



Research Product 98-29

Combat Leaders' Guide (CLG): Leader Handbook 1997

Margaret S. Salter
U.S. Army Research Institute

Michael Martin
Auburn University
Consortium Research Fellows Program

19980415 133

October 1997

Infantry Forces Research Unit

U.S. Army Research Institute for the Behavioral and Social Sciences

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DTIC QUALITY INSPECTED 3

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**EDGAR M. JOHNSON
Director**

Technical Review by

MAJ James P. Reeves, ARI
SGT Michael Lee Sparks, USARNG

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REPORT DOCUMENTATION PAGE					
1. REPORT DATE 1997, October		2. REPORT TYPE Final		3. DATES COVERED (from... to) April 1997-October 1997	
4. TITLE AND SUBTITLE Combat Leaders' Guide (CLG): Leader Handbook 1997				5a. CONTRACT OR GRANT NUMBER	
6. AUTHOR(S) Margaret S. Salter (ARI) and Michael Martin (Auburn University)				5b. PROGRAM ELEMENT NUMBER 0602785A	
				5c. PROJECT NUMBER A790	
				5d. TASK NUMBER 212C	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Research Institute for the Behavioral and Social Sciences Infantry Forces Research Unit P.O. Box 52086 Fort Benning, GA 31995-2086				5e. WORK UNIT NUMBER H01	
				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army Research Institute for the Behavioral and Social Sciences ATTN: TAPC-ARI-IJ 5001 Eisenhower Avenue Alexandria, VA 22333-5600				10. MONITOR ACRONYM ARI	
				11. MONITOR REPORT NUMBER Research Product 98-29	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT (Maximum 200 words): The Combat Leaders' Guide (CLG) is a job performance aid for leaders to use as a memory jogger during realistic combat training like that at the Combat Training Centers or in continuous operations environments. The CLG is a pocket-sized, quick reference system to be used by trained soldiers at company, platoon, or squad level. The CLG helps to overcome the effects of performance decay over time and during periods of high stress and fatigue. It supports unit readiness by providing a leader with doctrinal, tactical, and technical materials in a quick-reference format.					
15. SUBJECT TERMS Combat Leaders' Guide (CLG) Leader Guide Job Aids					
SECURITY CLASSIFICATION OF			19. LIMITATION OF ABSTRACT Unlimited	20. NUMBER OF PAGES 240	21. RESPONSIBLE PERSON (Name and Telephone Number)
16. REPORT Unclassified	17. ABSTRACT Unclassified	18. THIS PAGE Unclassified			

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Margaret S. Salter
U.S. Army Research Institute

Michael Martin
Auburn University
Consortium Research Fellows Program

Infantry Forces Research Unit
Scott E. Graham, Chief

U.S. Army Research Institute for the Behavioral and Social Sciences
5001 Eisenhower Avenue, Alexandria, Virginia 22333-5600

October 1997

Army Project Number
2O26785A790

Personnel Systems and
Performance Training

Approved for public release; distribution is unlimited.

FOREWORD

The U.S. Army Research Institute for the Behavioral and Social Sciences Infantry Forces Research Unit conducts research and development on training methods and technologies to maximize combat effectiveness. Much of this research has resulted in useable products for soldiers. The Combat Leaders' Guide: Leader Handbook 1997 is the latest version of a prototype pocket sized job performance aid to be used by trained soldiers. Earlier editions of the CLG have been distributed to over 30,000 soldiers throughout the world, and it is in use in both Active and Reserve Component tactical units.

The newest edition of the CLG was developed with the assistance and support of the Fort Benning Special Assistant to the Commanding General, Army National Guard (ARNG). The ARNG Office will continue to distribute copies of the CLG to units and individuals who request it. Recipients include personnel in the National Guard's Officer Candidate Schools, Reserve Officer Training Courses, and both National Guard and FORSCOM units, as well as trainers at TRADOC Schools and professional development academies. CLGs are also in use at the Combat Training Centers.

The CLG supports unit readiness by providing leaders with doctrinally correct tactical and technical information in a quick, easy to access format. The CLG can provide increased operational capability through standardization and enhanced leader readiness.

ZITA M. SIMUTIS
Technical Director

ACKNOWLEDGMENTS

The Combat Leaders' Guide owes its primary success to the soldiers who use and request it. It also owes its success to those who make distribution possible. First, and foremost, COL Howard L. Willis, Jr., has again provided enthusiastic support for the CLG project. His efforts included providing three soldiers who acted as consultants: LT Jamie Kirby, SGT Emmett Rose, and SGT Michael Sparks. We are grateful to all of them.

COMBAT LEADERS' GUIDE (CLG): LEADER HANDBOOK 1997

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Combat Leaders' Guide (CLG): Leader Handbook 1997

Introduction

The Combat Leaders' Guide (CLG) was originally developed by the Army Research Institute's (ARI) Infantry Forces Research Unit for the TRADOC Training Technology Agency. The intent was to develop a standardized job performance aid for already trained soldiers to use as a memory jogger. This job aid would help leaders to overcome effects of procedural decay over time as well as to provide assistance during the stress and fatigue of continuous combat operations, and during realistic combat training.

The CLG is a pocket-sized handbook containing tasks from Soldiers' Manuals and other training materials, in easy to read checklist format, on water and tear resistant paper. It fastens with rings for easy insertion or removal of material although soldiers can customize it with screws or cord as desired. The CLG provides fast information recovery, can be personalized to individual and unit needs, and is usable under low light and in inclement weather. It also includes a clear pocket and a grid square with both 1/25,000 and 1/50,000 grids. The CLG is a generic guide that requires little updating.

Background

Preliminary CLGs: 1985-1990

The original brown covered CLG, Combat Leaders' Guide: Rifle Platoon and Squad (Winn, Evensen & Salter, 1987b) was based on an extensive front end analysis of basic military tasks and missions. Winn and Evensen's 1987 Authoring Guide documented the clear decision rules used for task and format selection. ARI printed the CLG as a test item in 1986 and handed out nearly 1000 copies with questionnaires for comments. Recipients included officers and soldiers of all ranks from both the active and reserve component. Additional review copies went to retired officers and training developers from various TRADOC schools. Analyses and summaries from the returned questionnaires were reported in Evensen, Winn, and Salter (1988).

Incorporating comments received on the first CLG, a second edition, the gray covered Combat Leaders Guide - Platoon Leaders, Platoon Sergeants and Squad Leaders (Winn, Evensen, & Salter,

1987a) was printed in 1987 and reprinted in 1990. The book received immediate positive response, and several thousands of copies were distributed. User feedback indicated that the CLG's appeal was that it included basic information in a useful and useable format.

The non-specific nature of the book, its unusual format and relatively high cost became a limitation. From 1987 to 1990, ARI made numerous unsuccessful attempts to turn the CLG over to TRADOC or to another agency. Simultaneously, the CLG was beginning to enjoy such wide dissemination that requests were coming from active and reserve component units, including many deployed in Korea and Germany. Schools of military science and ROTC units also requested copies. ARI's intent had been to develop a prototype; the prototype was so successful that it had become an end itself.

Impact of Operation Desert Storm on the CLG

Despite its obvious success, ARI canceled the CLG project after the second printing due to lack of sponsorship. However, beginning in mid-August 1990, the Fort Benning Research Unit began to receive urgent requests for multiple copies of the CLG from units deploying to Operation Desert Shield/Desert Storm. Requests came from the 24th Infantry Division at Forts Stewart and Benning, and the 1st Infantry Division at Fort Riley. Similar inquiries came from the 48th and 155th Infantry Brigades (Georgia and Mississippi Army National Guard), in anticipation of deployment. Shortly thereafter, the 12th Cavalry Regiment (Fort Knox) asked for CLGs to support training of Individual Ready Reserve soldiers being called up for deployment. The final supplies of the CLG were exhausted by requests from, for example, combat service support units already in Saudi Arabia.

In response to the demonstrated need, and after surveying soldiers called up for Operation Desert Storm, ARI printed a revised and updated version, Combat Leaders' Guide: Leader Handbook (Salter, 1993). This book was smaller, with fewer pages, and circular rings to hold the pages together, replacing the screws of the original two versions. Incorporating user comments, some content was changed to make the book more useful. Items felt unnecessary or inappropriate for the target audience of company grade and below leader were deleted; some extra material was added. The new and revised content, suggested by personnel from the Georgia, Mississippi and Louisiana National Guard, was evaluated by senior personnel from Fort Benning. The Desert Storm CLG was printed with tan covers to distinguish it from the previous versions.

National Guard Assistance

In late 1993 the CLG: Leader Handbook was reprinted by the Special Assistant to the Commanding General, Army National Guard (ARNG), Fort Benning, for nationwide distribution to ARNG infantry battalions. It was first printed on regular paper, then on the special paper of the standard CLG. It was an instant success. Requests came from Guard units, and from active duty units as well.

As the ARNG supplies dwindled, the CLG was again updated and revised. Subject matter experts from throughout Fort Benning reviewed the latest CLG. The new product, Combat Leaders' Guide: Leader Handbook 1994 (Salter, 1994) was printed by the ARNG. There were few content changes from the previous version, although some materials were added. New sections on Risk Assessment, Rules of Engagement, and Peacekeeping, made the book more relevant to stability operations missions. The 1994 CLG was printed with a forest green cover.

1997 Combat Leaders' Guide

Since supplies of the 1994 version (both the original and a reprint) are nearly gone, ARI and the ARNG have constructed another CLG. Senior cadre from the ARNG Pre-Ranger Course, in conjunction with ARI and Infantry School personnel, reviewed the 1994 CLG and updated it as necessary. There were few content changes, although some diagrams and charts were clarified. Some pages were reordered to make the CLG even more user friendly. The newest CLG, Combat Leaders' Guide (CLG) - 1997 Leader's Guide, is at Appendix A to this report. The title and date show the continuity with the four previous books; again the ARNG Office at Fort Benning is printing and distributing the product. This version of the CLG will first be printed on regular paper with a camouflage type cover; it will be printed using the special paper at a later date as funds become available. Plans are also underway to place the CLG on the Internet.

CLG Status

More than 40,000 CLGs are in worldwide distribution. Users have been overwhelmingly supportive of the CLG as evidenced by the continuing individual and unit requests. CLGs are used in classroom instruction, during field exercises and unit evaluations, and at the Combat Training Centers. The CLG

provides a leader with doctrinal, tactical and technical materials in a quick reference format. The CLG offers potential for increased operational capability by ensuring maintenance of leader readiness.

There are lingering potential problems. There will always be some disagreement as to the appropriate content and the emphasis given to each section within the Guide. Interest in or allegiance to any section often corresponds to the individual reviewer's present job description. This issue has been resolved by focusing on a wide range of Infantry skills. Information with only a limited audience has been deleted. Personnel with specialized skills can use the book for its overall Infantry information, and use other sources for specific subject matter.

There is still some concern over the intended primary audience for the CLG. While there have been users across ranks and functional areas, the appropriate target audience is probably the company level and lower leader, especially the platoon leader, the platoon sergeant and squad leader. Personnel at battalion level and higher tend to have other sources for job-related information and staffs have ready access to job-specific manuals and publications.

The CLG is a prototype item, and although based on doctrinal materials, it is not part of the doctrinal literature program. Local reproduction has always been both authorized and encouraged as the CLG is expensive to produce, and limited in availability. Although there is no formal requirement for a job aid for the small unit leader, and although other job aids are available, requests continue unabated for copies of the CLG. The Combat Leaders' Guide fills a soldier need.

References

- Evensen, E. B., Winn, R. B., & Salter, M. S. (1988). Evaluation of a job aid system for combat leaders: Rifle platoon and squad (ARI Research Report 1465). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.
- Salter, M. S. (1993). Combat leaders' guide: Leader handbook (ARI Research Product 93-01). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences. (AD A263 416)
- Salter, M. S. (1993). Combat leaders' guide updated: The leader handbook (ARI Research Note 93-13). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences. (AD A263 479)
- Salter, M. S. (1994). Combat leaders' guide: 1994 leader handbook (ARI Research Product 95-03). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences. (AD A286 010)
- Winn, R. B. & Evensen, E. B. (1988). Authoring guide: A job aid to design and produce a combat leaders' guide (ARI Research Product 88-14). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.
- Winn, R. B., Evensen, E. B., & Salter, M. S. (1987a). Combat leaders' guide: Platoon leaders, platoon sergeants, and squad leaders (ARI Research Product 87-33). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.
- Winn, R. B., Evensen, E. B., & Salter, M. S. (1987b). Combat leaders' guide: Rifle platoon and squad (ARI Research Product 87-23). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.

**COMBAT LEADERS'
GUIDE**

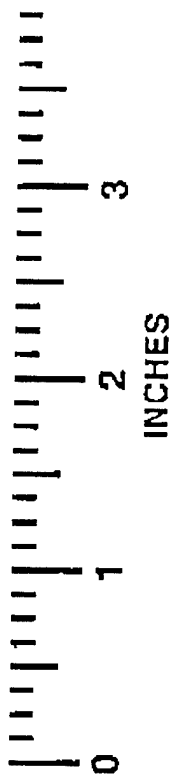
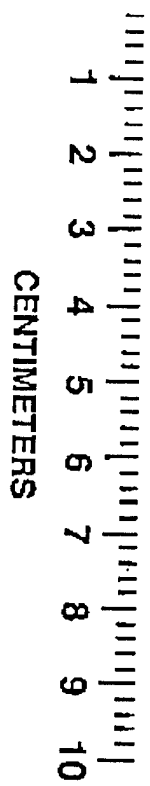


LEADER HANDBOOK



**ARMY RESEARCH INSTITUTE
INFANTRY FORCES RESEARCH UNIT**

1997



INTRODUCTION

The Combat Leaders' Guide is both an extract of doctrinal publications and a compilation of tactics, techniques and procedures(TTPs). It is principally designed as a pocket reference and memory-jogger.

Some TTPs you have learned in training do not appear here. The material in this job aid comes from the doctrinal literature program.

