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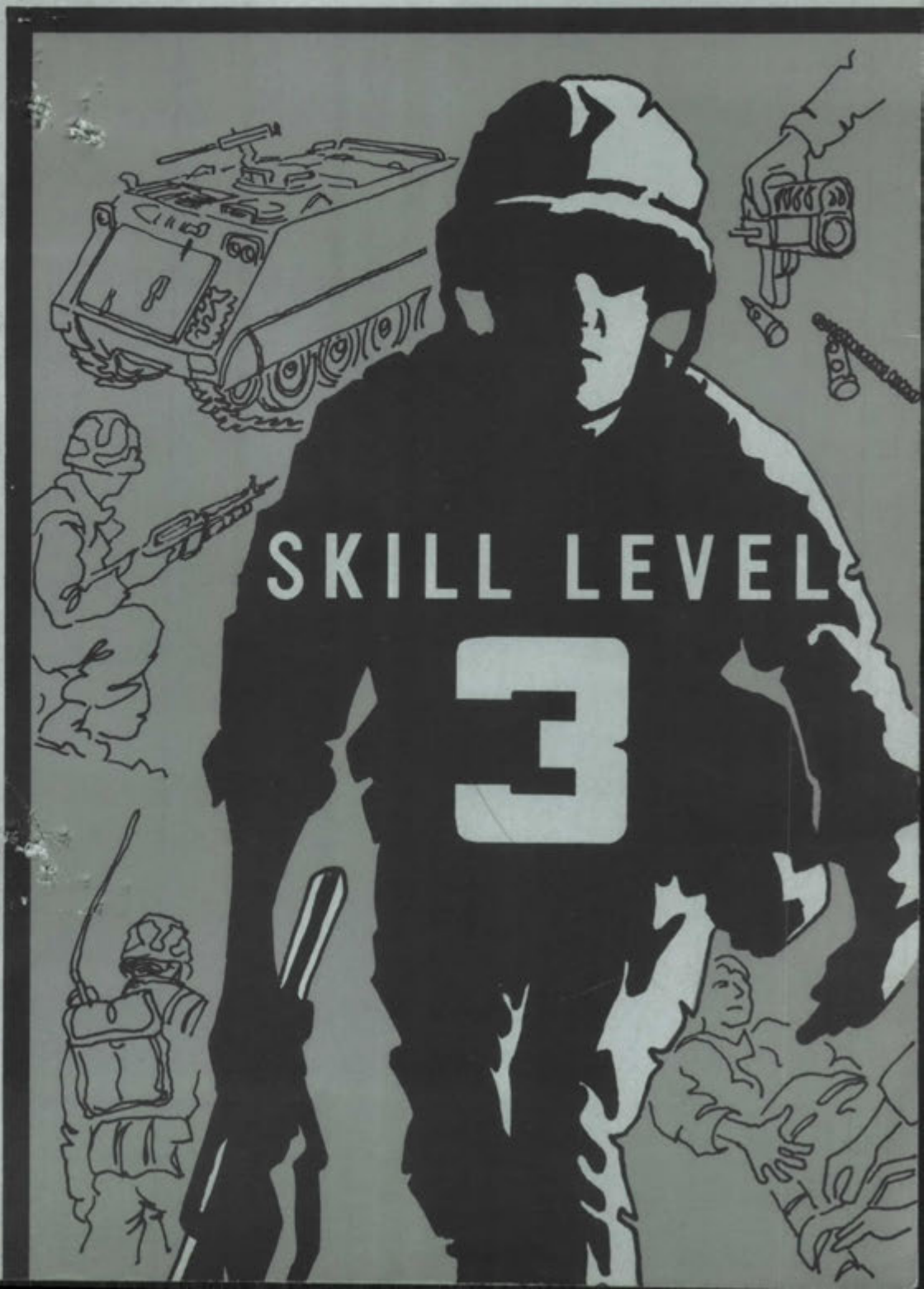
FM 7-11B3

SOLDIER'S MANUAL

11B30 - INFANTRYMAN



COMMANDER'S ATTENTION

Distribute this manual to each soldier in MOS 11B Skill Levels 2-5.

This Soldier's Manual is designed to tell the soldier what tasks he must be proficient in to be MOS qualified. If the soldier follows the road map it provides, he should progress readily to positions of responsibility commensurate with his aptitude and motivation.

Initial distribution of Soldier's Manuals will be "pushed" down to the unit level, based upon assigned strength in the particular MOS and skill level. If additional manuals are needed by the unit for MOS study, libraries, or other training needs, requests for publications may be sent directly to the US Army Publications Center, 2800 Eastern Boulevard, Baltimore, Maryland 21220.

Soldier's Manuals are designed on the modular system. Each skill level manual builds upon another. As an example, a skill level 3 soldier needs manuals 1 through 4. Levels 1 through 3 tell the level 3 soldier what he needs to know for proficiency at his present skill level. The skill level 4 manual tells him what he must be able to do at the next skill level. The point is - he needs all 4 manuals to know all he needs to know.

The individual soldier is responsible for retaining and maintaining his manual. Upon promotion to grades E5, E6, E7, or E8, the soldier must order his next higher level manual directly from the preparing agency.

> To comply with guidance of the Assistant Secretary of Defense (Manpower and Reserve Affairs), this Soldier's Manual has been reviewed for the use of neuter language. Unless otherwise noted, the third person singular "he" stands for both masculine and feminine genders.

This Soldier's Manual was prepared by the US Army Infantry School.

WILLIAM J. LIVSEY
Major General, USA
Commandant

RESERVE COMPONENT COMMANDER

ARMY NATIONAL GUARD ARMY RESERVE

The information on this page is for you, the Reserve/Guard component commander. Although this manual lists the critical tasks to be performed by the Active Army soldier in this MOS on equipment available in the Active Army inventory, most tasks in this manual are applicable to reservists/guardsmen without changes. However, some tasks may require modification because of differences of equipment, facilities, and training time available. Because of these differences, you, as a Reserve/Guard component commander, will need to be innovative and seek ways to enable your soldiers to accomplish their critical tasks.

This manual has not undergone the review process necessary to make it completely applicable to Reserve/Guard components. However, some Reserve/Guard component tasks have been identified. In the meantime, Reserve/Guard components will be using the manual prepared for their Active Army counterpart. As necessary, change sheets will be published and distributed to your unit.

Many tasks learned in basic combat training and advanced individual training are in this manual. There are other critical tasks that your reservists/guardsmen must learn on their own. Study materials have been prepared and can be ordered from the proponent agency. Your job is to make sure that the necessary study materials are available in your unit training center.

NOTICE TO RESERVE COMPONENTS

This manual will not be effective for the Army National Guard and the Army Reserve until ***after*** the 1979 SQT. ***Do not*** (repeat ***do not***) destroy FM 7-11B3, dated 14 May 1976. Your SQT in 1979 will be based on FM 7-11B3, dated 20 November 1978.

SOLDIER'S MANUAL

11B30 - INFANTRYMAN

Skill Level 3

The new Table of Contents, Introduction, and Tasks contained in this document provide for upgrading and updating **FM 7-11B1/2** to form **FM 7-11B3** for Skill Level 3 soldiers (E6s).

ATTENTION:

Collating your manuals is not a requirement. However, USAIS suggests that you do collate them.

FM 7-11B1/2 is updated as follows:

1. Remove the following from FM 7-11B1/2:

Front Cover
Pages i thru vi

2. Insert the following pages as indicated below:

MAJOR AREA	ADD PAGES	AFTER PAGE
Front Cover - SL3	N/A	N/A
Commander's Attention and Contents - SL3	Pages i thru vii	Cover
SL3 Introduction and Road Map	Section III divider sheet thru 1-III-B-14	1-II-B-12
Nuclear, Biological, and Chemical	2-I-B-18.1 thru 2-I-B-27.3	2-I-B-17.2
Individual Fitness	2-I-C-2.1 thru 2-I-C-2.6	2-I-C-1.2
Security and Intelligence	2-II-C-12.1 thru 2-II-C-12.3	2-II-C-11.5
Communications	2-II-D-18.1 thru 2-II-D-19.3	2-II-D-17.3
Land Navigation	2-II-E-14.1 thru 2-II-E-15.4	2-II-E-13.2
Light Antitank Weapon (LAW)	2-III-C-4.1 thru 2-III-C-5.5	2-III-C-3.2
106-mm Recoilless Rifle	2-III-I-11.1 thru 2-III-I-11.4	2-III-I-10.4
TOW	2-III-J-10.1 thru 2-III-J-10.3	2-III-J-9.5
Mines	2-IV-B-13.1 thru 2-IV-B-14.7	2-IV-B-12.4
Leadership	2-VI-A-5.1 thru 2-VI-A-6.6	2-VI-A-4.6
Training	2-VI-B-2.1 thru 2-VI-B-2.3	2-VI-B-1.2

MAJOR AREA	ADD PAGES	AFTER PAGE
Tactics	Introduction to Tactics; 2-VII-1.1 & 2-VII-1.2	Cover Sheet Section VII
Basic Tactics	2-VII-A-2.1 thru 2-VII-A-3.2	2-VII-A-1.2
All remaining pages (Offense, Defense, and Mechanized Infantry Tactics)	2-VII-C-3.1 thru 2-VII-E-7.5	2-VII-C-2.1
Appendix B, Consolidated List of References (FM 7-11B3)	B-1 thru B-3	A-11
Questionnaire and Reorder Form		B-3

3. File these change sheets in front of the publication for reference purposes. The proponent agency of this field manual is the United States Army Infantry School. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) or the questionnaire provided with this manual direct to Commandant, United States Army Infantry School, ATTN: ATSH-I-V-TDD, Fort Benning, Georgia 31905.

