of fire	360 degrees
Maximum angle of elevation	85 degrees
Maximum angle of depression	5 degrees
Effective range against aerial targets	1,600 m
Effective range against ground targets	1,500 m
Maximum range	7,000 m
Thickness of armor pierced at 500 meters	15 mm
Rate of fire	80-100 rounds/min.

2. Tactical and Technical Performance of 501 Infantry Combat Vehicle

General Data

Combat Weight	13.1 tons
Operators	3
Infantry troops carried	8
Vehicle length	6.704 m
Vehicle height (to top of turret light)	2.158 m
Clearance	0.38-0.40 m
Vehicle width	2.97 m

Speed and Mobility

Average speed (highway)	40-45 km/hr
Average speed (dirt road)	30-35 km/hr
Maximum speed	65 km/hr
Maximum distance	500 kms
Travel on water	7-8 kms/hr
Maximum range on water	100 kms
Maximum negotiable grade going up	35 degrees
Maximum negotiable grade going down	30 degrees
Maximum tilt driving grade	25 degrees
Height of traversable wall	0.6 - 0.8 m
Traversable palisade height	0.6-0.8 m
Width of traversable trench	2 m

Armament

73 mm low-pressure smooth-bore gun	1
Maximum range	1,300 m
Point blank distance	800
Rate of fire	7-8 rounds/min.
Armor penetration	120 mm
Maximum angle of elevation	33 degrees
Maximum angle of depression	4 degrees 15 mins
HJ-73 anti-tank missiles	4
7.62 mm coaxial machinegun	1
Effective range	1,000 m
Maximum rate of fire	250 rounds/min
Basic number of rounds	2,000
Shells	40

Tactical and Technical Performance of Type-523 Wheeled Armored Vehicle

General Data

Combat Weight	
With water propeller	11.2 tons
Without water propeller	10.8 tons
Operators	2
Infantry troops carried	10
Vehicle length	6,020 mm
Vehicle height (to top of machine gun turret)	1,980 mm
Vehicle width	2550 mm
Angle of approach	52.6 degrees
Angle of departure	45.8 degrees

Speed and Mobility

Maximum speed (highway)	80 km/hr
Using propeller on water	More than 7 km/hr
Continuous travel distance	600 km
Maximum negotiable grade	30 degrees
Height of vertical wall that can be traversed	More than 0.4 m

Width of traversable trench	0.8 m
Engine model	EQ 6105 yuangang [0337 4971] water cooled gasoline engine
Engine power	165 horsepower 3,200 horsepower revolutions/min
Fuel tank capacity	255 liters
Armament	
12.7 mm machine gun	1
Basic number of cartridges	600 rounds
Night vision equipment	Infra-red night vision device for driver
Communications	
Two-way radio model	A-220A
Signal distance	at least 16 km

4. Tactical and Technical Performance of Type-701 Armored Command Vehicle

General Data

Combat Weight	13 tons
Operators	3
Command personnel passengers	5
Vehicle length	5,476 mm
Vehicle height	2,140 mm
Vehicle width	2,970 mm
Spare seats	2

Speed and Mobility

Maximum speed	60 km/hr
Average speed (highway)	35-40 km/hr
Average speed (dirt road)	30 km/hr
Maximum range	500 km
Maximum negotiable slope going up	32 degrees
Maximum negotiable slope going down	30 degrees
Maximum inclined driving grade	25 degrees
Width of traversable trench	2 m
Fording depth (more than 1.5 meter float)	0.6 m
Height of traversable palisade	0.6 m
Maximum speed in water	6 km/hr
Maximum range in water	57 km
Maximum speed in water-laced paddyfields	25 km/hr
Engine power	260 hp
Armament	
Type-56-1 7.62 mm light machine gun	1
Basic number of cartridges	1,000 rounds
Communications	
Two-way radios (Type-889)	5
Communications method	3 telephones
Radio wired remote control distance	1 km
Manual method of relaying radio messages	Monitoring and forwarding