Laminate pages to be written on; remove, reorganize or tab pages based on your mission; insert other job aids, TTPs or SOPs as needed.

Questions? Call SACG at Ft. Benning, DSN 835-5741 LT Kirby, SGT Rose, SGT Sparks.

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LEADING IN COMBAT	
1	Set the example
2	Lead from as far forward as you can
3	Lead from a position where your soldiers can see you/your vehicle
4	Lead from where you can control all elements physically or by radio
5	Move to influence the action
6	Make sound, quick decisions
7	Forcefully execute decisions
8	Use reverse planning sequence
Notes:	

BASIC RULES OF COMBAT	
TYPE	RULE
1	SECURE Use cover and concealment Establish local security/recon
2	MOVE Establish moving element/move to position of advantage Gain and maintain initiative
3	SHOOT Establish base of fire/mutual support Kill/suppress enemy
4	COMMUNICATE Inform everyone/tell soldiers what you expect
5	SUSTAIN Keep fight going/care for soldiers

1

1-2

1

TROOP LEADING PROCEDURES		
STEP	ACTION	✓
1	Receive mission	
2	Issue warning order	
3	Make tentative plan	
4	Initiate necessary movement	
5	Conduct Reconnaissance	
6	Complete plan	
7	Issue orders	
8	Supervise and refine	
Notes:		

WARNING ORDER	
1. Situation	_____
2. Mission	_____ _____ _____
3. General Instructions	
a. Special teams/task organization	_____ _____
b. Common uniform/equipment	_____ _____
c. Special weapons, ammo, equipment	_____ _____
d. Tentative time schedule	_____ _____
4. Special Instructions	_____ _____ _____ _____

FACTORS OF METT-T		
(FACTORS APPLY TO FR & EN)		
ITEM	FACTORS	✓
1	MISSION	
	Intent one & two levels up	
	Specified tasks	
	Implied tasks	
	Mission essential tasks	
	Limitations/constraints	
	Restated mission	

2

2-3

2

FACTORS OF METT-T		
ITEM	FACTORS	✓
2	ENEMY	
	Disposition/composition	
	Strength	
	Recent activities	
	Weaknesses	
	Possible COAs	
	Probable COAs	
	Reinforcement abilities	

2

2-4

2

FACTORS OF METT-T		
ITEM	FACTORS	✓
3	TROOPS AVAILABLE	
	Key leaders	
	Disposition	
	Composition	
	Strength (personnel/ materiel)	
	Activities	
	Weaknesses	
	Morale	
	Maintenance level	
	Combat service support	

2

2-5

2

FACTORS OF METT-T		
ITEM	FACTORS	✓
4	TERRAIN (OCOKA)	
	Observation/Fields of fire	
	Cover & concealment	
	Obstacles	
	Key terrain	
	Avenues of approach	

2

2-6

2

FACTORS OF METT-T		
ITEM	FACTORS	✓
5	TIME	
	Planning & preparation of combat orders	
	Inspections & rehearsals	
	Movement	
	Line of departure	
	Start, critical, release points	
	Use 1/3 - 2/3 rule	

2

2-7

2

ESTIMATE OF THE SITUATION		
1. Detailed Mission analysis		
a. Mission/intent of commander 2 levels up		
b. Mission/intent of immediate commander		
c. Tasks & purpose/specified & implied		
d. Mission essential tasks		
e. Constraints & limitations		
f. Restated mission		
g. Tentative time schedule		

2

2-8

2

ESTIMATE OF THE SITUATION		
2. Estimate situation/develop course of action		
a. Terrain & weather - effects on personnel & equipment		
OCOKA		
Visibility/trafficability mobility/survivability		
b. Enemy situation & COA		
Intentions		
Capabilities		
Disposition		
Composition		
Strengths		
Weaknesses		
Weapons/units		
Most probable COA based on doctrine/situation		

2

2-9

2

ESTIMATE OF THE SITUATION		
c. Friendly situation		
Troops available		
Equipment available		
Time available		
d. Friendly COA (repeat for each COA)		
Decisive point & time to focus combat power		
Results that must be achieved		
Purposes & tasks of main & supporting efforts		
Task organization to accomplish mission		
Control measures		
e. Prepare a COA statement & sketch		

2

2-10

2

ESTIMATE OF THE SITUATION		
3. Analyze COAs		
Mission specific factors		
mission essential tasks		
commander's intent		
relative effectiveness		
logistic support		
General Factors		
characteristics of offense and defense		
METT-T		
weapon utilization		

2

2-11

2

ESTIMATE OF THE SITUATION			
4. Compare Courses of Action considering how well the COA:	1	2	3
Supports scheme of maneuver			
Helps command & control			
Concentrates combat power at decisive point			
Forces provide mutual support			
Responds to maneuver elements & reserve			

2

2-12

2

ESTIMATE OF THE SITUATION			
4. Compare Courses of Action considering how well the COA:	1	2	3
Exploits enemy weakness			
Accounts for weather			
Uses best avenue of approach			
Provides enough maneuver space			
Maximizes observation & ranges of weapon systems			
Provides cover & concealment			

2

2-13

2

ESTIMATE OF THE SITUATION			
4. Compare Courses of Action considering how well the COA:	1	2	3
Considers obstacles			
Controls key terrain			
Helps speed of execution			
Does not require adjustment of unit positions			
Uses all HQs			
Requires normal CSS			
5. Decision			

2

2-14

2

OPERATION ORDER

Task organization: _____

1. Situation

a. Enemy forces: _____

b. Friendly forces: _____

Mission/concept higher _____

Location & actions of units on
left, right, front, rear _____

Units providing fire support _____

OPERATION ORDER	
2. Mission	_____

3. Execution	
Intent	_____

a. Concept of the operation	_____

(1) Maneuver	_____

OPERATION ORDER	
(2) Fires	_____

b. Tasks to maneuver units	_____

c. Tasks to combat support units	_____

d. Coordinating instructions	_____
(1) Time schedule	_____

(2) PIR	_____

OPERATION ORDER

4. Service Support: _____

a. General: _____

5. Command and Signal

a. Command: _____

b. Signal: _____

FRAGMENTARY ORDER

(FRAGO provides changes to an existing order. Address only elements that have changed)

Reference _____

Task organization _____

1. Situation _____

2. Mission _____

3. Execution _____

4. Service Support _____

5. Command/Signal _____

LIGHT AND WEATHER DATA		
ITEM	FIRST DAY	NEXT DAY
BMNT/EENT		
Sun Rise		
Sun Set		
Moon Rise		
% Illum		
Moon Set		
NVG Hours		
Temp High/Lo		
Winds		
Precip		
Effects of light & weather:		

2

2-21

2

ACTIONS BEFORE MARCH		
STEP	ACTION	✓
1	Give warning order	
2	Select quartering party NCO and send to team CP	
3	Recon route from AA to SP	
4	Record time from AA to SP	
5	Adjust departing time from AA to arrive at SP on time	
6	Have crews perform precombat checks	
7	Have vehicle commanders report their status	
8	Give march order to vehicle commanders	

3

3-1

3

DUTIES OF QUARTERING PARTY		
STEP	ACTION	✓
1	Inspect intended assembly area for enemy NBC/mines	
2	Secure platoon area until platoon arrives	
3	Establish and maintain commo	
4	Clear or mark obstacles	
5	Select general location of vehicle positions; mark places	
6	Select covered/concealed route to RP; meet platoon	
7	Guide platoon into area	
8	Brief platoon leader	

3

3-2

3

MARCH ORDERS

1. Destination (map) _____
2. Route of march (map) _____
3. Location of SP, critical points, RP (map) _____
4. SP time _____
5. March interval (meters) _____
6. March speed (mph/kph) _____
7. Catch up speed (mph/kph) _____
8. Time and location of scheduled halts _____
9. Time unit leaves present position _____
10. Order of march _____

ACTIONS DURING MARCH		
ITEM	ACTION	✓
1	Arrive at SP on time at march speed with proper march interval	
2	Maintain ground and air security	
3	Observe vehicle sectors of responsibility	
4	Report SP, critical points, RP (unless under radio listening silence)	
5	If under radio listening silence - use hand and arm signals, flag signals, or flashlight signals	

3

3-4

3

ACTIONS AT HALTS		
ITEM	ACTION	✓
1	Pull to side of route - maintain order	
2	Establish/maintain security	
3	Move disabled vehicles off road - post guides to direct traffic	
4	Maintain observation/contact with other vehicles	
5	Report status	
6	Take appropriate actions/repair vehicles if possible	

3

3-5

3

ACTIONS AT ASSEMBLY AREA		
ITEM	ACTION	✓
1	Follow guides into preselected secure positions	
2	Clear RP without halting	
3	Emplace/maintain security/OPs	
4	Conduct fire planning	
5	Establish wire commo net/ coordinate with other units	
6	Check/adjust positions; camouflage positions	
7	Start maintenance/resupply/ rearming	
8	Prepare/rehearse reaction plan	

3

3-6

3

PREPARATION FOR ATTACK		
TASK	ACTION	✓
1	Issue warning order	
2	Move to assembly area	
3	Perform commo check	
4	Check weapons	
5	Check key equipment	
6	Rehearse critical tasks	
7	Recon rtes to LD/OBJ	
8	Issue OPORD	
9	Resupply, rearm, refuel	
10	Coordinate w/higher, supporting, adjacent units	
11	Rehearse	
12	Conduct PMCS as required	
13	Check/integrate attachments	

4

4-1

4

PREPARATION FOR ATTACK		
TASK	ACTION	✓
14	Check NBC situation/confirm MOPP status	
15	Inspect troops	
16	Inspect vehicles	
17	Feed troops	
18	Rest troops	
19	Move to LD	
Notes: Several steps may occur concurrently.		

CONSOLIDATION		
STEP	ACTION	✓
1	Eliminate all remaining enemy resistance on objective	
2	Occupy hasty positions/ prepare for counterattack	
3	Bring up base of fire element	
4	Prepare for a counterattack	
5	Position key weapon systems	
6	Develop quick fire plan	
7	Prepare range cards	
8	Begin planning to continue attack (map recon, orders)	
Notes:		

REORGANIZATION		
STEP	ACTION	✓
1	Reestablish chain of command	
	Restore commo with higher, adjacent, FSO	
	Report status: ACE (AMMO/Casualties/Equipment)	
	Request resupply as needed	
2	Reestablish security/prep for counterattack	
	Reman key weapons	
	Redistribute ammo, supplies, equipment as needed	
3	Clear objective of casualties & EPW	
	Treat, evacuate, process	

4

4-4

4

REORGANIZATION		
STEP	ACTION	✓
4	Prepare for next mission	
	Relocate weapons & positions Reoccupy & repair positions Repair obstacles & mines Repair & maintain equipment	
Notes:		

DEFENSIVE PRIORITY OF WORK		
STEP	TASK	✓
1	Establish local security	
2	Position key weapons & vehicles	
3	Posn sqds/assign sectors	
4	Set up commo net	
5	Coordinate with adjacent units for interlocking sectors	
6	Clear fields of fire	
7	Prepare range cards	
8	Prepare squad & platoon sector sketches	
9	Site final protective line (FPL) and fires (FPF), priority targets	

5

5-1

5

DEFENSIVE PRIORITY OF WORK		
STEP	TASK	✓
10	Prep fighting positions	
11	Emplace mines & obstacles	
12	Establish fire control measures	
13	Assign alternate & supplementary battle positions	
14	Take NBC protective measures	
15	Improve primary positions	
16	Prep alternate then suppl posns	
17	Establish sleep/rest plan	
18	Recon supply/evac routes	
19	Rehearse actions on contact	
20	Stockpile ammo, food, water	
21	Continue to improve positions	

5

5-2

5

DEFENSE PLANNING OUTLINE

1. Commander's intent _____

2. Platoon/squad mission _____

3. Position in company defense _____

4. Sectors of fire/EAs/TRPs _____

5. Fire support available _____

6. Evacuate/destroy procedures for
damaged vehicles _____

DEFENSE PLANNING OUTLINE

7. Evacuation procedures for friendly casualties _____

8. Place to take EPW _____

9. Special signals to use _____

10. On-order mission for platoon/squad _____

11. Position and mission of units on flanks _____

12. Position and mission of units in the rear _____

COORDINATION CHECKLIST		
STEP	ITEM	✓
1	Location of leaders	
2	Location of primary, alternate, & supplementary positions	
3	Sectors of fire of machine guns, anti-armor weapons & subunits	
4	Route to alternate & supplementary positions	
5	Location of dead space between platoons & squads & how to cover it	
6	Location of OPs & withdrawal routes back to the platoon or squad position	
7	Location & types of obstacles & how to cover them	

5

5-5

5

COORDINATION CHECKLIST		
STEP	ITEM	✓
8	Patrols - size, type, times of departure & return & routes	
9	Fire support planned	
10	Location, activities & passage plan for scouts & other units forward of platoon position	
11	Signals for fire/cease fire & any emergency signals	
12	Engagement & disengagement criteria	
13	Location of coordination points	

5

5-6

5

ESTABLISH OBSERVATION POST		
ITEM	ACTION	✓
1	Select site - cover & concealment Overlapping sectors	
2	Designate OP security & secure reporting procedures Establish withdrawal plan with procedures & routes	
3	Prepare to call for/adjust indirect fire; use binos/ NODs; navigation tools & commo equipment	
4	Conduct surveillance - name observer, recorder & security Search, identify & report personnel, vehicles, etc. Use overlapping sectors of observation	
5	Change observers every 20-30 minutes as situation permits	

5

5-7

5

FIGHTING POSITION GUIDELINES		
ITEM	DESCRIPTION	✓
1	Protection - adequate to cover enemy weapons Position - provide cover & concealment - make sure it cannot be seen Fill sandbags 3/4 full Revet excavations in sandy soil Check stabilization of wall bases Inspect daily, especially after rain & after direct/indirect fires Maintain, repair, improve Use proper material, correctly	
2	Site to engage the enemy select best position, cover dead space, use max eff range & provide interlocking fires Priority to effective weapon system use; METT-T dependent	
3	Prep by stages with inspection Improvement is progressive	