Field Manual
No. 7-11B3

*FM 7-11B3

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington DC, 20 November 1978

SOLDIER'S MANUAL 11B
INFANTRYMAN SKILL LEVEL 3

Contents

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*This field manual supersedes FM 7-11B3, dated 14 May 1976.

SECTION II

COMBAT TECHNIQUES

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CHAPTER 1

LIGHT WEAPONS INFANTRYMAN

SECTION III

SKILL LEVEL THREE
INTRODUCTION AND ROAD MAP

HOW TO USE THE SOLDIER'S MANUAL

Refer to the Introduction to Skill Level 1, pages 1-I-A-1 thru 1-I-A-5, for an explanation of a Soldier's Manual. Refer to pages 1-I-A-7 thru 1-I-A-9 for an explanation of a Task Summary.

COMMON SKILL LEVEL 3 TASKS

The Soldier's Manual for Skill Level 3 soldiers (grade E6) contains basic combat tasks that **all** 11B30 Infantrymen must be able to perform. These tasks are listed on the Road Map for Skill Level 3 in chapter 1 under COMMON TASKS for all Skill Level 3 Infantrymen. The Road Map will tell you the page on which each task can be found.

DUTY POSITIONS TASKS

Your duty position may require you to be able to do some add-on tasks. The table below lists the duty positions which require add-on tasks and the number of add-on tasks required. A list of tasks for each duty position and the page on which each task can be found are listed on the Road Map for Skill Level 3 in chapter 1 under DUTY POSITION TASKS.

DUTY POSITION	NUMBER OF TASKS
RC HAW Section Leader (106-mm RCLR)	11
HAW Section Leader (TOW)	10
Squad Leader (Mechanized units only)	18

At Skill Level 1, you were concerned with individual tasks. These were tasks aimed at qualifying you as a member of the Light Weapons Team. While you had to be aware of other members' actions, you were only responsible for your own. At Skill Level 2, you began to pick up the responsibilities of a leader. Now, as a Skill Level 3 infantryman, your leadership role is greatly expanded. At Skill Level 3, you are given tasks which test your ability to lead. You are responsible for the actions of others as well as your own. You must not only be aware of what others are doing, you must also CONTROL that action. You are expected to not only master the basic combat skills, but to train others to a high degree in these skills, and to insure they properly apply these skills in combat. The tactical training guidelines on page 2-VII-1.1 go into more detail as to how this demanding new role applies to you and your responsibility to prepare your squad/section to fight and win on the battlefield.

A NOTE TO TRAINERS

In these days of constant readiness, we are faced with the problem of training leaders who are ready to go NOW. We must look for dominant personalities and put them in command. Our squad and HAW section leaders must build word pictures and issue specific, unmistakable instructions. Nothing can be left to chance or doubt.

Because the job of squad leader/section leader is one of the most difficult on the battlefield, we must simplify as much as possible; and this is where the battle drill and the team system relieve the squad and/or section leader of at least half of his problem of battlefield explanation.

To decide under fire -- where the enemy is -- how to approach him -- how to use the terrain -- how to control his teams -- inspire his men -- and how to keep the squad's mental picture alive is challenge enough for any man. Your unit training program should be based on how well your squad and HAW section leaders can perform the combat tasks contained in Soldier's Manuals. After you determine the proficiency level of your leaders, train them in the areas of poor performance first.

The ARTEP provides the basis for your unit training. It sets forth the missions which your squads/sections will have to perform frequently in combat and identifies the collective skills associated with these missions. The ARTEP establishes the **MINIMUM STANDARDS** your squads/sections must achieve in training if they are to **FIGHT** and **WIN** on the **BATTLEFIELD.**

HOW TO MAKE SERGEANT FIRST CLASS E7

The Army will only promote men who have proved that they can do the job. In other words, you must show that you can do the tasks required of a Sergeant First Class before you can be considered for promotion to that grade. Here is how the system works:

1. LEARN THE TASKS IN THIS MANUAL that apply to you. As soon as you have done that, ask for a copy of FM 7-11B4 Soldier's Manual **(for Skill Level 4).**

2. Then LEARN THE BASIC TASKS IN THE SKILL LEVEL 4 MANUAL. There will not be as much new material as you might think since many of the skills that you learned for Skill Level 3 will also be in the Skill Level 4 manual.

3. As an E6, you will TAKE A SKILL QUALIFICATION TEST (SQT). The SQT will test your ability to do the tasks in the Soldier's Manual. If you make a high enough score on the test, you will be given the Skill Level 4 rating which you must have before you are promoted to E7. Since the SQT will use the same conditions and standards used in the Soldier's Manual, you will be able to prepare in advance for the SQT.

4. The SQT has three parts: written, hands-on, and performance certification. Sixty to ninety days before the SQT is given, an SQT notice will be sent to each unit. It will tell which tasks will be tested in each part of the SQT. It will also tell how the task will be tested. There are three different ways to test a task. First, you may be asked to answer a **written question** about how a task is performed. You will pick the correct answer from a list of answers and mark the correct answer on a machine-scored answer sheet. Second, you may be asked to actually do the task. For example, you may be given an M72A2 LAW and be asked to prepare it for firing. This is called a **hands-on test** which means you are actually required to do the task as you would on the job. Third, your unit commander may observe your performance of a task and report your ability **(performance certification)** to perform it as part of your SQT score. Your performance on all three parts of the test will be reported to you sometime soon after you complete the SQT. You will be told which tasks you did not perform well. You can use your Soldier's Manual to improve your performance in those areas.

5. Also while you are an E6, you may ATTEND THE ADVANCED NONCOMMISSIONED OFFICER'S COURSE **(ANCOC).** In this course, you will build on the skills you developed during unit training and gain leadership experience to help you perform more effectively.

6. In addition to the SQT, you will RECEIVE A SENIOR ENLISTED EFFICIENCY REPORT (SEER). In the SEER, your supervisor will give his opinion of your performance on the job. Both the SQT and the SEER will be used to determine your final evaluation score.

7. If you don't understand any parts of the manual or want to know more about advancement opportunities, see your platoon sergeant. Take advantage of his knowledge and experience.

8. At the top of your enlisted chain of command is your sergeant major. He is an expert in helping younger soldiers learn about training, evaluation, and the system for getting ahead in the Army. As such, he is responsible for insuring that NCOs senior to you either provide the assistance you need or refer you to him for his guidance and help.

9. The Army wants and needs well-trained soldiers who desire to advance through the ranks. This manual and the willing assistance of senior NCOs are the tools you can use to your advantage and the Army's.

ROAD MAP
FOR
LIGHT WEAPONS INFANTRYMAN SKILL LEVEL 3

COMMON TASKS FOR ALL SKILL LEVEL 3 INFANTRYMEN

NOTE:

1. TASKS MARKED (SL1 and 2) WERE SKILL LEVEL 1 AND 2 SOLDIERS' TASKS AND ARE NOW YOUR RESPONSIBILITY.

2. [redacted] TASKS MARKED IN THIS MANNER ARE YOUR NEW SKILL LEVEL 3 TASKS.

BATTLEFIELD SURVIVAL

FIRST AID

TASK NUMBER		SL	PAGE
	Introduction to first aid.	1	2-I-A-1.1
081-831-1004	Perform mouth-to-mouth resuscitation and external heart massage.	1	2-I-A-2.1
081-831-1005	Stop bleeding (arm or leg).	1	2-I-A-3.1
081-831-1006	Identify signs of and treat for shock.	1	2-I-A-4.1
081-831-1007	Splint a fracture.	1	2-I-A-5.1
081-831-1008	Apply first aid measures for burns.	1	2-I-A-6.1
081-831-1010	Apply first aid for sun or heat injuries.	1	2-I-A-7.1
081-831-1011	Apply first aid for wet or cold injuries.	1	2-I-A-8.1

NUCLEAR, BIOLOGICAL, AND CHEMICAL

092-503-1001	Perform operator's maintenance on an M17 series protective mask.	1	2-I-B-1.1
092-503-1010	Exchange filters on an M17 series protective mask.	1	2-I-B-2.1
092-503-1002	Put on and wear a protective mask.	1	2-I-B-3.1
092-503-1015	Put on and wear protective clothing.	1	2-I-B-4.1
092-503-1007	Decontaminate self.	1	2-I-B-5.1
092-503-1008	Decontaminate individual equipment.	1	2-I-B-6.1

ALL TASKS MARKED WITH (RC) APPLY ONLY TO THE US ARMY RESERVE AND NATIONAL GUARD.