9. Maximum Fording Depths for Personnel, Horses, Motor Vehicles and Artillery

Category	Maximum Fordable Depth (Meters)		
	Current speed of less than 1 meter per second	Current speed of 1-2 meters per second	Current speed of 2-3 meters per second
Infantry	1.00	0.80	0.60
Donkey and horse-drawn artillery	0.70	0.60	0.50
1.5-2.5 ton trucks	0.60	0.50	0.40
3-4 ton trucks	0.80	0.70	0.60
5 ton trucks	0.90	0.80	0.70
Tracked towed vehicles and towed artillery	1.00	0.90	0.80
Medium tanks and self-propelled artillery	1.20	1.10	1.00

Remarks: 1. Wheeled armored personnel carriers and vehicle-drawn artillery maximum fording depths are figured in terms of vehicle fording depths.

2. After tanks have been battened down, they can cross streams in which the water depth is no more than 7 meters, in which the speed of the current is not great, and where the stream bed is flat and solid.

10. Method of Calculating Load Bearing Weight of Ice

The ice thickness (meaning transparent ice) that will support a vehicle may be extrapolated from the following formula. For tracked vehicles H=9 *p; for wheeled vehicles H=11*p; [H means thickness (cms) of ice]; [P is vehicle weight (in tons)].

For example. if a 36 ton tank is to cross ice, extrapolation using the foregoing formula shows the following:

H=9*36=9 x 6 = 54 (cms), i.e., an ice thickness of 54 centimeters will be required for a 36 ton tank to pass. Note: (1) The minimum thickness of ice required by ordinary vehicles and armored personnel carriers is between 16 and 35 centimeters. For artillery, it is 20-51 centimeters. For tanks, it is 50-75 centimeters. (2) Everything else being equal, ice made from fresh water is about again as strong as ice made from sea water. Ice containing pollutants is not clear; its transparency is low, and its load bearing capacity is poor.

11. Semaphore and Light Signals Table for Directing Tanks and Armored Vehicles

No.	Meaning of Signal	Semaphore	Light
1.	Attention	Yellow flag held aloft stationary	Several long flashes of the light
2.	Fall in in front of vehicles	A red and a yellow flag held to the left and right stationary	White light swayed to the left and right
3.	All hands fall in	A red and a yellow flag circled above the head	Green light circled in front of the chest
4.	Board vehicles	A red and a yellow flag held to the left and right then lowered at once	White light raised up & down
5.	Start engines	Yellow flag circled in front of body	Circling of red light
6.	Extinguish fires	Red and yellow flags crossed in front of the body	Red light moved in an arc left and right
7.	Move out	Red flag waved forward	Green light moved forward
8.	Reverse vehicles	Red flag waved toward vehicle reverse	Green light moved toward vehicle reverse
9.	Stop	Red flag held aloft stationary	Red light held aloft stationary
10.	Left turn	Red flag held aloft stationary; yellow flag held stationary to the left	Green light moved toward the left
11.	Right turn	Red flag held aloft stationary; yellow flag held stationary to the right	Green light moved toward the right
12.	Breakdown	Red flag held stationary to the right at a 45 degree angle	Red light flashing two longs and two shorts several times
13.	Increase distance between vehicles	Red and yellow flags held together and raised straight up and down	Green light flashing one long and one short several times
14.	Shorten distance	Yellow flag held aloft	Green light flashing one

between vehicles	stationary; red flag held flat out to the side and waved up and down	short and one long several times
15. Increase speed	Yellow flag raised straight up and down	Green light flashing short flashes several times
16. Reduce speed	Red flag raised straight up and down	Red light flashing short flashes several times
17. Obstacle ahead	Red and yellow flag crossed aloft and stationary	
18. NBC defenses	Red and yellow flags held stationary to the left at a 45 degree angle	

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