5

5-8

5

BUILD FIGHTING POSITION	
STAGE	ACTION
1	<u>Establish position:</u> Leader check fields of fire, soldier emplace sector stakes Position log or sandbag between stakes Scoop out elbow holes Position lim vis aiming stakes Trace outline on ground Clear fields of fire Leader inspects position
2	<u>Emplace walls:</u> 1 helmet distance from hole to start of cover Front wall 2-3 sandbags high by 2 M16s long for 2 man position Flank wall same height, 1 M16 long; rear wall 1 sandbag high by 1 M16 long Stakes required to hold logs Leader inspects position

5

5-9

5

BUILD FIGHTING POSITION	
STAGE	ACTION
3	<u>Dig the position:</u> throw & pack dirt Armpit deep Parapets filled, all camouflaged Grenade sumps dug/floor sloped Rucksack storage optional Leader inspects position
4	<u>Overhead cover:</u> camouflage blended, cannot detect at 35M Logs placed over center front to rear Waterproofing (plastic bags, ponchos) placed over top 6" - 8" of dirt/sandbags piled on top Overhead cover & bottom camouflaged Leader inspects position

5

5-10

5

RANGE CARD PREPARATION		
Note: Make card and copy for each primary, alternate, supplementary position		
STEP	ACTION	✓
1	Draw symbol for weapon/ position in center circle	
2	Draw/label L&R sector limits	
3	Determine range value for each circle by dividing range to most distant terrain feature by number of circles & label card	
4	Draw final protective lines/ principal direction of fire	
5	Draw and number TRPs, RPs and possible EAs as ordered	
6	Show dead space areas and label	
7	Draw max engagement lines	
8	Draw terrain features/mark wpn ref point from terrain or grid	

RANGE CARD PREPARATION		
STEP	ACTION	✓
9	Fill in data section	
	Identify primary, alternate or supplementary position	
	Date & time range card complete	
	Identify weapon/vehicle	
	List L&R limits, TRPs, ref points in numerical order	
	Show gun elev (mils), ammo, range (meters) to limits, TRPs & ref points, describe objects	
10	Fill in wpn ref data (description, grid, magnetic az, distance from WRP to position) in remarks	
11	Fill in marginal info, not higher than company & direction of magnetic north arrow	

5

5-12

5

RANGE CARD PREPARATION

STANDARD RANGE CARD
For use of this form see Tab 9-7.2 The preparation agency is TRADOC

NO. 1
 PLT 2
 CO C

May be used for all types of direct fire weapons.

MAGNETIC NORTH

POSITION IDENTIFICATION
 WEAPON M2
 NO. C-21

PRIMARY

DATE 3 MAR 89 / 1140 HRS
 EACH CIRCLE EQUALS 400 METERS

NO.	DIRECTION/ DEFLECTION	ELEVATION	RANGE	AMMO	DESCRIPTION
L	350°/5800M	0M	2000M	TOW 2	FARMS HOUSE
R	105°/920M	110M	2400M	TOW 2	R/SIDE WOODLINE
1	6400M	+30M	3200M	TOW 2	RP - HILLTOP
2	5910M	+10M	2700M	TOW 1	TRP - AB002 RJ
3	60M	-10M	1800M	TOW 2	TRP - AB003 RJ

REMARKS:
4 WRP - RJ AT LN 13629411, 100° AT 320M
A FORM 8877-1 FEB 88

5

5-14

5

SECTOR SKETCH PREPARATION		
Make card and copy for each primary, alternate and supplementary position		
ITEM	ACTION	✓
1	Draw your unit sector or EA	
2	Draw main terrain features in sector(s) and range to each	
3	Draw subunit positons	
4	Draw subunit primary and secondary sectors of fire	
5	Draw weapon positions with primary sectors of fire for each	
6	Draw MEL for each weapon/ ammo	
7	Draw machine gun/cannon final protective lines or principal direction of fire	
8	Draw location of CP/OP	
9	Draw TRPs and RPs in sector	

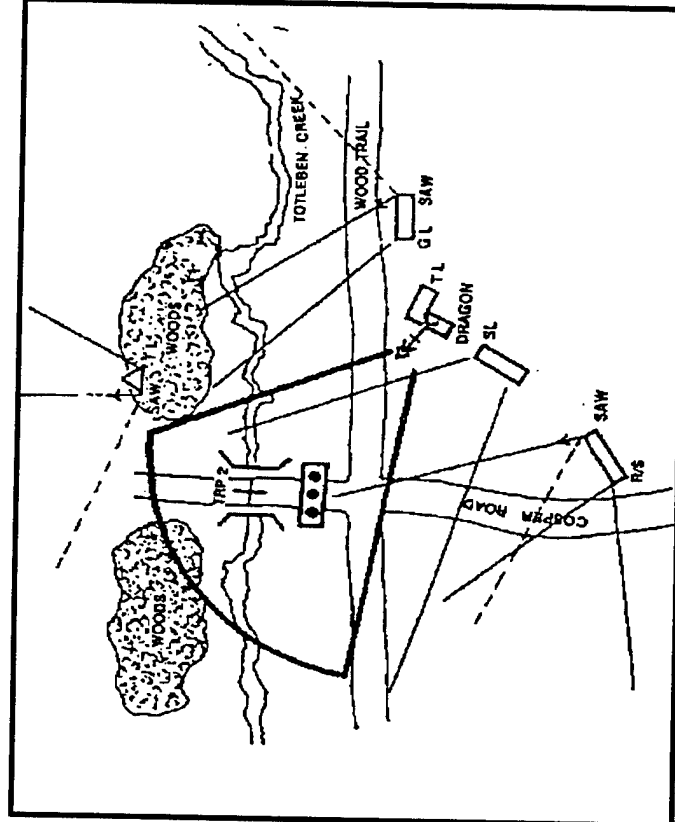
5

5-15

5

SECTOR SKETCH PREPARATION		
ITEM	ACTION	✓
10	Draw mines/obstacles	
11	Draw indirect fire target locations/final protective fire locations	
12	Draw and label dead space	
13	Draw patrol routes	
14	Draw locations, sector of fire of other weapons in your sector	
15	Draw location of NODs for use in limited visibility plan	
16	Place your unit ID, DTG prepared, and magnetic north arrow on sketch (pencil)	
Notes:		

SECTOR SKETCH PREPARATION



5

5-17

5

OCCUPATION OF A BATTLE POSITION (BP)		
STEP	ACTION	✓
1	Move to turret-down psn on BP	
2	Keep rest of plt in hide psn(s)	
3	Recon primary, alternate & supplementary positions	
4	Designate general location of primary posns; move platoon	
5	Designate primary sectors of fire/EA/TRP	
6	Designate alt & suppl psns, sectors of fire/EA/TRP	
7	Coord w/flank/adjacent units OPs/patrols Observation & fields of fire Positions/routes of withdrawal Wire commo	
8	Rpt situation to Co/Tm Cdr	
9	Improve psn; plan rts to next BP	

5

5-18

5

FIGHTING FROM A VEHICLE BATTLE POSITION (BP)		
STEP	ACTION	✓
1	Determine targets to engage	
2	Determine methods of target engagement	
3	Send contact and spot report	
4	Issue platoon fire commands	
5	Call for indirect fire as needed	
6	Send spot reports	
7	Move to subsequent BP	
8	Keep Co/Tm Cdr informed of situation and location	
9	Organize to fight from BPs	

FIRE DISTRIBUTION AND CONTROL

ITEM	PRINCIPLE
1	Engage critical targets first; engage laterally and in depth
2	Avoid target overkill
3	Use each weapon in its best role
4	Destroy most dangerous targets first, considering range, terrain and weapon capability
5	Concentrate on long range targets if possible, to gain standoff advantage
6	Take best shots; expose only systems actually needed
7	Control firing; conserve ammo if possible
8	Avoid fratricide
9	Engage different threats simultaneously

CAMOUFLAGE		
STEP	ACTION	✓
1	Prepare individual/equipment	
2	Consider position from enemy viewpoint	
	Use natural concealment/blend	
	Reduce shine and movement	
	Observe from prone position	
	Don't skyline when moving	
3	Inspect the following areas	
	Individuals/Fighting positions	
	Vehicles and routes in and out	
	Noise/light discipline plan	
	Camouflage nets	
4	Break up vehicle silhouettes - use nets	
5	Reduce glare and signatures	
6	Reduce vehicle noise	

PHYSICAL SECURITY		
STEP	ACTION	✓
1	Conduct patrols	
2	Conduct stand-to (general)	
	Troops ready	
	Vehicles topped off/loaded/ ready	
	Basic load of missiles/ammo	
	Weapons loaded/ready	
	Radios on/tested	
3	Conduct stand-to (evening)	
	Emplace vision block covers/ turn internal lights off	
	Ready driver's night vision viewer	
	Test panel control lights/ thermal sights	
	Prepare NVGs/NODs	

PHYSICAL SECURITY		
STEP	ACTION	✓
	Check all batteries	
	Upload wpns and ammo	
	Inspect vehicle position to insure no light is visible after dark	
4	Silent watch	
	Assign sectors for surveillance	
	Use manual, battery, or AVP power when possible	
	Use radio listening silence	
	Rotate troops using thermal sight(s)	
	Lay guns on primary AAs/EAs	
5	Post local security	
	Assign sectors/observe sectors	
	Adjust position(s) closer to vehicle(s) at night	

DEFENDING DURING LIMITED VISIBILITY		
ITEM	ACTION	✓
1	Employ long range STANO equip (GSR, sensors, NOD)	
2	Coordinate any movement outside battle psn boundaries with higher and adjacent units	
3	Redeploy some units & weapons to concentrate along dismounted avenues of approach	
4	Employ scouts, OP, patrols, ambushes, and armor killer teams forward on secondary AA and between positions	
5	Employ nuisance obstacles and early warning devices along likely night approaches	

DEFENDING DURING LIMITED VISIBILITY		
ITEM	ACTION	✓
6	Plan required movement of weapons, units, and massing of fires on enemy approaches	
7	Rehearse movement of weapons, units, and massing of fires on enemy approaches	
8	Reposition weapons to take advantage of differences between enemy and friendly STANO devices	
9	Plan illumination on or behind engagement areas to silhouette enemy	

DEFENDING DURING LIMITED VISIBILITY		
ITEM	ACTION	✓
10	Move TRPs and/or EAs closer to defensive positions or move weapons closer to them-use METT-T	
11	Commence adjustments to defensive organization before dark	
12	Complete return to daylight positions before dawn	
13	Move closer to avenue(s) of approach you guard during bad weather	
14	Be aware that sensors and radar may still penetrate bad weather	

FUNDAMENTALS OF DELAY		
ITEM	ACTION	✓
1	Centralized control and decentralized execution	
	Maintain enemy contact	
	Coordinate flank security	
2	Maximize OCOKA	
	Observation and fields of fire	
	Cover and concealment	
	Obstacles	
	Key terrain	
	Avenues of approach	
3	Force enemy maneuver/deploy	
	Use snipers, ambushes to slow enemy	
	Trade space for time	

FUNDAMENTALS OF DELAY		
ITEM	ACTION	✓
4	Use obstacles	
	Natural and reinforcing	
	Cover by observation/fire	
5	Maintain enemy contact	
	Keep enemy in sight	
	Observe and adjust fires	
6	Keep free to maneuver	
	<u>Avoid</u> decisive engagement	
	Displace to next position	
7	Missions: delay in sector or forward of a line or position for specified time	
8	Assign sectors for each committed unit/avenue of approach	
9	Each unit sets up own security	

DISENGAGEMENT PLANNING

1. Scheme of maneuver _____

2. Time of disengagement _____

3. Priority of disengagement _____

4. Location of new positions _____

5. Size and composition of advance parties _____

6. Size and composition of overwatch forces _____

7. Location of overwatch forces _____

8. Combat service support _____

DISENGAGEMENT ACTIONS		
ITEM	ACTION	✓
1	Deceive the enemy with smoke, patrols, fires, radio transmissions	
2	Use overwatch elements to keep enemy pressure off disengaging forces	
3	Maintain OPSEC/COMSEC	
4	Recon/prepare routes	
5	Recon/prepare new positions	
6	Plan to move wounded	
7	Plan to move equipment	
8	Move CSS early	
9	Move during limited visibility	
10	Use obstacles to slow enemy	

PASSAGE OF LINES COORDINATION

(MECH)

1. Disposition of the stationary force
2. Contact points
3. Select routes
4. Size of passage lanes
5. Attack position (forward move)
6. Assembly area (rearward move)
7. Initial location
8. Time of transfer of responsibility
9. Traffic control/guides
10. Communications/call signs/
frequencies
11. Supporting fires
12. Recognition signals
13. CS/CSS
14. Execution

(LIGHT)

1. Ask for changes to previous coordination
2. Known or suspected enemy
3. Fire & barrier plan
4. Actions on contact
5. What type support provided

WITHDRAWAL UNDER ENEMY PRESSURE		
ITEM	ACTION	✓
1	Withdrawal principles	
	Co Cdr controls sequence of plt withdrawals/PL controls squads	
	Initiate break contact drill using fire, maneuver, overwatch, obscuration	
2	Disengagement technique based on enemy status, terrain, available covering fires	
	Simultaneous when overwatch is present; by teams; thinning the lines	

WITHDRAWAL UNDER ENEMY PRESSURE		
ITEM	ACTION	✓
3	Maintain base of fire	
	Move AT weapons/tanks back first against enemy mounted attack	
	Use Infantry in close terrain/ limited visibility/against dismounted enemy	
4	Plan for/specify	
	Scheme for maneuver	
	Time of withdrawal	
	Location of new positions	
	Size/make-up of advance party/overwatch forces	
	Battle/overwatch positions	
	Routes/checkpoints	

WITHDRAWAL UNDER ENEMY PRESSURE		
ITEM	ACTION	✓
	Remount point(s)	
	Evacuation of wounded	
	Evacuation of equipment	
	Priorities	
	Obstacles	
	Items to destroy	
Notes:		