(NUCLEAR, BIOLOGICAL, AND CHEMICAL, CONTINUED)

TASK NUMBER		SL	PAGE
	INDIVIDUAL FITNESS		
071-327-0201	Maintain an appropriate level of physical fitness (male only).	1	2-I-C-1.1
071-327-0202	Lead physical conditioning activities.	3	2-I-C-2.1
	COMBAT TECHNIQUES		
	BASIC INDIVIDUAL TECHNIQUES		
071-326-0501	Move as a member of a fire team.	1	2-II-A-1.1
071-326-0502	Move under direct fire.	1	2-II-A-2.1
071-326-0510	React to indirect fire.	1	2-II-A-3.1
071-326-0511	React to flares.	1	2-II-A-4.1
071-326-0503	Move over, through, or around obstacles.	1	2-II-A-5.1
071-326-0512	Estimate range.	1	2-II-A-6.1
071-326-0513	Select temporary battlefield positions.	1	2-II-A-7.1
071-326-5703	Construct individual fighting position.	1	2-II-A-8.1
071-326-0600	Use visual signals to control movement (dismounted).	1	2-II-A-9.1
071-329-1021	Determine an enemy target location using grid coordinates.	2	2-II-A-10.1
061-283-6002	Locate a target by shift from a known point.	1	2-II-A-11.1
061-283-6003	Call for/adjust indirect fire.	1	2-II-A-12.1
071-326-5704	Supervise/evaluate construction of a fighting position.	2	2-II-A-13.1
	CAMOUFLAGE, COVER, AND CONCEALMENT		
051-202-1001	Camouflage/conceal self and individual equipment.	1	2-II-B-1.1
051-202-1002	Camouflage/conceal equipment.	1	2-II-B-2.1
051-202-1003	Camouflage/conceal defensive positions.	1	2-II-B-3.1
071-331-0852	Clear fields of fire.	1	2-II-B-4.1

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(BASIC INDIVIDUAL TECHNIQUES, CONTINUED)

(COMMUNICATIONS, CONTINUED)

LAND NAVIGATION

(LAND NAVIGATION, CONTINUED)

TASK NUMBER	(M60 MACHINEGUN, CONTINUED)	SL	PAGE
071-312-3006	Field zero an M60 machinegun.	1	2-III-E-6.1
071-312-3007	Prepare a range card for an M60 machinegun.	1	2-III-E-7.1
071-312-2310	Mount/dismount an AN/PVS-2 on an M60 machinegun.	1	2-III-E-10.1
071-312-2311	Zero an AN/PVS-2 to an M60 machinegun.	1	2-III-E-11.1
	90-MM RECOILLESS RIFLE (RC)		
071-319-3151 (RC)	Perform operator maintenance on a 90-mm RCLR.	1	2-III-G-1.1
071-319-3152 (RC)	Boresight the 90-mm RCLR.	1	2-III-G-2.1
071-319-3153 (RC)	Load, unload, and clear 90-mm RCLR.	1	2-III-G-3.1
071-317-0000	Prepare an antiarmor range card (90-mm RCLR).	1	2-III-H-5.1
071-319-3155 (RC)	Engage targets with 90-mm RCLR.	1	2-III-G-4.1
071-317-3307	Construct a fighting position (Dragon/ 90-mm RCLR).	1	2-III-H-7.1
	DRAGON		
071-317-3301	Conduct a preoperational inspection of the Dragon tracker and round.	1	2-III-H-1.1
071-317-3302	Prepare the Dragon for firing.	1	2-III-H-2.1
071-317-3304	Demonstrate correct Dragon firing positions.	1	2-III-H-3.1
071-317-3303	Determine if a target is engageable.	1	2-III-H-4.1
071-317-0000	Prepare an antiarmor range card (Dragon).	1	2-III-H-5.1
071-317-3306	Perform immediate action procedures for a Dragon misfire.	1	2-III-H-6.1
071-317-3307	Construct a fighting position (Dragon/ 90-mm RCLR).	1	2-III-H-7.1
071-317-3308	Perform emergency destruction procedures.	1	2-III-H-8.1
	HAND GRENADES, MINES, AND DEMOLITIONS		
	HAND GRENADES		
071-325-4401	Perform safety checks on hand grenades.	1	2-IV-A-1.1
071-325-4402	Engage enemy targets with hand grenades.	1	2-IV-A-2.1
071-325-4405	Identify and employ hand grenades.	1	2-IV-A-3.1

TACTICAL VEHICLES

TASK NUMBER:	WHEELED VEHICLE	SL	PAGE
071-333-6001	Drive a wheeled vehicle cross-country.	1	2-V-A-1.1
071-333-6002	Drive a wheeled vehicle on roads, in vehicle parks, and in built-up areas.	1	2-V-A-2.1
071-333-6003	Drive a wheeled vehicle using blackout drive.	1	2-V-A-3.1
071-333-6004	Start a wheeled-vehicle engine using auxiliary power (M151, M715, and M561).	1	2-V-A-4.1
071-333-6005	Perform an ESC (equipment serviceability criteria) inspection on a wheeled vehicle (M151, M715, and M561).	1	2-V-A-5.1
071-333-6006	Maintain required TAMMS records on a wheeled vehicle (M151, M715, and M561).	1	2-V-A-6.1
071-333-6007	Perform operator maintenance on a wheeled vehicle.	1	2-V-A-7.1
071-333-6008	Recover a wheeled vehicle.	1	2-V-A-8.1

TRACKED VEHICLES (MECHANIZED UNITS ONLY)

071-333-6501	Drive an APC cross-country.	1	2-V-B-1.1
071-333-6502	Drive an APC on roads, in vehicle parks, and in built-up areas.	1	2-V-B-2.1
071-333-6503	Drive an APC with night vision devices, infrared equipment, and blackout drive.	1	2-V-B-3.1
071-333-6504	Operate an APC in water.	1	2-V-B-4.1
071-333-6505	Start the APC engine using auxiliary power.	1	2-V-B-5.1
071-333-6506	Perform a tracked-vehicle ESC (equipment serviceability criteria) inspection.	1	2-V-B-6.1
071-333-6507	Maintain required TAMMS records on a tracked vehicle.	1	2-V-B-7.1
071-333-6508	Perform operator maintenance on an APC.	1	2-V-B-8.1
071-333-6509	Recover a tracked vehicle using field expedients.	1	2-V-B-9.1

LEADERSHIP AND TRAINING

DEFENSE

TASK NUMBER		SL	PAGE
071-326-5701	Supervise the preparation of a squad defensive position.	3	2-VII-D-1.1
071-326-5705	Establish an observation post (OP)	3	2-VII-D-2.1
071-326-5710	Designate primary fighting positions for squad members (less crew-served weapons).	3	2-VII-D-3.1
071-326-5711	Designate alternate and supplementary positions for squad members.	3	2-VII-D-4.1
071-326-5720	Prepare a squad defensive sector sketch.	3	2-VII-D-5.1
071-326-5725	Direct squad fires in the defense.	3	2-VII-D-6.1

TASKS FOR SELECTED DUTY POSITIONS - SKILL LEVEL 3

TOW SECTION LEADER (HAW)

071-316-2500	Assemble the TOW launcher.	1	2-III-J-1.1
071-316-2501	Perform operator maintenance on TOW weapons system.	1	2-III-J-2.1
071-316-2502	Conduct a system self-test and preoperational inspection.	1	2-III-J-3.1
071-316-2503	Load, arm, and unload an encased missile.	1	2-III-J-4.1
071-316-2504	Perform immediate action procedures for a misfire.	1	2-III-J-5.1
071-316-2505	Determine if a target can be engaged.	1	2-III-J-6.1
071-316-2506	Camouflage/conceal TOW position.	1	2-III-J-7.1
071-317-0000	Prepare an antiarmor range card (TOW).	1	2-III-H-5.1
071-316-2551	Supervise preparation of a TOW fighting position.	2	2-III-J-8.1
071-316-2552	Control TOW squad fires.	2	2-III-J-9.1
071-316-2601	Plan and Control TOW squad fires.	3	2-III-J-10.1

106-MM RCLR SECTION LEADER (HAW) (RC)

TASK NUMBER		SL	PAGE
071-319-3601 (RC)	Perform operator maintenance on a caliber .50 spotting rifle, M8C.	1	2-III-I-1.1
071-319-3602 (RC)	Load, reduce a stoppage, unload, and clear the caliber .50 spotting rifle, M8C.	1	2-III-I-2.1
071-319-3603 (RC)	Perform operator maintenance on a 106-mm RCLR.	1	2-III-I-3.1
071-319-3604 (RC)	Load, reduce a stoppage, unload, and clear a 106-mm RCLR.	1	2-III-I-4.1
071-319-3605 (RC)	Engage targets with the 106-mm RCLR.	1	2-III-I-5.1
071-319-3606 (RC)	Conduct 106-mm RCLR weapon system alinement.	1	2-III-I-6.1
071-317-0000	Prepare an antiarmor range card (106-mm RCLR).	1	2-III-H-5.1
071-319-3608 (RC)	Construct 106-mm RCLR position (mounted).	1	2-III-I-7.1
071-319-3609 (RC)	Construct 106-mm RCLR position (dismounted).	1	2-III-I-8.1
071-319-3610 (RC)	Camouflage/conceal 106-mm RCLR position.	1	2-III-I-9.1
071-319-3611 (RC)	Control 106-mm RCLR squad fires.	2	2-III-I-10.1
071-319-3612 (RC)	Plan and control 106-mm RCLR section fires.	3	2-III-I-11.1

SQUAD LEADER (MECHANIZED UNITS ONLY)

071-313-3451	Perform operator maintenance on a caliber .50 M2 HB machinegun and ammunition.	1	2-III-F-1.1
071-313-3452	Target/zero a caliber .50 machinegun.	1	2-III-F-2.1
071-313-3453	Load, reduce a stoppage, unload, and clear a caliber .50 machinegun.	1	2-III-F-3.1
071-313-3454	Engage targets with a caliber .50 machinegun.	1	2-III-F-4.1
071-313-3455	Set headspace and timing on a caliber .50 machinegun.	1	2-III-F-5.1
071-313-2314	Mount/dismount AN/TVS-2 sight on caliber .50 machinegun.	1	2-III-F-6.1
071-313-2315	Boresight AN/TVS-2 to caliber .50 machinegun.	1	2-III-F-7.1

(SQUAD LEADER (MECHANIZED UNITS ONLY), CONTINUED)

TASK NUMBER: 092-503-3003

OPERATE AN IM-174 SERIES RADIACMETER

CONDITIONS:

Given a calibrated IM-174A/PD or IM-174/PD radiacmeter and two complete sets of the batteries as follows:

IM-174A/PD	IM-174/PD
two batteries BA-1391/U	two batteries BA-1318/U
two batteries BA-1396/U	one battery BA-1288/U
two batteries BA-1006/U	

(For test purposes, one set may have one or more dead batteries; the other set must have all live batteries.) Subsequently, given a mission to conduct area monitoring with the IM-174A/PD radiacmeter.

STANDARDS:

1. Install one set of batteries, turn radiacmeter on, and determine if batteries are operational.

2. Correctly zero radiacmeter and determine correct reading.

PERFORMANCE MEASURES FOR IM-174A/PD:

1. Prepare IM-174A/PD Radiacmeter for use.

a. Unsnap the snap fasteners and remove the radiacmeter from the carrying case (figure 1).

b. Set the zero control (figure 2) to OFF.

c. Unscrew the captive screw on the bottom of the battery cover (figure 3).

d. Remove the battery cover, which contains the battery board assembly.

e. Carefully lift the top battery contacts for the BA-1006/U (figure 3) and slide the two batteries BA-1006/U in their respective positions so that the + (plus) polarity marking on each battery is down (facing the battery board assembly); release the battery contacts.

f. Repeat the procedure given in e, above, and install the two BA-1391/U's.

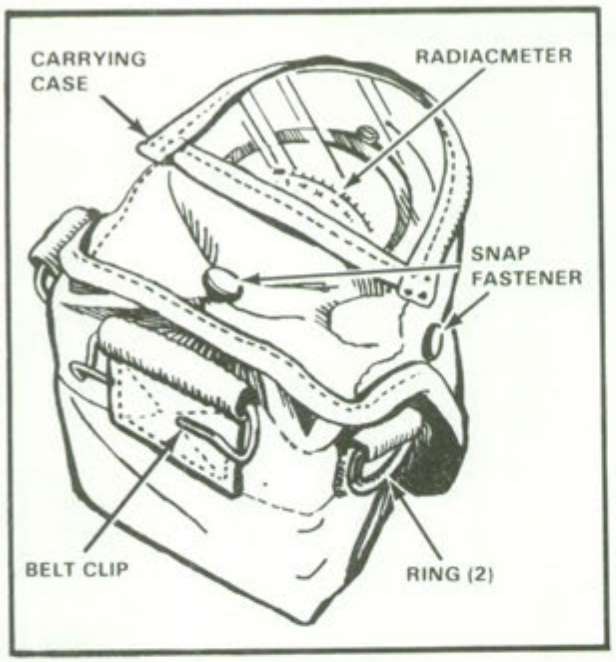


Figure 1. Radiacmeter in carrying case.

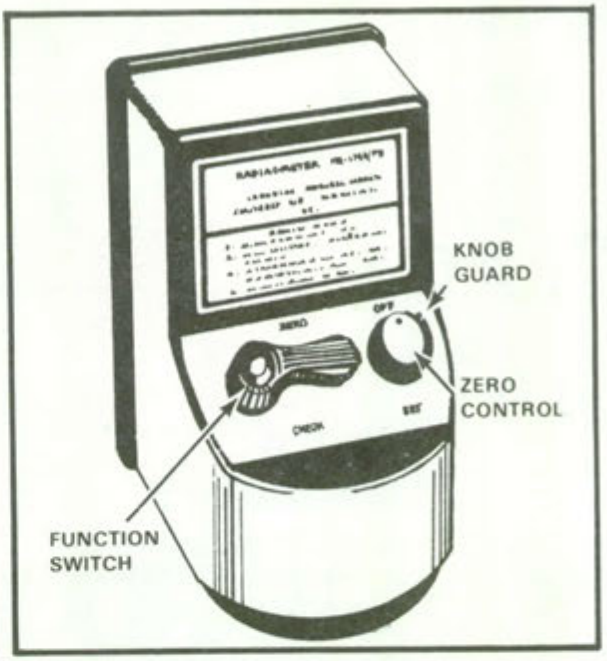


Figure 2. Radiacmeter controls.

g. Carefully insert the two BA-1396/U's in their contacts so that the + (plus) polarity marking on each battery coincides with the + polarity marking on the battery board assembly.

h. Carefully position the battery cover, which contains the battery board assembly, on the cover assembly so that the cable, attached to the battery board assembly (figure 4), is at the rear of the radiacmeter.

i. Secure the battery cover, which contains the battery board assembly, to the radiacmeter; tighten the captive screw.

NOTE: If the radiacmeter contains an instrument light, proceed to paragraph j, below. If the radiacmeter does not contain an instrument light, proceed to paragraph o.

j. Remove the cover from the instrument light (figure 5) by lifting up on the tab (not shown) at the rounded (bottom) end of the cover.

k. Remove the battery/lamp clip ring containing a lamp from the battery/lamp compartment (figure 3).

l. Install a battery BA-1391/U in the battery/lamp clip ring so that the + polarity marking on the battery is facing the same direction as the glass portion (not shown) on the lamp.

m. Insert the battery/lamp clip ring containing the battery and the lamp in the battery/lamp compartment so that the glass portion of the lamp fits into the lamp hole, and the + polarity marking on the battery is down (facing the meter).

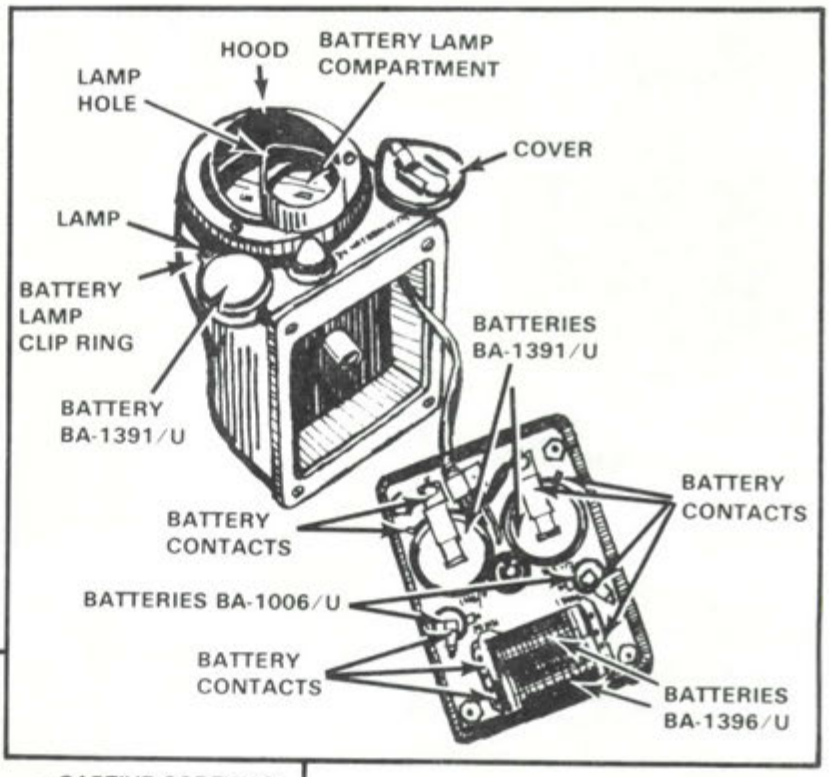


Figure 3. Installing batteries.