WITHDRAWAL NOT UNDER ENEMY PRESSURE		
ITEM	ACTION	✓
1	Withdrawal principles	
	Speed/secrecy/deception	
	At night/in reduced visibility	
	As part of a larger force to perform another mission	
2	For plt as company security force	
	Cover entire company area	
	Reposition sqds/wpns to cover withdrawal	
	Place 1 sqd's key weapons in each plt psn to cover most dangerous AA	
	Co XO or PL is security force leader	

7

7-7

7

WITHDRAWAL NOT UNDER ENEMY PRESSURE		
ITEM	ACTION	✓
3	For security force made up of 1 sqd / 1mg tm / 2 dragons	
	SL left in position is plt security leader	
	Reposition sqd to cover plt withdrawal and plt area	
	CP scty force Cdr controls plt scty force during withdrawal	
4	Security Force	
	Conceals withdrawal	
	Deceives enemy-keeps up normal operating patterns	
	Provides covering fire if enemy attacks	
	Withdraw when company is at next position or as ordered	

WITHDRAWAL NOT UNDER ENEMY PRESSURE		
ITEM	ACTION	✓
	Gets withdrawal order by land line or radio codeword	
	Uses company plan to withdraw	
	Reassembles to move to rear	
	If under attack, conducts fire and maneuver to rear until they break contact	
5	Quartering party	
	Send ahead before withdrawal	
	PSG and guide for each squad	
	Recons and selects psn/ sectors/routes/OP for plt	
	Meets and guides plt into psn	
	PSG meets/briefs PL on position/situation	

WITHDRAWAL NOT UNDER ENEMY PRESSURE		
ITEM	ACTION	✓
6	Company OPORD contains	
	Time withdrawal will start	
	Location of plt/co assembly area & routes between	
	Plt mission(s) upon arrival	
	Size/org/Cdr of scty force	
	Next co/plt mission	
7	Platoon Leader plans	
	When his withdrawal starts	
	Location of sqd/plt assembly areas and routes between	
	Sqd missions on arrival	
	Size/org/Cdr of scty force	
	Next plt/sqd mission(s)	

RELIEF IN PLACE		
ITEM	ACTION	✓
1	Incoming leader recons area	
2	Incoming and outgoing leaders coordinate	
3	Exchange liaison personnel	
4	Coordinate positions of weapons and vehicles	
5	Exchange range cards and fire plans	
6	Exchange relief or organic fire support elements	
7	Coordinate obstacles locations	
8	Transfer responsibility for minefields	
9	Coordinate routes into and out of positions	
10	Coordinate vehicle guides	

RELIEF IN PLACE		
ITEM	ACTION	✓
11	Transfer excess ammo, wire lines, POL, and other material to incoming unit	
12	Coordinate commo for one net during relief	
13	Coordinate enemy situation and intelligence	
14	Coordinate sequence of relief	
15	Coordinate time of change of responsibility for the area	
Notes:		

PATROL PLANNING STEPS		
STEP	ACTION	✓
1	Identify actions on objective then plan backward	
2	Analyze mission in accordance with factors of METT-T	
3	Task organize	
4	Organize patrol	
5	Select personnel/wpns/equip	
6	Issue warning order	
7	Coordinate	
8	Make recon	
9	Complete detailed plans	
10	Issue order	
11	Supervise/inspect/rehearse	
12	Execute mission	

8

8-1

8

PATROL COORDINATION		
ITEM	DESCRIPTION	✓
1	Between leader & BN staff or CO CDR	
	Changes/updates to enemy situation	
	Best use of terrain for routes, RPs, PBs	
	Light/weather data	
	Changes in friendly situation	
	Attachment of soldiers with special skills/equip	
	Use/location of LZs	
	Departure/reentry of friendly lines	
	Fire support on obj & along planned primary/alt routes	
	Rehearsal areas & times	
	Special equipment	

PATROL COORDINATION		
ITEM	DESCRIPTION	✓
	Transportation support	
	Signal plan	
2	Coord with unit thru which plt/sqd will conduct forward & rearward passage of lines	
3	PL coordinate with leaders of other patrols	
Notes:		

COMPLETE THE PLAN		
ITEM	DESCRIPTION	✓
1	Essential & supporting tasks on objective, RPs, danger areas, security/surveillance locations, along routes/passage lanes	
2	Key travel & execution times for movement, leader recon, estab of security, completion of tasks on obj, movement to ORP, return through friendly lines	
3	Primary & alternate routes	
4	Signals, including rehearsal of special signals	

8

8-4

8

COMPLETE THE PLAN		
ITEM	DESCRIPTION	✓
5	Challenge & password forward of friendly lines (SOI not forward of FEBA)	
6	Actions on enemy contact, including WIA/KIA, EPWs	
7	Contingency plans	
	Where leader is going Who else is going along Amount of time leader is planning to be gone Actions to be taken if leader does not return Actions on chance contact while leader is gone	

DEPARTURE FROM FRIENDLY LINES	
ITEM	DESCRIPTION
1	Coordinate with CDR of forward unit/leaders of other patrols SOI, plans, password, procedures, rally points, enemy information
2	PL provide unit ID, patrol size, departure & return times, AO Fwd unit provide info on terrain, en posns/activity, ambush sites, friendly posns, OPs, obstacles & fire plan, support available
3	Planning Move to initial rally point Complete final coordination Move to/thru passage point/single file Establish security

RALLY POINTS	
ITEM	DESCRIPTION
1	<p>Selection</p> <p>Easy to find</p> <p>Offer cover & concealment</p> <p>Away from natural lines of drift</p> <p>Defendable for short periods</p>
2	<p>Types</p> <p><u>Initial</u> - inside friendly lines</p> <p><u>En route</u> - every 100-400 meters based on terrain, vegetation, visibility</p> <p><u>Objective rally point (ORP)</u> out of sight, sound, small arms range</p> <p><u>Reentry rally point</u> outside friendly FPF</p> <p><u>Near & far side rally points</u> - danger areas</p>

PATROL REPORT (DEBRIEFED)

A. Patrol size and composition _____

B. Mission (type, location, purpose of patrol) _____

C. Time of Departure and return _____

D. Routes out and back (checkpoints, grid, overlays) _____

E. Description of terrain and enemy position _____

F. Results of enemy encounters _____

G. Misc information/map corrections _____

H. Condition of personnel _____

I. Conclusions/recommendations _____

SELECTION OF A PATROL BASE		
STEP	ACTION	✓
1	Pick tentative PB site from map or aerial recon	
2	Plan for alternate site; recon and observe until occupied or not needed	
3	Select site considering lack of tactical value to enemy, terrain, trafficability, water	
4	Plan for OPs/commo with OPs	
5	Plan for defense of PB, withdrawal routes, rally and rendezvous points	
6	Provide security/alert plan, camouflage, noise/light/litter discipline	
7	Avoid enemy positions, built up areas, ridges, roads/trails, slopes	

OCCUPATION OF A PATROL BASE	
STEP	ACTION
1	Approach - halt patrol Conduct leader recon of site
2	Recon
	Patrol ldr designates entry point/CP at center of base
	Element ldrs recon sectors and return to CP
	Ldr sends 2 to bring patrol fwd
3	Occupation single file/camouflaged
4	Ldr check perimeter by meeting element leaders in turn
5	R&S team recon fwd, move clockwise
6	R&S teams report enemy activity, OPs, RPs, withdrawal routes
7	Ldr designates routes and RPs outside
8	Each element sets commo, OPs

PATROL BASE ACTIVITIES	
STEP	ACTION
1	Security One point of entry/exit Noise light litter discipline - challenge all Aiming stakes & claymores in Each sqd estab OP/dig hasty posns SLs prep sector sketch/range cards
2	Alert plan & stand-to time day & night Check posns, OPs, rotate leaders
3	Withdrawal plan Signals, order, rendezvous point
4	Maintenance plan for wpns, commo, NVDs
5	Sanitation & personal hygiene plan
6	Mess plan & water resupply
7	Sterilize upon departure

PRINCIPLES OF A RAID		
ITEM	TASKS	✓
1	Conduct with combat patrol; plan withdrawal	
2	Attack /destroy posn/ installation	
3	Destroy or capture enemy troops/equipment	
4	Rescue friendly personnel	
5	Gather Priority Intelligence Requirements (PIR)	
6	Do not become decisively engaged	
7	Attack when least expected, in poor visibility, from unexpected direction and terrain	
8	Concentrate fire at critical points	
9	Achieve violence by surprise, massed fire, aggressive attack	

CONDUCT A RAID		
STEP	ACTION	✓
1	Patrol move to ORP for recon	
	Recon & secure ORP, conduct leader recon of objective	
	Coordinate movements of elements to objective	
2	Security element duties	
	Move to positions, secure ORP	
	Block avenues of approach into/prevent escape from objective area- seal off area	
	Inform patrol leader of changes on objective	
	Shoot only if detected or on order; cover withdrawal of assault and support elements from ORP	

CONDUCT A RAID		
STEP	ACTION	✓
3	Support element duties	
	Move into psn prior to assault element	
	Cover withdrawal of assault element	
	Withdraw on order/signal	
4	Assault element duties	
	Deploy close to objective for immediate assault (if detected)	
	Seize, secure objective when supporting fire lifts or shifts	
	Protect demolition/search teams	
	Withdraw on order/signal	
5	Reorganize patrol 1km or 1 terrain feature from ORP: report, redistribute ammo, treat casualties, disseminate info	

PRINCIPLES OF AN AMBUSH		
ITEM	PRINCIPLE	✓
1	Place effective fires into entire kill zone - assign sectors	
2	Use well-trained teams with simple plan and prior recon	
3	Maintain security, especially when returning to friendly psn	
4	Soldier and weapon placement - priority to concealment and fields of fire	
5	Clear signals to open/shift/cease fire	
6	<u>Point ambush</u> - enemy attacked in single kill zone	
7	<u>Area ambush</u> - unit deploys to 2 or more related point ambushes in area	
	Security elements/teams on flank & rear if possible	

PRINCIPLES OF AN AMBUSH		
ITEM	PRINCIPLE	✓
	PI reorganize into assault element, support element, security element	
	Man trap/natural boundary on far side of kill zone Plan indirect fires to seal area & cover withdrawal Initiate with most casualty producing wpn - have backup	
8	<u>Vehicular ambush</u> - stop lead & trail vehicles in kill zone; kill armor first	
9	<u>Night ambush</u> similar to day	
	Control soldiers/issue clear orders & signals	
	Use sector stakes Move to position after EENT; plan illum	

ORGANIZE AN AMBUSH		
STEP	ACTION	✓
1	Point or area? L-shaped or linear?	
2	Are routes to & from concealed & known to all?	
3	Do positions provide early warning & effective fires onto kill zone?	
4	Is kill zone isolated & dead space covered w/mines, demo, indirect fire?	
5	Does everyone know signal (& backup) to warn of enemy approach, initiate ambush, shift/lift, withdraw?	
6	Does everyone know withdrawal routes & sequence?	

ORGANIZE AN AMBUSH		
STEP	ACTION	✓
7	Are routes covered by mines or indirect fire if ambush fails?	
8	Does everyone know what to do if ambush detected?	
9	What is the running password?	
10	Does everyone know teams/ tasks?	
Notes: 		

CONDUCT AN AMBUSH		
STEP	ACTION	✓
1	Ambush formation based on	
	METT-T/overall situation	
	Ease of control/target	
2	Patrol halt at ORP	
	Establish security/confirm location	
	Recon objective to confirm plan	
	Return to ORP/leave R&S team	
3	<u>Security</u> element secure ORP & flank of ambush site	
4	<u>Support/assault</u> elements leave ORP	
	When security in position	
	Occupy positions	
	Support overwatches assault move to ambush site	

CONDUCT AN AMBUSH		
STEP	ACTION	✓
5	Patrol waits for target after all elements in position	
6	Security team alerts patrol on enemy direction of movement, target size, special weapons/ equipment	
7	Patrol ldr alerts other elements	
	Initiates when most of target in kill zone	
	Lift/shift fire if assault into zone required	
8	Withdraw to ORP for accountability, disseminate information, return to friendly position	

PLAN A RECON MISSION		
STEP	ACTION	✓
1	Make estimate of the situation	
	Current intelligence	
	Capabilities of unit	
	Task organize to support mission	
2	Plan	
	Intelligence	
	Deceptive measures	
	Use of smallest unit possible to accomplish mission	
	Methods to remain undetected	
	Use of STANO devices	
	Rehearsal	
	Ways to minimize audio and electronic equipment	
	Inspection of recon force and equipment	

PLAN A RECON MISSION		
STEP	ACTION	✓
3	Subordinate missions	
	Command and control	
	Recon of objective	
	Security of force	
Notes:		

RECON ZONE	
ITEM	METHOD
1	Use fan method
	PL selects series of ORPs through zone
	Select recon rtes to and from ORP - overlapping rtes form fan shaped pattern around ORP. Recon elements recon adjacent rtes
	After recon complete, move to next ORP and repeat
2	Use converging routes method
	Leader select ORP. Recon rtes through zone, and then a link up point
	Each element recons own route; entire unit links up at end

RECON ZONE	
ITEM	METHOD
3	Use successive sectors method
	Leader selects ORP, a series of recon rtes, and link up points
	Each link up point becomes ORP for next phase
Notes:	

RECON AREA	
ITEM	METHOD
1	Separate recon and security elements if objective restricted in area, clearly defined, with specific avenues of approach
	Conduct leader recon
	Designate positions for security team
	Security teams move on covered & concealed routes to positions
	After security in place, recon element departs ORP to recon objective
	After objective recon, recon element & security return to ORP and disseminate information <u>OR</u>

8

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8

RECON AREA	
ITEM	METHOD
2	Combine R&S elements if objective not clearly defined and located, and terrain does not permit plt to secure objective area or if detection possible
	One R&S team stay in ORP to act as reaction force in case of contact
	Several R&S teams recon separate parts of obj, then link up at ORP
	2 R&S teams use ORP as release point, then link up at point on far side of objective
	1 R&S team w/one follow on security team to follow, acts as quick reaction force; entire unit departs when recon complete