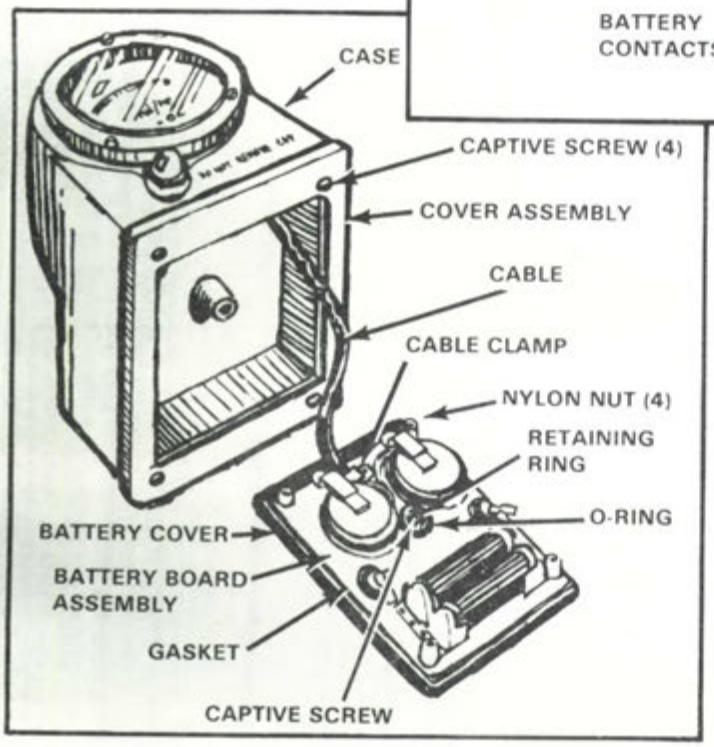


Figure 4. Battery cover removed from radiacmeter.

n. Replace the cover on the instrument light by fitting the pointed end of the cover on the pointed end of the battery/lamp compartment and carefully pressing down on the rounded (bottom) end of the cover (figure 5).

o. Replace the radiacmeter in its carrying case, and secure the snap fasteners.

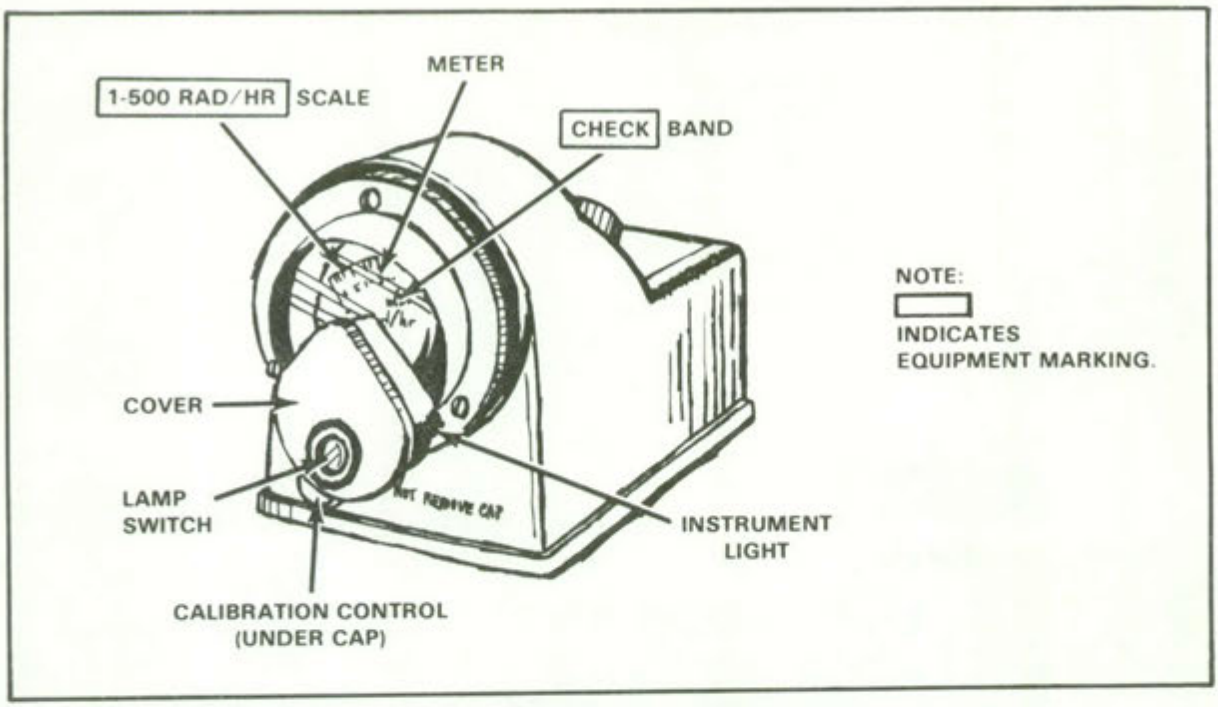


Figure 5. Radiacmeter (with instrument light), front and right side.

2. **Operate the IM-174A/PD.**

a. Unsnap the fasteners on the front and sides of the carrying case (figure 1). Push back the top part of the carrying case, and secure it to the carrying case snap fastener near the rear of the carrying case (figure 6).

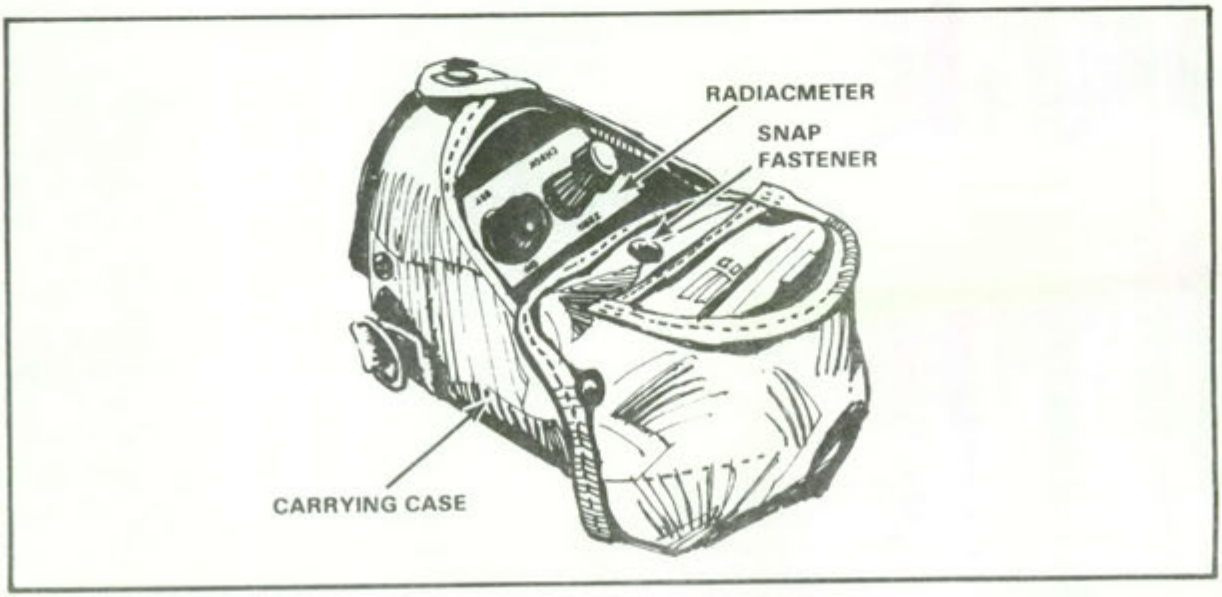


Figure 6. Radiacmeter (in carrying case) ready for operation.

NOTES:

During operation of the radiacmeter (b through h below), the radiacmeter should be positioned so that the meter face is up and parallel to the ground.

Some radiacmeters do not have an instrument light, but have a slightly radioactive dial that permits reading of the meter in low light. Others do not have a radioactive dial, but have an instrument light that also permits reading the meter in low light. To operate the instrument light (figure 5), press and hold the lamp switch; the lamp should light. When the lamp switch is released, the lamp should go out.

b. Turn on the radiacmeter by turning the zero control (figure 2) clockwise from OFF. Allow at least 2 minutes for the radiacmeter to warm up; if time permits, allow 20 minutes for complete warmup.

c. Press and hold the function switch to ZERO and adjust the zero control until the meter (figure 2) indicates 0 (zero).

d. Release the function switch (figure 2); the pointer of the meter (figure 7) should swing up-scale to between 5 and 10 rad/hr, then fall back to 0.

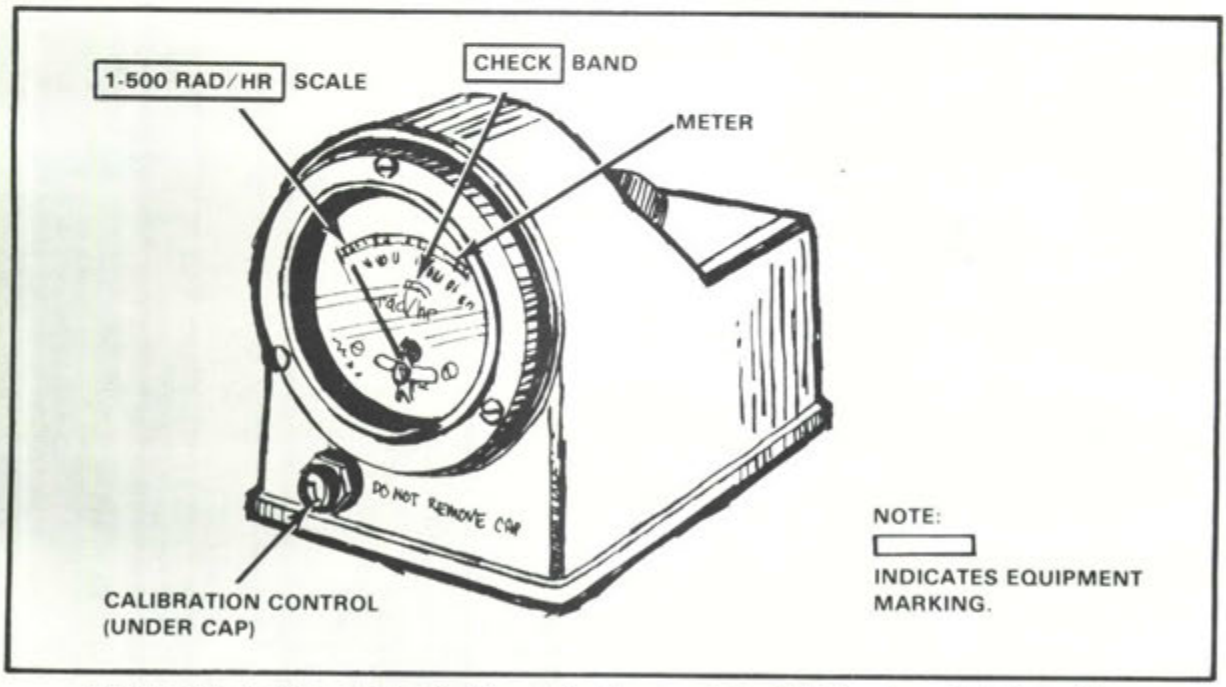


Figure 7. Radiacmeter (without instrument light), front and right side.

e. Press and hold the function switch to CHECK. The pointer of the meter should indicate within the CHECK band on the meter scale. (If the pointer of the meter indicates outside of the CHECK band, replace each battery with a new one.)

315-389 O - 80 - 3

f. Release the function switch. The pointer of the meter should return to 0.

g. Unsnap the carrying case snap fastener at the rear of the carrying case. Pull the top part of the carrying case over the top of the radiacmeter, and fasten the snap fasteners on the sides and front of the carrying case.

h. Measure the radiation dose rate by taking the reading indicated on the 1-500 rad/hr scale of the meter. Observe the radiation readings through the front clear face of the carrying case.

i. Report the reading to your supervisor.

PERFORMANCE MEASURES FOR IM-174/PD:

1. **Install batteries.**

a. Unsnap the snap fasteners and remove the radiacmeter from the carrying case.

b. Loosen the thumbscrew (turn it toward the left) on the battery box (figure 8) from the recess in the bottom cover plate of the radiacmeter. Do not place any excess strain on the cable.

c. Press down on the lock plate (figure 8), turn it to the left, and lift it off the battery box.

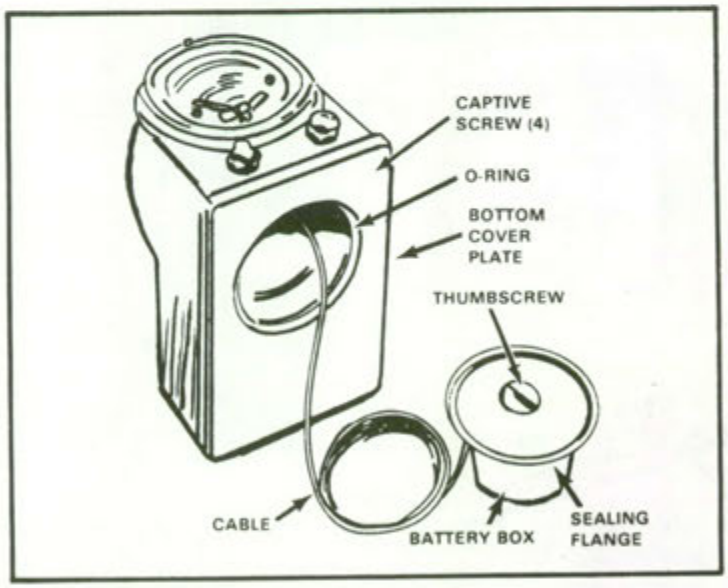


Figure 8. Radiacmeter, bottom view, battery box removed.

d. Lift the phenolic retaining plate (figure 9) from the battery box.

e. Examine the battery cavities, and clean them if necessary.

f. Install battery BA-1288/U in its cavity in the battery box so that the plus sign (+) faces the center (threaded shaft).

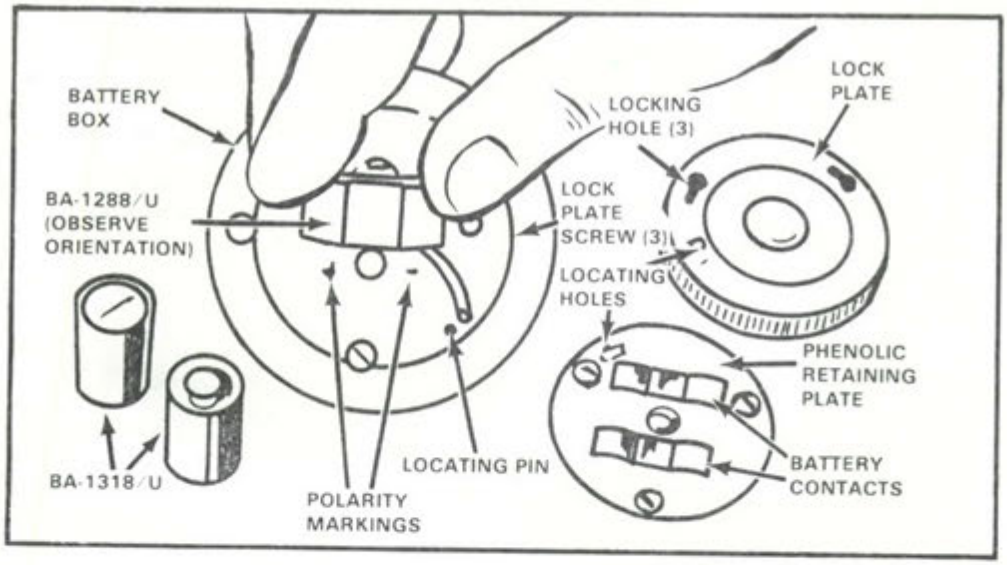


Figure 9. Installing batteries in battery box.

g. Install each battery BA-1318/U in its respective cavity in the battery box; observe the polarity markings on the bottom of the battery box and on each battery.

h. Replace the phenolic retaining plate on the battery box by orienting the plate with the box so that the locating pin on the box mates with the locating hole on the plate.

i. Replace the lock plate by orienting it with the battery box so that the locating hole and locking holes on the lock plate mate with the locating pin and the lock plate screws on the battery box. Press down on the lock plate, and turn it to the right until it is secure under the lock plate screws.

j. Wrap the cable (figure 8) around the battery box. Be sure that the cable is wrapped snugly and flush against the sealing flange (no more than one layer of cable) of the battery box.

CAUTION: Do not allow the wrapped cable to slip down into the smaller portion of the recess. The cable might be cut and thereby prevent the radiacmeter from operating when the thumbscrew is tightened.

k. Carefully replace the battery box in the recess of the bottom cover plate of the radiacmeter. Make sure that the cable is still in place, and then handtighten the thumbscrew. Do NOT overtighten the thumbscrew.

l. Replace the radiacmeter in the carrying case and secure the snap fasteners.

2. **Operate the IM-174/PD.**

a. Starting. The following procedures must be performed to start the radiacmeter after any shutdown.

(1) Unsnap the snap fasteners on the front and sides of the carrying case (figure 1).