RECON AREA	
ITEM	METHOD
4	Recon objective by long range surveillance if possible; short range surveillance if required by METT-T; avoid detection
	Techniques: observe/collect/record information about enemy/ use binos Well-rehearsed plan Cover movement w/battlefield noise Establish control measures, alternate routes, fire support
Notes:	

NBC-1 REPORT		
LINE	ITEM	*CHEM/BIO
B	Position of observer - (UTM coord)	
C	Direction of attack from observer (Degrees) (Mils)	
D	Date-time group of detonation/ *area attacked (DTC)	
F	Location of attack/*area attacked (Actual) (Estimated) (UTM coord)	
G	Means of delivery (artillery, mortar, spray, etc.)	
H	Height of burst/*type of agent (Air) (Surface) (Unknown)	

NBC-4 REPORT	
LINE	ITEM
H	Height of burst/*agent-type (Air) (Surface) (Unknown)
Q	Location of reading (UTM coord) (Air) (Liquid)
R	Dose rate - measure in open, 1 meter above the ground (cGy/hr)
S	DTG of initial reading

NBC-PRIOR TO ATTACK		
STEP	ACTION	✓
1	Increase MOPP level IAW intel	
2	Set up chemical agent alarm 100-150 m out & upwind	
	Prevent tampering	
	Attach M42 to M43A1 w/wire (MAX 400M); place near PLT CP & commo	
	Reservice/check every 24 hrs	
3	Affix M8/M9 detector paper	
4	Prep overhead cover	
5	Alert detection teams, M256 kit	
6	Leaders check for readiness	
7	Cover equipment not in active use	

NBC-DURING ATTACK		
STEP	ACTION	✓
1	STOP BREATHING, MASK & GIVE ALARM warn subordinate & higher: send "GAS, GAS, GAS, AND GRID" message leaders give order to mask & take protective action	
2	Seek overhead cover for self, cover equipment, close up vehicle	
3	Decontaminate M258A1/M291 on skin & equip M11/M13DAP to apply DS2	
4	Go to MOPP4	
5	Initiate detection measures: vapor M256 kit; liquid M8/M9 paper; close inlet/outlet ports of M8A1 alarm	

NBC-DURING ATTACK		
STEP	ACTION	✓
6	Report; send follow up NBC1 reports	
7	Leaders check personnel & protection	
8	Continue the mission	
Notes:		

NBC-AFTER ATTACK		
STEP	ACTION	✓
1	CONTINUE THE MISSION	
2	Minimize effects on personnel/ equipment	
3	Inform CP of extent of contamination-mark personnel, equipment & areas	
4	Maintain MOPP4 until ordered to lower level	
5	Decontaminate personnel w/M258A1/M291 kits; Apply DS-2 to vehicles	
	Hasty decon: MOPP gear exchange, vehicle washdown w/M17LDS, M12	

NBC-AFTER ATTACK		
STEP	ACTION	✓
	Deliberate decon: detailed troop (unit), equipment (decon plt)	
6	Casualties - decon with PDK & wrapped as appropriate	
Notes:		

UNMASKING WITH CHEMICAL AGENT DETECTOR KIT		
STEP	ACTION	✓
1	Use all available detection equipment (M8 & M9 paper, chemical alarms, etc.) before proceeding	
2	Get Cdr's approval	
3	Employ M256 or M256A1 Detector Kit	
4	If no chemical agent detected, have 1-2 soldiers unmask <u>in shade</u> for 5 minutes; remask for 10 minutes	
5	Check for symptoms; if none, others may unmask; remain alert for symptoms.	

UNMASK WITHOUT CHEMICAL AGENT DETECTOR KIT

STEP	ACTION	✓
1	Use all available detection equip (M8 & M9 paper, chemical alarms, etc.) before proceeding	
2	Get Cdr's approval	
3	Have 1-3 soldiers hold breath & break seal of mask <u>in shade</u> for 15 seconds, eyes open	
4	Reseal, clear & check masks, wait 10 minutes	
5	Check for symptoms; if none, break seal of mask, take 2-3 breaths; repeat Step 4	
6	If no symptoms, have soldiers unmask for 5 minutes; remask for 10 minutes	
7	Check for symptoms; if none, others may unmask; remain alert for symptoms	

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9-10

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MOPP LEVEL	OVER-GARMENTS	OVERBOOTS	MASK/HOOD	GLOVES	MOPP LEVELS
0	Carried	carried	carried	carried	
1	Worn open or closed	carried	carried	carried	
2	Worn open or closed	worn	worn	carried	
3	Worn open or closed	worn	worn	worn	
4	Worn closed	worn	worn	worn	

DETAILED TROOP DECON		
STEP	ACTION	✓
1	Equipment decon	
2	Mask/hood decon & boot shuffle	
3	Remove over garment jacket-high jumper trousers	
4	Remove boot & glove	
5	Monitor (medical/contam eval)	
6	Mask removal (vapor control line)	
7	Mask decon	
8	Re-issue point	

9

9-11

9

MOPP GEAR EXCHANGE		
STEP	ACTION	✓
	*solo **buddy team assist	
1	Gear drop & decon*	
2	Decon hood & roll**	
3	Remove overgarment** jacket black side out trousers	
4	Remove overboots & step on jackets** Remove CP gloves**	
5	Put on overgarment*	
6	Put on overboots*	
7	Put on CP gloves*	
8	Roll down & secure hood**	
9	Secure gear*	

MARK CONTAMINATED AREA: RADIOLOGICAL/BIO/CHEM		
STEP	ACTION	✓
1	Locate/identify contaminated area	
2	For <u>radiological</u> use marker labeled ATOM. Print information so word "ATOM" faces toward you & in upright psn: print dose rate (centigrays/hr); date/time (state ZULU or local) of reading & detonation. If unknown print "UNKNOWN"	
3	For <u>biological</u> use marker labeled BIO; for <u>chemical</u> use marker labeled GAS. Use same procedures as above, stating type of agent, if known	
4	Position markers so information faces away from contaminated area	

MARK CONTAMINATED AREA: RADIOLOGICAL/BIO/CHEM		
STEP	ACTION	✓
5	Attach markers so they can be seen from all routes through area; ensure each is visible from previous marker.	
6	Place ATOM markers at locations where dose rate measures 1 centigray/hr (cGy/hr) or more	
Notes:		

Notes:

PREPARE FOR NBC ATTACK/ PROTECT AGAINST ELECTROMAGNETIC PULSE		
STEP	ACTION	✓
1	Ensure ALL items are covered or dug in when not in use	
2	Park vehicles with air vents away from winds; close hatches, doors, etc.	
3	Protect electronic equipment against EMP by disconnecting antennas & spare equipment; shield with metal	
4	Use highest freq possible; never use commercial power. Keep cable & wire short; bury 18"	
5	Use remote sets only when required; use common ground for all equipment; insulate antenna guy lines	

SUPERVISE RADIATION MONITORING		
STEP	ACTION	✓
1	List grid coordinates of central point in area	
2	Tell IM-174/AN/VDR-2 operator to take readings from central point hourly; check that operator uses IM-174/AN/VDR-2 correctly	
3	Have operator report readings to you immediately; use NBC-4 report	
4	Take continuous readings if reading is 1 or more cGy/hr; fallout warning received or nuclear burst seen; if moving to another location	
5	Check hourly when reading drops below 1 cGy/hr	

USING A DOSIMETER		
STEP	ACTION	✓
1	Hold viewing end of dosimeter up to your eye, pointing toward light but not directly into the sun. An IM93 must be held parallel to the ground.	
2	Point where vertical hairline crosses scale is total amount of radiation received in cGy	
3	Report the number of cGy to your Cdr	
Notes:		

COLLECT/REPORT TOTAL RADIATION DOSE		
STEP	ACTION	✓
1	Turn in for recharging any dosimeter that does not read 0; recharge dosimeters daily	
2	Have soldiers who perform duties in unit's area wear dosimeters	
3	Collect readings from soldiers at the same time, at least once daily; ensure readings are accurate	
4	Add reported readings together; divide by number of readings	
5	Round up to nearest 10 and report to Cdr	

PRINCIPLES OF FIRE SUPPORT PLANNING/COORDINATION

ITEM	PRINCIPLE	✓
1	Plan early & continuously	
2	Consider all available resources & means of fire support - mortars, artillery, attack helicopters, CAS	
3	Select most effective asset & avoid duplication-check with higher	
4	Provide flexibility & safe fires	
5	Insure continuous targeting - likely, known & suspected enemy locations	
6	Before LD, LD to OBJ, on OBJ, beyond OBJ	
7	Use lowest echelon possible	

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10-1

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CALL FOR FIRE	
STEP	DESCRIPTION
	STEPS 1-3 ARE REQUIRED
1	Observer ID & warning order: Adjust fire Fire for effect (FFE) Suppress (Tgt #) Immediate suppression (Grid)
2	Target location methods Grid - 6 digit grid/direction Polar - direction, distance Shift from a known point - direction to tgt, add or drop, left or right from kp (dir always OBS to TGT)
3	Target description (SNAP) Size/shape Nature/nomenclature Activity Protection

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10-2

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CALL FOR FIRE	
STEP	DESCRIPTION
4	Method of engagement Type of adjustments Danger close Trajectory, Ammunition Distribution
5	Method of fire & control At my command/Cannot observe Time on target Continuous/coordinated illum Cease loading Check firing/Continuous fire Repeat
6	Refinement & end of mission Correct, Record, Report battle damage assessment

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10-3

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10-4

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CALL FOR FIRE CARD	
STEP 1	ID: (STEPS 4 & 5 ARE OPTIONAL)
WARNING ORDER: AF / FFE / S / IS POLAR / SHIFT (GRID)	
LOCATION: (POLAR) DIR DIS	
STEP 2	(SHIFT) DIR
L/R +/-	
STEP 3	(GRID)
STEP 4	DESCRIPTION:
STEP 5	METHOD OF ENGAGEMENT:
METHOD OF CONTROL:	
* DO NOT SAY WORDS IN PARENTHESES	

SHEET OF

[illegible]

10

MORTAR/ARTILLERY CAPABILITIES		
NAME	RANGE	TYPE
60mm/M224	70-3500	HE WP ILLUM
81mm/M29A1	70-4790	HE WP ILLUM
81mm/M252	73-5600	HE WP ILLUM RED P
107mm/M30	770-6840	HE WP ILLUM
120mm/M120	200-7200	HE SMOKE ILLUM
NAME	PLANNING RANGE	ROF - MAX/SUST
105MM/M102	11,500	10 RPM/3 RPM
105MM/M119	14,000	6 RPM/3 RPM
155MM/M198	18,100	4 RPM/1 RPM
155MM/M109	18,100	4 RPM/1 RPM
155MM/M109A6	23,500	6 RPM/1 RPM
Paladin	RAP	
227MM/MLRS	30KM	12 RDS/M
MLRS(ATACM)	100KM	2 missiles/18sec

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10-6

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AFV WEAPON CAPABILITIES EFFECTIVE RANGE (METERS)

SYSTEM	7.62 mm	.50 mm	25 mm	40 mm	105/120 mm	152 mm	TOW/ SHIL
HMMWV M1044	1100	1800		2200			3750
M901 ITV	1100						3750
M113 APC		1800		2200	or		3750
M2/ 3 BFV	1100		<u>1750 AP</u> <u>3000 HE</u>				3750
LAV25	1100		3000				
M1/M1A1	1100	1800			2800/ 3990		
M60A1/A3	1100	1800			1700		
M551 SHER	1100	1800				2000	3000

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10-7

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TARGET ACQUISITION		
ITEM	SIGNATURE	✓
1	Soldiers - trash, damaged vegetation, noise	
2	Tracked vehicles - fuel, smoke, noise	
3	Antitank weapons - noise, wires, vapor trails, flash	
4	Artillery - noise, smoke, flash	
5	Aircraft - noise, glare, vapor trails, dust	
6	Mines and obstacles - strange material, tripwires, loose/ disturbed dirt, tactical barbed wire	

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10-8

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ATTACK HELICOPTER CAPABILITIES				
NAME		WEAPON	#	RANGE M
AH-6	LITTLE BIRD	7.62 minigun	1	1100
		2.75" FFAR	7-28	9300
AH-1(G)	COBRA	2.75" FFAR	4	9300
		7.62 minigun	1	1100
		40mm GL	1	2000
AH-1(S)	COBRA	2.75" FFAR	2	9300
		TOW	8	3750
		20mm cannon	1	1500
OH-58D	KIOWA WARRIOR	2.75" FFAR	7-14	9300
		HELLFIRE	2-4	6000
		12.7mm HMG	1	1800
AH-64	APACHE	2.75" FFAR	7-28	9300
		HELLFIRE	1-16	6000
		30mm chaingun	1	2500
AH-60L	DIRECT ACTION PENETRATOR	2.75" FFAR	7-28	9300
		HELLFIRE	1-16	6000
		7.62 minigun	1	1100

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10-9

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ARTILLERY COUNTERFIRE
SHELREP - MORTREP - BOMBREP

A	Call sign
B	Coordinates of observer
C	AZ to flash or sound
D	Time shelling started
E	Time shelling ended
F	Coordinates of shelled areas
G	Number of guns
H	Nature of fire
I	Number, type & caliber of rounds
J	Flash-to-Bang-Time
K	Damage

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10-10

10

SUPPLIES AND LOGISTICAL SERVICES		
ITEM	PRINCIPLE	✓
1	Chain of command plans for supply status & equipment for fighting; 1SG directs Co log services; PSG coordinates/supervises platoon maintenance with 1SG	
2	Plt logistics includes long & short term supply/transportation/maintenance	
3	PSG coordinates/supervises by getting requests for supplies/equipment from SLs and PLs; reviewing & consolidating, giving list to 1SG or supply sgt	
4	PSG must maintain status of supplies & equipment in plt, monitors requests, reports to PL	

11

11-1

11

PRECOMBAT CHECKS - MECH		
ITEM	ACTION	✓
1	Complete prepare to fire weapons checks	
2	Complete preops PMCS; resolve problems	
3	Load vehicles/rucks per load plans	
4	Clean/function check individual & crew served weapons	
5	Top off vehicles	
6	Stow basic load of Classes I & V	
7	Fill canteens, water & oil cans as needed	
8	Index battlesights	
9	Check radio frequency and operation if authorized.	
10	Check speech security equipment and operation if authorized	
11	Check personnel; brief mission	
12	Rehearse	

11

11-2











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PRECOMBAT CHECKS - LIGHT		
ITEM	ACTION	✓
1	Leaders inspect equipment and camouflage	
2	Packing list checked	
3	Compasses, maps present	
4	Communications check	
5	Rations drawn	
6	Weapons test fired	
Notes:		

11

11-3

11

CLASSES OF SUPPLY		
CLASS	DESCRIPTION	SYMBOL
I	Rations	
II	Expendables	
III	POL	
IV	Barrier material	
V	Ammunition	
VI	Sundry	
VII	Major end items	
VIII	Medical	
IX	Repair parts	
X	Material to support nonmilitary programs	

11

11-4

11

ELECTRO COUNTER-COUNTER MEASURES

1 To determine if you are being jammed, disconnect antenna. If noise stops, then starts again when antenna is reconnected, suspect jamming. If noise does not stop, check radio malfunction.