(2) Push back the top part of the carrying case, and secure it to the carrying case snap fasteners near the rear of the radiacmeter (figure 6).

(3) Turn on the radiacmeter by turning the SET control (figure 10b) clockwise (just past the click) from OFF. Allow at least 2 minutes for the radiacmeter to warm up.

NOTE: If time permits, allow 20 minutes for complete warmup.

(4) Hold the function switch at ZERO, and adjust the SET control until the pointer on the panel meter indicates 0.

(5) Release the function switch to the CHECK position. The panel meter pointer should give a sudden kick up-scale and then drop back to 0.

(6) Set the function switch to ELEC. CAL. The panel meter pointer should indicate 500 rad/hr. If the pointer does not indicate 500 rad/hr, remove the cap from the CALIB. control (on the righthand side of the front panel) (figure 10b) and adjust the control until the panel meter pointer indicates 500 rad/hr. Replace the cap on the CALIB. control.

NOTE: This procedure provides an indication that the radiacmeter is probably calibrated. If a panel meter indication of 500 rad/hr cannot be obtained by adjusting the CALIB. control, change the batteries (IM-174/PD, 1b - 1j) and repeat the procedures given in (3) through (6), above. If a panel meter indication of 500 rad/hr still cannot be obtained by adjusting the CALIB. control, the radiacmeter is defective and should be turned in for maintenance.

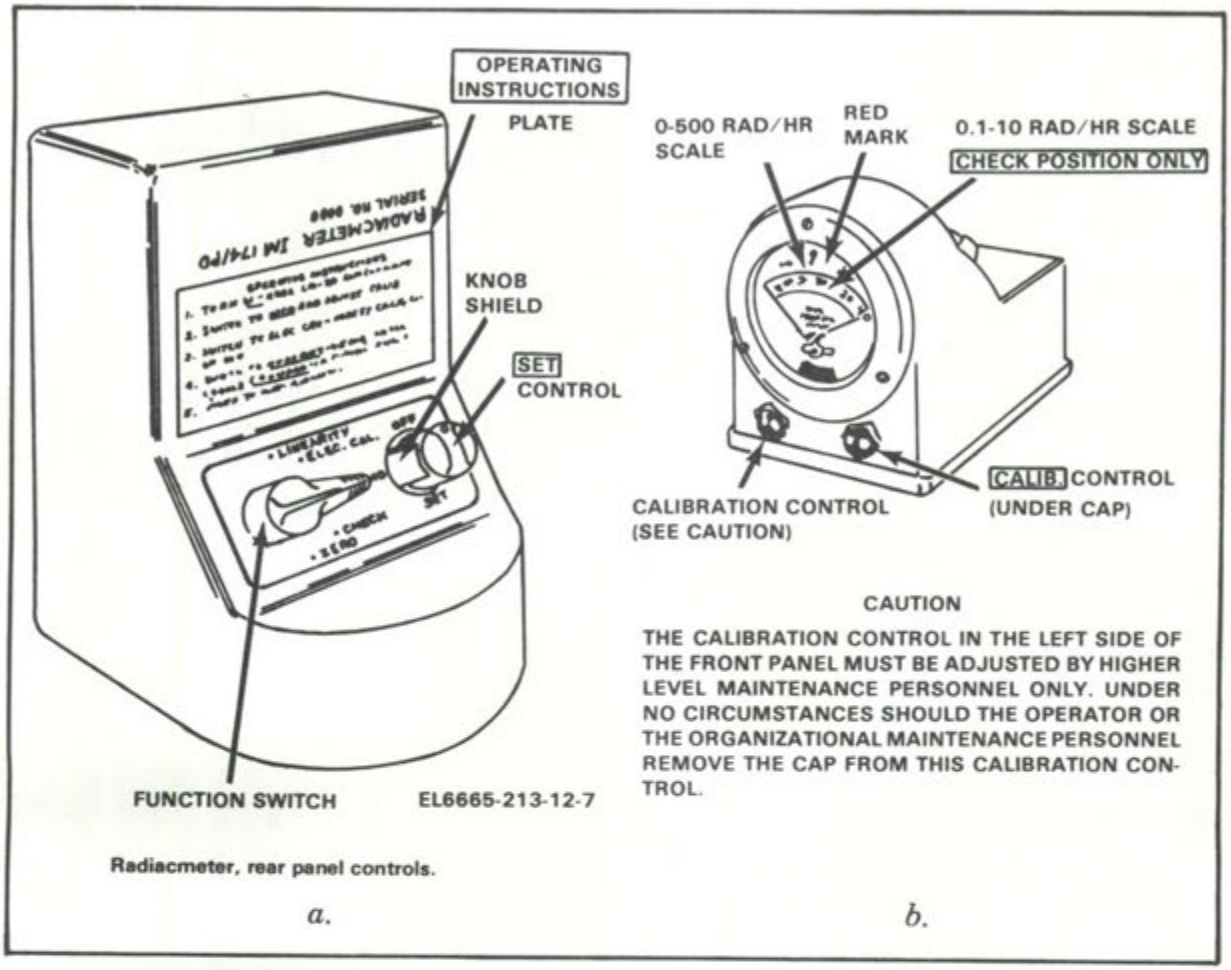
(7) Hold the function switch (figure 10a) in the LINEARITY position. The panel meter pointer should fall within the red mark on the face of the meter.

NOTE: If the pointer indicates outside the red mark, change the batteries (para 1b - 1j) and repeat the procedures given in (3) through (7), above.

b. Operating.

(1) Set the function switch to READ. The radiation dose rate will be indicated on the 0- to 500-rad/hr scale of the panel meter.

CAUTION: Continuous operation over several hours or after extreme temperature changes may cause a small drift or change in the ZERO adjustment or in the ELEC. CAL. calibration. To correct this action, readjust the SET control (a(4), above) and the CALIB. control (a(6), above).



Radiacmeter, rear panel controls.

Figure 10a. and b.

(2) If it is suspected that the radiation dose rate is less than 10 rad/hr and only a rough survey is desired, proceed as follows:

(a) Readjust and calibrate the radiacmeter (a(4) through (7), above).

(b) Set the function switch to CHECK.

(c) Read the radiation dose rate given on the 0.1- to 10-rad/hr scale of the panel meter (figure 10b).

NOTE: If a more accurate indication is required, return the function switch to the READ position ((1), above).

(3) When the radiation dose rate measurements have been completed, shut down the radiacmeter (c, below).

c. Stopping.

(1) Turn the SET control (figure 10a) to OFF.

(2) Unsnap the carrying case snap fasteners at the rear of the radiacmeter, and fasten it to the snap fasteners on the front and sides of the carrying case (figure 1).

NOTE: If the radiacmeter is not to be kept in use, remove the batteries (para 1b - 1j).

REFERENCES:

TM 11-6665-232-12, Radiacmeter IM-174A/PD, C1-4, Aug 67 (chap 2, pages 2-4, 2-5; chap 3, pages 3-2 to 3-7)
TM 11-6665-213-12, Radiacmeter IM-174/PD, C1-2, Jul 69 (chap 2, pages 2-4 to 2-8; chap 3, pages 3-6 to 3-10)

TASK NUMBER: 092-503-3006

DECONTAMINATE UNIT EQUIPMENT

CONDITIONS:

In a field or garrison location, given unit equipment contaminated with an identified chemical or radiological hazard (simulated) and the requirement to select an appropriate means of decontamination.

STANDARDS:

Select the appropriate decontaminant IAW performance measures below.

PERFORMANCE MEASURES:

1. A decontaminant is anything used to reduce the hazard caused by chemical, biological, or radiological contamination so the mission can be accomplished.

2. Chemical decontaminants include:

a. STB decontaminating agent (bleach). STB neutralizes liquid chemical agents by chemical action. Pure STB in direct contact with liquid blister agents reacts violently and can cause a fire. This is why STB is used in a dry mix (with dirt) or as a wet mix (with water). STB also corrodes metals. Wet mix is effective against biological agents.

WARNING: DO NOT USE STB FOR PERSONNEL DECONTAMINATION. DO NOT MIX WITH DS2 BECAUSE A FIRE MAY RESULT. Wear protective mask and gloves when handling STB.

b. DS2 decontaminating agent. DS2 neutralizes all known chemical agents and most biological agents. It reacts with G-agents, V-agents, and blister agents to reduce their hazards within 30 minutes after application. Ready-to-use solution is available in 1 1/3-quart cans and 5-gallon drums. DS2 can be applied easily with the 1 1/3-quart M11 decontaminating apparatus, a broom, or a swab. One application of DS2 should be applied to the contaminated surface and, after 30 minutes, flushed with water.

WARNING: DO NOT USE DS2 FOR PERSONNEL DECONTAMINATION. DO NOT MIX WITH STB BECAUSE A FIRE MAY RESULT. DS2 IS FLAMMABLE. Avoid inhalation of vapors or contact of solution with the skin or eyes. Wear protective mask when using DS2.

c. Water or steam. It removes dirt and grease containing chemical

agents or radioactive material. Hot soapy water destroys G-agents and physically removes other chemical and radiological contamination. Water or steam is applied under high pressure; action of hot water is speeded by using soap or other detergent.