2 If you are being jammed:
Continue to transmit on
highest power setting
Relocate to mask jamming
signal with terrain
Use directional antenna
Turn squelch off
NEVER acknowledge jamming
Move after transmission

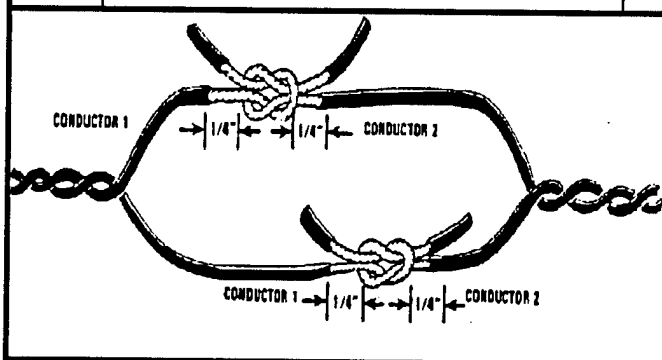
3 MIJI Report

RADIO TROUBLESHOOTING		
STEP	ACTION	✓
1	Check frequency setting	
2	Check battery: charge-new	
3	Check antenna: upright-clear	
4	Check ALL connections from battery through to antenna: clean-dry-tighten	
5	Check ALL power and position switches	
6	Replace CVC or handset	
7	Check distance/position for terrain mask; move if needed	
8	Check antenna top section: repair if broken-replace if lost	

12

12-2

12

SPlicing FIELD WIRE		
ITEM	ACTION	✓
1	Prepare conductors for splicing:	
	Untwist both ends of wire, remove insulation	
	Cut 6" back from one side of each pair so lengths are uneven	
2	Splice: Tie long conductor of 1 pair to short conductor of other in square knot. Repeat for second pair	
		

12

12-3

12

SPlicing FIELD WIRE		
ITEM	ACTION	✓
3	Secure splices:	
	Separate steel strands from copper, cutting steel even with insulation	
	Cross left hand end of copper strands over top of knot; wrap over bare portion of right hand conductor	
	Continue for two wraps; cut off excess copper	
	Repeat for right hand end	
4	Tape splices:	
	Start at center of splice & wrap tape to cover 1 1/2" of insulation at one end	
	Work tape back over center of knot to cover other side	
	Retape back to center	

12

12-4

12

INSTALLING COMMO LINES		
STEP	ACTION	✓
1	Test field wire on reel: attach telephone sets to ends; if commo check clear, install wire.	
2	Installing field wire: tie to fixed object to start & end (allow slack); tie several places at ground level	
3	Attach wire tags at road crossings, telephones & test stations, both sides of buried or aerial crossings, locations with several lines.	
4	Test wire line after buried or aerial crossings, before & after splicing new reel, before connecting line to switchboard.	

12

12-5

12

CROSSING OBJECTS WITH COMMO LINES		
STEP	ACTION	✓
1	Culvert: Attach wire tag on each side of road, pass wire thru culvert, add protective tape at ends of culvert.	
2	Aerial crossings: Clear roads by at least 7m, using trees or poles to raise wire. Use lance poles if needed.	
3	Buried crossings: Dig 6-12" deep trench extending beyond each side of road, lay wire loosely, tag, backfill.	
4	Railroad crossing: Cut enough wire to reach across tracks, pull under tracks & secure with stakes along crossties. Splice to wire reel; bury exposed wire.	

12

12-6

12

MESSENGER BRIEFING

1. Name/location of person to receive message.
2. Route to follow.
3. Danger points to avoid.
4. Speed required.
5. Is answer required?
6. Action if message cannot be delivered.
7. Special instructions.
8. Content (if required).
9. Report destination at OP/lines.
10. Challenge/Password.

12

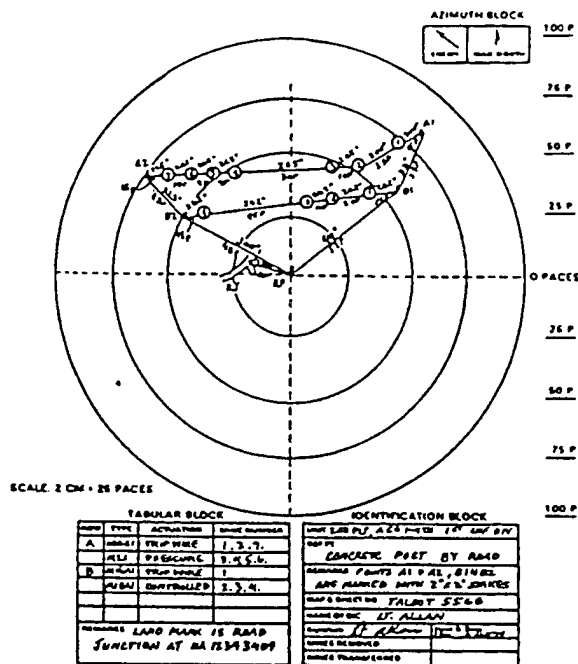
12-7

12

INSTALL/REMOVE HASTY PROTECTIVE MINEFIELD		
STEP	ACTION	✓
1	Report intention/get authorization to lay minefield	
2	Recon for best sites, under unit observation/fire, integrating with other defense plans	
3	Report initiation of field; place in irregular pattern on avenues of approach	
4	Record Field on DA 1355-1-R	
5	Arm mines - from enemy side to friendly side	
6	Report completion of field; warn adjacent units	
7	Retain DA 1355-1-R as long as unit/field stay in place; if field abandoned forward to Cdr	

INSTALL/REMOVE HASTY PROTECTIVE MINEFIELD	
STEP	ACTION
8	Removal: if DA 1355-1-R not available, treat as enemy field and use breaching techniques
9	Remove mines in order using azimuths and distances from DA 1355-1-R
Notes:	

DA FORM 1355-1-R

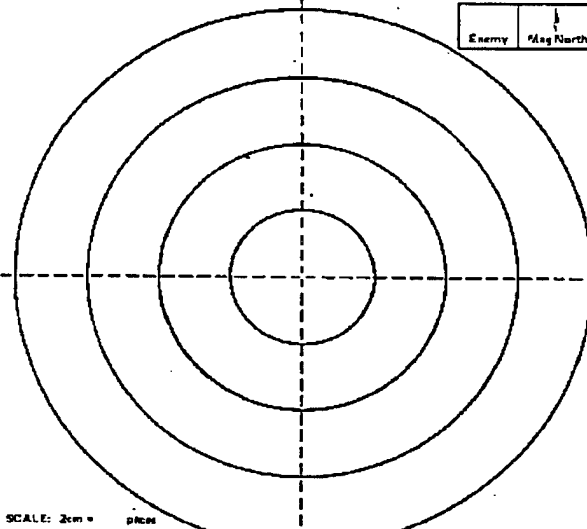


DA FORM 1355-1-R, 1 JULY 75, REPLACES DA FORM 1355-7, 1 MAR 68, WHICH IS OBSOLETE

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13-3

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DA FORM 1355-1-R																																											
HASTY PROTECTIVE MINEFIELD RECORD <small>(FM 20 - 32)</small>																																											
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center; padding: 2px;">AZIMUTH BLOCK</th> </tr> <tr> <td style="width: 50%; padding: 2px;">Enemy</td> <td style="width: 50%; padding: 2px;">Mag North</td> </tr> </table>		AZIMUTH BLOCK		Enemy	Mag North																																				
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Enemy	Mag North																																										
SCALE: 2cm = _____ paces		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center; padding: 2px;">IDENTIFICATION BLOCK</th> </tr> <tr> <td colspan="2" style="padding: 2px;">Unit</td> </tr> <tr> <td colspan="2" style="padding: 2px;">Ref Pt.</td> </tr> <tr> <td colspan="2" style="padding: 2px;">Remarks</td> </tr> <tr> <td colspan="2" style="padding: 2px;">Map & Chain No.</td> </tr> <tr> <td colspan="2" style="padding: 2px;">Name of CIRC</td> </tr> <tr> <td style="padding: 2px;">Signature</td> <td style="padding: 2px;">Time & Date</td> </tr> <tr> <td colspan="2" style="padding: 2px;">Mines removed</td> </tr> <tr> <td colspan="2" style="padding: 2px;">Mines transferred</td> </tr> </table>		IDENTIFICATION BLOCK		Unit		Ref Pt.		Remarks		Map & Chain No.		Name of CIRC		Signature	Time & Date	Mines removed		Mines transferred																							
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<small>DA Form 1355-1-R</small>																																											

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BREACHING AND CLEARING MINEFIELDS		
STEP	ACTION	✓
1	Suppress enemy covering obstacles	
2	Obscure area with smoke	
3	Secure near side	
4	Reduce obstacle-blow or probe lane through	
5	Secure the far side	
6	Blow marked mines in place (time permitting)	
7	Mark cleared lane	
8	Move unit through obstacle	

NONELECTRIC FIRING SYSTEM		
STEP	ACTION	✓
1	Determine length of fuse needed Cut & discard 6" length; cut off 3' length to determine burn rate Light fuse end and list time it takes to burn Compute burn rate per foot (time/burn rate)	
2	Determine amount of explosive needed	
3	Cut fuse to proper length & pass end thru priming adapter	
4	Attach M60 fuse igniter: unscrew fuse holder cap, press shipping plug into igniter, rotate & remove plug, insert fuse in fuse hole, tighten cap	

NONELECTRIC FIRING SYSTEM		
STEP	ACTION	✓
5	Attach blasting cap to fuse Inspect open end, remove debris by tapping or shaking gently Hold fuse vertically with square end up Slip cap down over fuse so cap & fuse are in contact Turn cap out & away from body & crimp cap at point 1/8-1/4" from open end	
6	Pull pin to detonate charge	
Notes:		

NONELECTRIC/ELECTRIC PRIMING OF DEMO BLOCK

Note: prime by wrapping demolition blocks with detonating cord, by inserting knot of detonating cord into plastic explosive, by lacing cord thru dynamite, 40-pound cratering charges or shaped charges

STEP	ACTION	✓
1	<p>Prime with threaded cap well & priming adapter:</p> <p><u>Non-electric</u> inspect cap well, insert cap with fuse into cap well, screw in adapter</p> <p><u>Electric</u> after inspection, fasten free ends of cap lead wire to firing wire & pass thru adapter slot, pull cap into place, then finish as above</p>	

NONELECTRIC/ELECTRIC PRIMING OF DEMO BLOCK

STEP	ACTION	✓
2	<p>Prime with threaded cap well without priming adapter: <u>Non-electric</u> inspect cap well, wrap & tie string around block, leaving excess, insert blasting cap with fuse into cap well - use loose string to keep cap from separating from block.</p> <p><u>Electric</u> after inspection, fasten free ends of cap wire to firing wire, pass lead wires thru adapter slot & insert electric cap into cap well, tie lead wires around block, allowing slack.</p>	
3	<p>Prime without threaded cap well or priming adapter: <u>Non-electric & electric</u> make hole with M2 crimpers, then follow step 2.</p>	

CLEAR NONELECTRIC/ELECTRIC MISFIRES

Note: If possible, misfire should be cleared by soldier who placed the charge

STEP	ACTION	✓
1	NON-ELECTRIC - Wait 30 minutes after misfire before moving to charge	
2	ELECTRIC - If dual primed with non-electric system, wait 30 minutes. Check firing wire connections, make 2-3 more attempts to fire; disconnect firing wire from blasting machine & shunt wires; check entire system for breaks/shorts	
3	UNTAMPED - Without moving or disturbing misfired charge, detonate 1-pound charge at side TAMPED - Dig within 1 foot of misfired charge; detonate a 2-pound charge on top of misfired charge	

ELECTRIC FIRING SYSTEM		
STEP	ACTION	✓
1	Check firing wire with M51 test set or galvanometer; lay out from charges to firing position	
2	Test electric blasting cap; twist free wire ends together	
3	Move to firing point & test entire circuit	
4	Test blasting machine/depress handle	
5	On order, connect lead wires to 2 blasting machine posts & detonate charge	
Notes:		

RULES OF ENGAGEMENT(ROE)	
ITEM	DESCRIPTION
1	Rigidly enforce the Rules of Engagement devised and disseminated by higher
2	Leaders will take steps necessary & appropriate for unit's self-defense
3	Use <u>minimum</u> force necessary to control the situation and accomplish the mission
4	Individuals apply common sense
5	Minimize risk to innocent civilians without endangering the mission
6	Train to specific ROE using vignettes and dilemmas

AREA ASSESSMENT CHECKLIST		
ITEM	DESCRIPTION	✓
1	Where are refugees from? Size & area of population	
2	What is food & water status?	
3	What is medical status?	
4	What civilian organizations exist; who are the leaders?	
5	What civil/military organizations exist; who are the leaders?	
6	What organization/leadership do most of the people support?	
7	What UN relief agencies are in operation?	
8	What is the security situation?	

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AREA ASSESSMENT CHECKLIST		
ITEM	DESCRIPTION	✓
9	What commercial or business activities are there?	
10	Which groups are most in need?	
11	What civil projects would leaders like to see accomplished?	
12	How many families are involved?	
13	What food is available and what does it cost?	
14	What skilled labor and services are available?	
15	What is the size and composition of the transient population?	

CHECKPOINT/ROADBLOCK PIR CHECKLIST		
ITEM	TO BE REPORTED	✓
1	Number & type of vehicles stopped; markings, license number, signs	
2	Number of passengers per vehicle; ages, genders	
3	Type and quality of cargo	
4	Point of origin & destination	
5	Stated reason for passenger travel	
6	Any weapons found	
7	Any passenger reports of sightings of weapons, technical equipment or bandits	

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CHECKPOINT/ROADBLOCK PIR CHECKLIST		
ITEM	TO BE REPORTED	✓
8	Condition of passengers (general health, dress, attitude)	
9	Anything unusual observed/ reported by passengers	
Notes:		

AIRCRAFT TROOP COMMANDER BRIEFING

1. Loading procedures _____

2. Bump plan (for individuals/loads) ____

3. Use of safety belts _____
4. Preflight safety inspection of troops _____
5. In-flight procedures _____
6. Downed aircraft procedures _____

7. Offloading procedures _____
8. Movement from the LZ/AZ _____

15

15-1

15

SAFETY BRIEFING CHECKLIST		
ITEM	ACTION	✓
1	Wear ID tags, earplugs, helmets, when in/near aircraft	
2	Never approach rotary wing aircraft from rear or front; always from sides	
3	Approach/depart in a crouch on down slope side to ensure clearance	
4	Keep sleeves rolled down	
5	Carry weapons without bayonet, safety on, bolt closed, chamber empty, muzzle DOWN	
6	Bend or tie down radio antennas	
7	Fasten seatbelts & leave buckled until crew chief signals exit	
8	Maintain written manifest (unit, rank, full name, SSN) separate from aircraft	

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15-2

15

REVERSE PLANNING SEQUENCE		
ITEM	ACTION	✓
1	Ground tactical plan	
2	Landing plan	
3	Air movement plan	
4	Loading plan	
5	Staging plan	
Notes:		

GROUND TACTICAL PLAN CONSIDERATIONS		
ITEM	CONSIDERATION	✓
1	Missions of all force elements and methods of employment	
2	Zones of attack, sectors, or areas of operations with graphic control measures	
3	Task organization to include command relationships	
4	Location and size of reserves	
5	Fire support to include graphic control measures	
6	Combat service support to include resupply, evacuation, and plans to sustain the force	

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15

LANDING PLAN CONSIDERATION		
ITEM	CONSIDERATION	✓
1	Supports ground tactical plan	
2	Availability, location & size of LZ	
3	Force is vulnerable during landing	
4	Elements must land with tactical integrity	
5	Inform all troops if landing direction changes	
6	Force must land prepared to fight in any direction	
7	Offer flexibility for options in scheme of maneuver	
8	Plan supporting fires in and around each LZ for next lifts and on objective	
9	Provide for resupply & medical evacuation by air	

LANDING ZONE SELECTION CRITERIA		
ITEM	CRITERIA	✓
1	Location (based on METT-T) & capacity (size)	
2	Alternates (one per primary LZ)	
3	Enemy disposition/capabilities	
4	Cover/concealment	
5	Obstacles	
6	Identification from air	
7	Approach/departure routes	
8	Weather/surface/slope	

15

15-6

15

AIR ASSAULT PZ/LZ PLANNING CONSIDERATIONS		
ITEM	CONSIDERATION	✓
1	PZs: Minimum movement; access to support assets; masked from enemy observation; outside the range of enemy artillery	
2	LZs: Locate on, close by, or some distance away from the objective (based on METT-T); size determines how much combat power can be landed; deny enemy observation, acquisition, and ADA; land on enemy side of obstacles; avoid exposing aircraft.	
3	Reduced visibility may limit or preclude use	

EXTRACTION LOADING PLAN REQUIREMENTS		
ITEM	REQUIREMENT	✓
1	PZ locations, primary & alternate	
2	PZ security	
3	PZ control party organization & location	
4	Fire support	
5	Sequence of extraction: main body, PZ control party, security force	
6	Movement to PZ: route & order	
7	Loading priorities	
NOTE: PZ TIME IS CRITICAL FACTOR		

LEADER DUTIES IN AIR ASSAULT OPERATIONS	
ITEM	DUTY
1	Senior person in each lift located with air mission cdr for C3
2	Set up PZ, supervise marking/clearing of obstacles w/PZCO
3	Brief all chalk leaders
4	Supervise conduct of rehearsals
5	Supervise security, movement of personnel & equipment, placement of chinks and slingloads on PZ
6	Devise & disseminate bump plan
7	PZ Control Officer (PZCO)/control party: Ensure PZ is cleared; plan/initiate fire support & security; establish comms nets; lead aircraft signalman responsible for visual landing guidance for lead aircraft

CHALK LEADER DUTIES/ PLATOON AIR ASSAULT		
ITEM	DUTY	✓
1	Brief chalk & attachments on loading plan, tasks & positions inside aircraft	
2	Ensure soldiers maintain assigned areas for local security	
3	Supervise loading of personnel; ensure all in assigned positions & buckled in	
4	Keep current on location with map & crew	
5	Ensure personnel exit quickly, rush to safe distance (10-15m), assume prone position & prepare to return enemy fire. Ensure lights/panels emplaced	

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15-10

15

SET UP A HELICOPTER LANDING SITE		
STEP	ACTION	✓
1	Select & secure landing site; size depends on number & type of helicopters	
2	Ground slope of site must be no more than 15 degrees. If less than 7 degrees, land upslope; if 7-15 degrees, land sideslope	
3	Ensure surface conditions free of rocks and debris; avoid dust, sand & snow	
4	Ensure ground firm enough to keep helicopter from bogging down during loading/unloading	

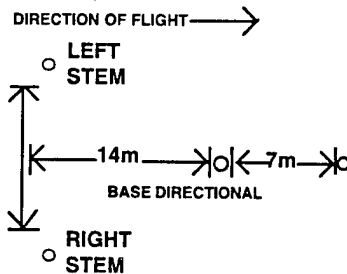
SET UP A HELICOPTER LANDING SITE		
STEP	ACTION	✓
5	Remove obstacles on approach/ deprture ends and clearly mark obstructions that cannot be removed. Ensure sufficient runway to clear obstacles, 10:1 horizontal clearance to vertical obstruct	
6	Mark landing site and touch- down point based on mission, capabilities & situation. Use smoke, signalman, lights; at night mark touchdown point with inverted Y composed of 4 lights.	

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NIGHT MARKING OF PZs AND LZs



NOTES: The aircraft touch down point will be midpoint on the legs of the Y. If more than 1 will land in the same PZ or LZ, add 1 more light for each. For OH-, UH-, and AH-acft, mark each additional landing point with 1 light at the exact point each acft is to land. For CH-acft, mark each additional point with 2 lights placed 10mm apart and aligned in the acft direction of flight.

EVALUATE A CASUALTY/FIRST AID		
STEP	ACTION	✓
1	Airway - clear and maintain	
2	Bleeding - stop	
3	Cover & protect wound	
4	Prevent or treat shock	
5	Check for fractures, burns, concussion	
6	Avoid moving suspected neck or back injuries	
7	Do not give water to abdominal wound except to moisten lips	
8	Seek medical aid	
Notes:		

SHOCK - SYMPTOMS/FIRST AID

STEP	ACTION	✓
1	Look for anxiety, agitation, confusion, pale, clammy, blotchy wet skin, nervousness, thirst, nausea, loss of blood, rapid shallow breathing	
2	Move to covered area. Lay patient on back, elevate feet, loosen clothing. Keep warm or cool depending on weather	
3	Calm patient	
4	Seek medical aid	

Notes:

HEAT EXHAUSTION/HEAT CRAMPS		
STEP	ACTION	✓
1	Look for moist pale, clammy wet skin, muscle cramps, sweating & thirst, headache & dizziness, faintness, weakness & nausea	
2	Move patient to shade, loosen clothing. If patient conscious, medical personnel give salt water slowly over next 12 hours. Watch for continued symptoms	
3	Seek medical aid if unconscious	
Notes: 		

HEAT STROKE/SUN STROKE		
NOTE: This is a medical EMERGENCY and potentially fatal		
STEP	ACTION	✓
1	Look for hot, dry, bright pink skin, high temperature, dizziness, nausea, fast pulse, delerium, no sweating.	
2	Lower body temperature IMMEDIATELY by immersion in water, fanning, use ice if available. Remove clothing. Give cool salt water if conscious.	
3	Seek medical aid; evacuate as URGENT; continue to cool.	
Notes:		

FROSTBITE		
STEP	ACTION	✓
1	Look for redness, or grey or waxy skin, frequently numb or itchy, blisters, areas of skin that are unnaturally firm, or tender and swollen.	
2	Shelter victim; keep warm with clothing or body heat; insulate from ground. Remove clothing from affected part; wrap loosely in dry sterile dressing. Do not massage area or break blisters or further injury may result.	
3	Seek medical aid; treat as litter casualty	
Notes:		

HYPOTHERMIA/COLD WEATHER INJURY		
STEP	ACTION	✓
1	Look for lowered body temp, violent uncontrolled shivering, lack of coordination, memory loss, irrationality, lethargy, slurred speech	
2	Move victim to sheltered area, cover and warm. Force conscious patient to drink quarts of heavily sugared liquids, hot if possible. Replace wet clothing with dry if possible; use sleeping bag to insulate from ground. Keep patient awake and drinking fluids. Do not rub or give alcohol. Start treatment before evacuation; evacuate when stable.	
3	Seek medical aid.	

REQUEST ARMY AIR MEDEVAC**NOTE: Send secure or encrypt all items.**

LINE	ITEM	✓
1	Location of pick-up site	
2	Pick-up site radio frequency, call sign, and suffix	
3	# of patients by precedence (urgent, priority, routine)	
4	Special equipment required	
5	# of patients by type (litter, ambulatory)	
6	Security of pick-up site	
7	Method of marking pick-up site	
8	Patient nationality and status	
9	NBC considerations	

CONTINUOUS OPERATIONS (CONOPS) PLANNING		
STEP	ACTION	✓
1	Set up and ENFORCE an eating and sleeping schedule for ALL personnel	
2	Include OPORD and movement times in warning orders so sleep can be scheduled	
3	Keep orders simple and clear; insist on briefbacks	
4	Do not permit sleeping in or near vehicles; move to safe place	
5	Recognize symptoms of sleep loss: not alert, slow response time, forgetful, mood change, short attention span, irritable	

CONTINUOUS OPERATIONS (CONOPS) PLANNING		
STEP	ACTION	✓
6	Recognize symptoms of stress: frustration, anger, tired even after rest, physical problems interfering with eating & sleeping, lack of confidence, forgetfulness	
7	Situation permitting, deal with stress. Give immediate attention, reassurance; rest and food. Pair with buddy	
8	REINFORCE eating/sleeping schedules for all personnel, especially leaders	

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HEAT PRECAUTIONS		
HEAT CATEGORY	WATER INTAKE	WORK/REST CYCLE(min)
1	1/2 QT/HR	CONTINUOUS
2	1/2 QT/HR	50 work/10 rest
3	1 QT/HR	45 work/15 rest
4	1 1/2 QT/HR	30 work/30 rest
5	2 QT/HR	20 work/40 rest
Note: MOPP gear or body armor will increase effects of heat. Watch for dehydration		

VEHICLE RECOVERY PROCEDURE CHECKLIST		
DANGER: Ensure unprotected troops at safe distance		
ITEM	PROCEDURE	✓
1	Recon the area	
2	Estimate the situation	
3	Calculate the ratio (resistance divided by effort)	
4	Obtain resistance	
5	Verify solution	
6	Erect rigging	
7	Recheck rigging	
8	You are ready	
Notes:		

VEHICLE RECOVERY FUNDAMENTALS	
ITEM	FUNDAMENTALS
1	Load resistance: <ul style="list-style-type: none"> • Overturned - 1/2 vehicle weight • Nosed (grade) - vehicle weight • Wheel deep - vehicle weight • Fender deep - double vehicle wgt • Turret deep - triple vehicle weight
2	Mechanical advantage: divide load resistance by available effort (capacity of winch)
3	Rigging: attach tow cables to TOW HOOKS, not lifting eyes or towing pintle
4	Safety: <ul style="list-style-type: none"> • Cross TOWING cables to prevent tangling & keep vehicles aligned • Position hook with throat (open part) UPWARD

VEHICLE RECOVERY FUNDAMENTALS

ITEM	FUNDAMENTALS
4	Safety (continued): <ul style="list-style-type: none">• Use heavy leather palmed gloves when handling cables/wire ropes• Place safety keys in hooks/shackles/equipment requiring them• Do NOT apply loads suddenly• No smoking/open flame if fuel or oil has spilled

Notes:

ENGAGING AIRCRAFT	
NOTE: In the absense of unit SOPs	
STEP	ACTION
1	Engage all attacking aircraft & helicopters positively identified as hostile
2	Engage when friendly ADA units are engaging enemy in your area
3	Engage enemy jet aircraft not attacking your position only after ordered to fire
WEAPONS CONTROL STATUS	
Wpns FREE	Fire at any aircraft not identified as friendly
Wpns TIGHT	Fire only at aircraft POSITIVELY identified as HOSTILE
Wpns HOLD	Fire only in self-defense

AIR DEFENSE WARNING	
WARNING	MEANING
RED	Attack is IMMINENT or IN PROGRESS
YELLOW	Attack is PROBABLE
WHITE	Attack is improbable
LOCAL AIR DEFENSE WARNING (LADW)	
WARNING	MEANING
DYNAMITE	Aircraft inbound & attacking; response is immediate
LOOKOUT	Aircraft in area of interest but not threatening OR inbound but there is time to react
SNOWMAN	No aircraft pose threat at this time

ENGAGEMENT/LEAD DISTANCES
High performance aircraft; Two football field "lead"; fire on automatic
Low performance/rotary wing: one half football field "lead"; fire on automatic
Aircraft coming directly at you: fire full automatic at nose
Notes:

PASSIVE AIR DEFENSE MEASURES		
ITEM	ACTION	✓
1	Use covered & concealed routes and stationary positions	
2	Cover glass & camouflage vehicles; do not skyline or outline; do not look at unless firing	
3	Maintain COMSEC & air guards	
4	Specify visual & audible air warning signals in unit SOP	
5	Enforce noise, light, litter discipline	
Notes:		

BUILT-UP AREA FIGHTING PRINCIPLES		
ITEM	PRINCIPLE	✓
1	Attack rapidly, in depth, to dominate killing areas, use masking smoke	
2	Clear each house thoroughly/consolidate	
3	Keep equipment light	
4	Plan for casualty/EPW armored evac	
5	Clear streets, houses, buildings and basements	
6	Mark cleared structures	
7	Wear body armor, use armored vehicles as transports/moving shield, sand-bag/harden thinskin vehicles	
8	Employ shock-producing weapons to reduce enemy strongpoints	
9	Employ expertise/equipment of combat engineers	

ATTACK AND CLEAR A BUILDING		
STEP	ACTION	✓
1	Organize unit into assault force and support force	
2	Designate special wpns/teams	
3	Support force ISOLATES bldg from overwatch position, covering smoke and fire	
4	Support force suppresses enemy in bldg and near by to cover assault force's move	
5	Support force resupply ammo, replace personnel, evacuate wounded/EPWs	
6	Aslt force ENTERS bldg at highest level possible to gain foothold or mouseholes into unexpected wall	
7	Aslt force CLEARS building room-by-room, by grenade or burst of fire	
8	Aslt force marks each room/ each building when cleared	

ORGANIZE BUILDING DEFENSE		
STEP	ACTION	✓
1	Select building(s) to defend by considering	
	Protection/Dispersion from enemy weapons/flamability	
	Concealment	
	Fields of Fire	
	Observation	
	Covered routes	
	Building strength/Fire hazard	
	Time available	
2	Position teams/vehicles	
3	Plan for/register indirect fires	
4	Select/prepare primary/alternate/supplementary psns for key dismounted weapons, escape route from building	

ORGANIZE BUILDING DEFENSE		
STEP	ACTION	✓
5	Prepare rooms in building(s)	
	Stockpile supplies	
	Establish CP/OPs	
	Set up wire commo lines	
	Cover floors with sand/dirt	
	Reinforce/camouflage psns	
6	Prepare outside of building(s)	
	Emplace mines/obstacles to cover deadspace/approaches/passages	
	Cover all mines/obstacles by observation and fire	
7	Inspect preparations	
Notes:		

PRINCIPLES OF THE LAW OF WAR		
STEP	PRINCIPLE	✓
1	All US/NATO ammo & weapons are lawful; do not alter.	
2	Do NOT fake surrender, use enemy uniforms, booby trap personnel or use medical symbols to deceive.	
3	Attack only combat targets, using only mission essential firepower, avoiding needless destruction and unnecessary suffering.	
4	Non-combat targets include the following: those surrendering, captives, the sick, the wounded; medical personnel, medical vehicles and medical	

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PRINCIPLES OF THE LAW OF WAR		
STEP	PRINCIPLE	✓
	buildings; undefended civilian buildings and monuments.	
5	Provide for the humane treatment and protection of all captives & non-combatants.	
6	Disposition of property: tag and turn in captured or abandoned military property; safeguard valuable abandoned private property; do not loot.	
7	Adherence to the Law of War supports tactical and strategic mission goals. Identify and report all violations.	

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RULES OF ENGAGEMENT (ROE) AND THE LAW OF WAR	
1	ROE are internally imposed restrictions upon the use of force
2	ROE may restrict actions allowable under the Law of War
3	ROEs are General Orders providing specific guidance for specific operations; they are NOT interchangeable.
4	Violations of a ROE are not necessarily violations of the Law of War, but are punishable under the UCMJ as violations of a General Order
5	Central to every ROE: The right to self-defense is <u>never</u> denied; use the <u>minimum</u> force required to complete your mission.

HANDLING ENEMY PRISONERS OF WAR		
ITEM	ACTION	✓
1	SEARCH- remove, tag & mark weapons, documents; return personal items, helmet, NBC gear	
2	SEGREGATE - by rank, sex, military, civilian	
3	SILENCE - no talking	
4	SPEED - from battle area	
5	SAFEGUARD - to prevent harm or escape	
Notes:		

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SPOT REPORT/SALUTE	
LINE	ITEM
1	Size
2	Activity
3	Location
4	Unit/Uniform
5	Time observed
6	Equipment

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FIND UNKNOWN RANGE USING MIL RELATION "WORM" FORMULA

NOTE: For MIL Relation Formula, the width or length of the target (W) must be known.

STEP	ACTION
1	Measure the target width using binoculars' mil scale (m)
2	Divide target width in meters (W) by mil width (m) to find range (R)
3	Round R to nearest tenth; multiply by 1000 for range to target
4	Remember $R = \frac{W}{m}$

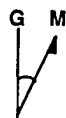



CONVERSION TABLE: US TO METRIC TO US

EXAMPLE: Multiply inches by 2.54 to get centimeters; multiply centimeters by 0.394 to get inches.

MULT	X	=	X	=
IN	2.54	CM	0.394	IN
FT	0.305	M	3.280	FT
YDS	0.914	M	1.094	YDS
MI	1.609	KM	0.621	MI
QTS	0.946	LTR	1.057	QTS
GAL	3.785	LTR	0.264	GAL
OZ	28.349	GMS	0.035	OZ
LBS	0.454	KG	2.205	LBS
MPG	0.245	KM/LTR	2.354	MPG
MPH	1.609	KM/HR	0.621	MPH

Fahrenheit to Celsius = $(F - 32) \times 5/9$

Celsius to Fahrenheit = $(C \times 9/5) + 32$

CONVERTING AZIMUTHS - GRID TO MAGNETIC/MAGNETIC TO GRID	
STEP	ACTION
1	<p>GRID TO MAGNETIC: (map to compass) for easterly G-M angle subtract G-M angle from grid azimuth; for westerly G-M angle add G-M angle to grid azimuth</p> 
2	<p>MAGNETIC TO GRID: (compass to map) for easterly G-M angle add G-M angle to compass azimuth for westerly G-M angle subtract G-M angle from compass azimuth</p> 
<p>Note: On G-M angle diagram, if conversion direction is to the Left, ADD; if conversion is to the Right, SUBTRACT LARS - left add right subtract</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  Easterly </div> <div style="text-align: center;">  Westerly </div> </div>	

REDUCE RISK OF FRATRICIDE	
ITEM	PRIMARY FACTORS
1	Mission and C² High vehicle or wpns density Cdr's intent is unclear or complex Poor flank coordination Crosstalk lacking No habitual relationships
2	Enemy Weak intelligence or recon Intermingled with friendly
3	Terrain Obscuration or poor visibility Extreme engagement ranges Navigation difficulty Absence of recognizable features

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21-5

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REDUCE RISK OF FRATRICIDE	
ITEM	PRIMARY FACTORS
4	Troops & Equipment High weapon lethality Unseasoned leaders or troops Poor fire control SOPs Incomplete ROE Anxiety or confusion Failure to adhere to SOPs
5	Time Soldier & leader fatigue Inadequate rehearsals Short planning time

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21-6

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RISK MANAGEMENT	
1	Risk Management integrated in decision making process
2	Tactical risk due to presence of enemy, nature of operations
3	Accident risk due to friendly personnel, equipment readiness & environmental conditions
4	Hazard - actual or potential condition leading to injury, illness or death of personnel; damage to or loss of equipment/property; mission degradation
5	Determine hazard probability (likelihood that it will occur), severity (degree of injury, property damage or other mission impairing factors), and assess risk by implementing risk management steps.

RISK MANAGEMENT STEPS	
1	<p>Identify hazards - potential sources of danger. Consider all aspects of METT-T:</p> <ul style="list-style-type: none"> -length & nature (complexity, danger) of operations -factors of supervision (command & control, day/lim vis/night) -soldier experience levels, training status & condition -environment/weather (terrain, heat, cold, haze, dust, mud, fog, rain, snow, ice) -age & maintenance status of equipment -leader rest status & mission prep time
2	<p>Assess hazards & cumulative effect on mission/objective considering probability of causing problems & severity of consequences; qualify risk as extremely high, high, moderate or low</p>

RISK MANAGEMENT STEPS	
3	<u>Develop controls</u> to eliminate or reduce risk of hazard - specify who, what, where, when & how, <u>determine residual risk</u> as controls are developed; CDR make decision whether to accept level of residual risk
4	Implement controls; state how communicated & put into effect - SOP, safety briefings, rehearsal
5	Supervise & evaluate -Monitor, follow up, reevaluate plan, make adjustments, incorporate lessons learned
4	Use sample hazard risk assessment matrix

RISK ASSESSMENT MATRIX					
S E V E R I T Y	HAZARD PROBABILITY				
	Frequent	Likely	Occasional	Seldom	Unlikely
	Catastrophic	E	E	H	M
	Critical	E	H	H	M
	Marginal	H	M	M	L
	Negligible	M	L	L	L

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[illegible]

WPN#

MASK#

OTHER

ACRONYMS	
A	
AA	Assembly Area/Avenue of Approach/ Anti Armor
ACE	Ammo, casualties, equipment
ADA	Air Defense Artillery
AP	Armor piercing
APC	Armored Personnel Carrier (M113A3)
AT	Antitank
ATACM	Army Tactical Missile System
AVP	Auxiliary Vehicle Power
AZ	Azimuth or Assault Zone
B	
BFV	Bradley Fighting Vehicle (M2/M3)
BMNT	Beginning of Morning Nautical Twilight
BN	Battalion
BP	Battle Position
C	
cal	caliber
CAS	Close Air Support
cGy	Centigray

ACRONYMS	
C	
COA	Course of Action
coax	coaxial machinegun
COMSEC	Communications Security
CONOPS	Continuous Operations
CP	Command Post
CQC	Close quarter combat
CS	Combat Support
CSS	Combat Service Support
CVC	Combat Vehicle Crewman
D-E-F	
Dir	Director
Dis	Distance
DTG	Date-Time-Group
EA	Engagement Area
EENT	End of Evening Nautical Twilight
EMP	Electromagnetic Pulse
EPW	Enemy Prisoner of War
FEBA	Forward edge of battle area
FFAR	Folding fin aerial rocket
FPF	Final protective fires
FPL	Final protective lines
FRAGO	Fragmentary Order
FSO	Fire support officer

ACRONYMS	
G-H-I	
G-M	Grid-Magnetic
GSR	Ground Surveillance Radar
HE	High Explosive
ID	Identification
ITV	Improved Tow Vehicle
J-K-L	
KIA	Killed in action
LADW	Local Air Defense Warning
LAV	Light Armored Vehicle
LD	Line of Departure
log	logistics
LZ	Landing Zone
M	
m	meter(s)
mil	mil
M1/M1A1	Abrams Tank
MEDEVAC	Medical Evacuation
MEL	Maximum Engagement Line
METL	Mission essential task list
METT-T	Mission, enemy, troops, terrain, & time

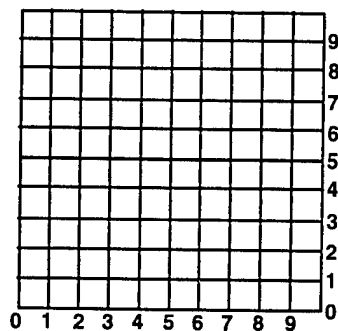
ACRONYMS	
M	
MLRS	Multiple Launch Rocket System
mm	millimeter
MOPP	Mission Oriented Protection Posture
MORTREP	Mortar Report
N	
NBC	Nuclear, Biological, Chemical
NOD(s)	Night Observation Device(s)
NVG	Night Vision Goggles
O	
OCOKA	Observation/fields of fire, Cover & concealment, Obstacles, Key terrain, Avenues of Approach
OBJ	Objective
OJT	On the job training
OP	Observation post
OPORD	Operation Order
ORP	Objective Rally Point

ACRONYMS	
P	
PB	Patrol Base
PIR	Priority information requirements
PMCS	Preventive Maintenance Checks and Services
PZ	Pickup Zone
PZCO	Pickup zone control officer
R	
RAP	Rocket Assisted Projectile
ROE	Rules of Engagement
RP	Release Point/Rally Point/Reference Point
R& S	Reconnaissance and Security
S	
SHELREP	Shell Report
SHER	Sheridan
SHIL	Shillelagh missile
SOI	Signal operation instructions
SP	Start Point
STANO	Surveillance, Target Acquisition and Night Observation

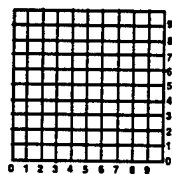
ACRONYMS	
T	
TOW	Tube-launched, Optically-tracked, Wire-guided
TRP	Target Reference Point
U-Z	
WIA	Wounded in action
WP	White Phosphorus
WRP	Weapons Reference Point

COMBAT LEADERS' GUIDE

1/25,000 OR 1/250,000



1/50,000



READ RIGHT → THEN UP ↑

CALL FOR FIRE CARD

ID:

STEP 1

(STEPS 4 & 5 ARE OPTIONAL)

WARNING ORDER: AF / FFE / S / IS POLAR / SHIFT (GRID)

LOCATION: (POLAR) DIR DIS

(SHIFT) DIR

L/R +/-

(GRID)

DESCRIPTION:

METHOD OF ENGAGEMENT:

METHOD OF CONTROL:

DO NOT SAY WORDS IN PARENTHESES

STEP 2

STEP 3
STEP 4
STEP 5