WARNING: Water and condensed steam used to remove contamination should be drained into a sump and properly marked. If necessary to drain into a stream, friendly units downstream must be notified.

d. Hot air. It evaporates liquid chemical contaminants. Hot air is used in special situations, such as decontamination of delicate instruments contaminated with liquid agents or decontamination of aircraft cabins by engine heaters.

CAUTION: Temperature and air pressures used should be safe for particular equipment involved. Blown air will itself be contaminated by the chemicals it removes.

e. Weathering. Exposure of chemically contaminated equipment to the sun, air, and rain will decontaminate the equipment if sufficient time is allowed.

3. Chemical decontamination of unit equipment. Unit equipment used by individuals is decontaminated by individuals, as soon after contamination as the situation permits, as described below.

a. Vehicles. Vehicles that are lightly contaminated (pinhead-size spots at least one-fourth inch apart), as determined by chemical agent detector paper, may be decontaminated by airing. Each tactical vehicle is authorized one M11 portable decontaminating apparatus that contains 1 1/3 quarts of decontaminating agent DS2. It is used to decontaminate parts of the vehicle that must be touched during vehicle operation, such as controls.

(1) If the driver of the vehicle realizes that the vehicle is contaminated, he and other occupants mask and continue their mission until the situation permits decontamination outside the contaminated area.

(2) The vehicle is decontaminated with DS2, soapy water, solvents, or slurry. The M11 decontaminating apparatus is not intended for decontamination of the entire vehicle; one filling of DS2 is sufficient for emergency decontamination of the operator controls. The apparatus is used by tank crews and armored personnel carrier drivers to decontaminate those parts of the vehicle that will be touched by personnel during the mission; for example, areas touched when entering or leaving the vehicle. If sufficient DS2 is not available, gasoline, mud, rags, or any other expedient may be used. (These expedients do not neutralize the hazard. They just remove it.) Contaminated wood surfaces and tires are decontaminated with slurry.

b. Crew-served weapons. Crew-served weapons are decontaminated by using the methods described in a above. If necessary, the bore can be

decontaminated by using cleaning solvent or hot soapy water. Ammunition is decontaminated with DS2 solution, wiped with gasoline-soaked rags, and then dried. If DS2 is not available, ammunition may be washed with cool soapy water, rinsed, and then dried thoroughly. Ammunition corroded from contamination is disposed of, particularly if the brass parts cannot be cleaned. **Dry STB (bleach) must not be used on ammunition contaminated with mustard-type blister agents because when mixed they may ignite and start a fire.** After decontamination, weapons are disassembled, washed, rinsed, dried, and oiled to prevent corrosion.

c. Optical instruments. Optical instruments are decontaminated by blotting with rags, wiping with an organic solvent (lens-cleaning solvent only is used for the lens), and then allowing them to air. If available, hot air is used to decontaminate most optical instruments.

d. Communication and radar equipment. Communication equipment is decontaminated by using hot air, if available. The next best method is by airing or weathering. The metal parts of field telephones and radios are decontaminated with DS2 and then wiped with rags. Heat-producing equipment such as electrical devices that contain tubes normally is decontaminated by the heat given off during operation.

4. Radiological decontamination of unit equipment. The three methods of radiological decontamination are aging, sealing, and removing. The method most desirable for decontamination of vehicles and equipment is aging. This method can be used only when there is not an immediate need for the vehicle and the contaminant is not too long-lived. Brush loose, dry contamination from the vehicle before starting the aging process. If the vehicle is required for immediate use, brush loose contamination from the surface and clean the vehicle by washing or scrubbing with steam or water and detergents. More extreme procedures include the removal of the protective finish with organic solvents and solutions or strong caustic solutions. These solvents and solutions should not be allowed to come in contact with rubber articles. Special attention should be paid to areas near the driver and to the controls.

REFERENCES:

FM 21-40, Chemical, Biological, Radiological, and Nuclear Defense, C1, May 71 (chap 4, page 4-15 and 4-16, para 4-25)
TM 3-220, Chemical, Biological, and Radiological (CBR) Decontamination, C1, 2, Nov 67 (chap 1, page 5-8, para 9; chap 2, page 23-31, para 24; app B)

TASK NUMBER: 092-503-3005

PREPARE AND SUBMIT NBC 1 REPORT

CONDITIONS:

In a simulated NBC environment, given a simulated nuclear or chemical agent attack, an NBC 1 reporting format, compass, watch, and FM tactical radio.

STANDARDS:

Within 5 minutes, submit an NBC 1 report to the next higher headquarters, reporting as a minimum lines D, H, and either B and C or F on the report form.

PERFORMANCE MEASURES:

1. United States forces use standardized NBC attack warning and reporting procedures. The NBC report formats provide a rapid means for disseminating information on opposing force use of NBC weapons. The first of these reports, NBC 1, is used by the observing unit to give initial and subsequent data of an enemy NBC attack.

2. NBC 1 reports (figure 1) follow the same format as the SHELLREPS, MORTREPS, and BOMBREPS dealing with conventional attacks.

a. The item "Type of Report", and letter items D, H, and either B and C or F must always be reported. Other items are optional.

b. Users of NBC 1 reports are not limited only to the use of letter items shown in figure 1; other letter items from FM 21-40, app E, sec II, para E-6, may be added at the user's discretion.

c. Initial NBC 1 reports are submitted with a FLASH precedence. Subsequent NBC 1 reports are submitted with an IMMEDIATE precedence.

Letter	*Meaning*	*Example*	
	Precedence*		
	Date/Time (local or ZULU, state which)		
	Security Classification		
	From		
	To		
	Type of Report	NBC 1 (Nuclear)	NBC 1 (Chemical)
A.	Strike serial number, if known		
B.	Position of observer (UTM or place)	B. LB 196400	B. MARVILLE
C.	Direction measured clockwise from grid or magnetic north (state which) of the attack from observer (degrees or mils, state which)	C. Grid 060 degrees	
D.	Date/time of detonation (local or ZULU, state which)	D. 201405 (local)	D. 201405 (local)
E.	Illumination time (seconds)		E. 201412 (local)
F.	Location of attack (UTM or place) (actual or estimated, state which)		F. LB 205305 est
G.	Means of delivery, if known		G. Artillery
H.	Type of burst—air, surface, or unknown (state which)—including height, if known	H. Surface	H. Airburst, nerve
J.	Falsh-to-bang time (seconds)	J. 60	
K.	Crater present or absent and diameter, if known (meters)		
L.	Nuclear burst angular cloud width measured at 5 minutes after the detonation (degrees or mils, state which) (Do not report if data are obtained more than 5 minutes after the detonation.)	L. 280 mils	
M.	Stabilized cloud-top angle and/or cloud-bottom angle (state which) or cloud-top height and/or cloud-bottom height (state which) measured at H + 10 minutes (mils, degrees, meters, or feet—state which)		

*As appropriate or as per unit SOP.

Figure 1. Format NBC 1 reports.

3. In nuclear burst reporting, the most probable sequence of events and the recommended procedures for the observer gathering nuclear burst data are outlined below.

a. At the instant of the "blue-white flash," hit the ground, start the stopwatch (if available), and start counting slowly - 1000 and one, 1000 and two, 1000 and three, and so on until the arrival of the shock wave or blast/bang. Do not look at the fireball. Stay under cover if possible until the shock wave or blast/bang has passed and debris has stopped falling. Make a mental note of the count on which the shock arrived (for example, 1000 and four), stop the stopwatch (if used), and continue counting to 1000 and five.

b. After the shock wave (blast/bang) has passed or the count of 1000 and five is reached (whichever is later), uncover the eyes, read the local time (wristwatch reading) to the nearest second, and then observe the developing cloud. If the bang is not heard in 5 minutes (that is, a count of 300), continue with other measurements.

c. Record the count on which the shock wave arrived at letter item J (for example, 4 seconds), or record the stopwatch reading, if used. Record the local time reading made (b above) to the nearest minute as letter item D. If throwout (earth particles that have fallen back and built up on the edge of the crater) can be observed or if a thick, dense stem has developed, report "SURFACE" as letter item H (see figure 2). If the stem is not connected to the mushroom part of the cloud, report "AIR." If in doubt or if determination

definitely cannot be made, report "UNKNOWN" as letter item H. If throwout was observed, also enter YES as letter item K; otherwise, leave blank.

d. If visibility permits observation of ground zero (GZ), determine by map inspection the coordinates of GZ, and record them with the name of the place as letter item F.

e. If GZ cannot be observed, measure the azimuth from observer location to the center of the stem or mushroom cloud. Enter this azimuth in mils or degrees (state which) as letter item C.

f. Complete letter item B and submit the initial nuclear burst report (NBC 1).

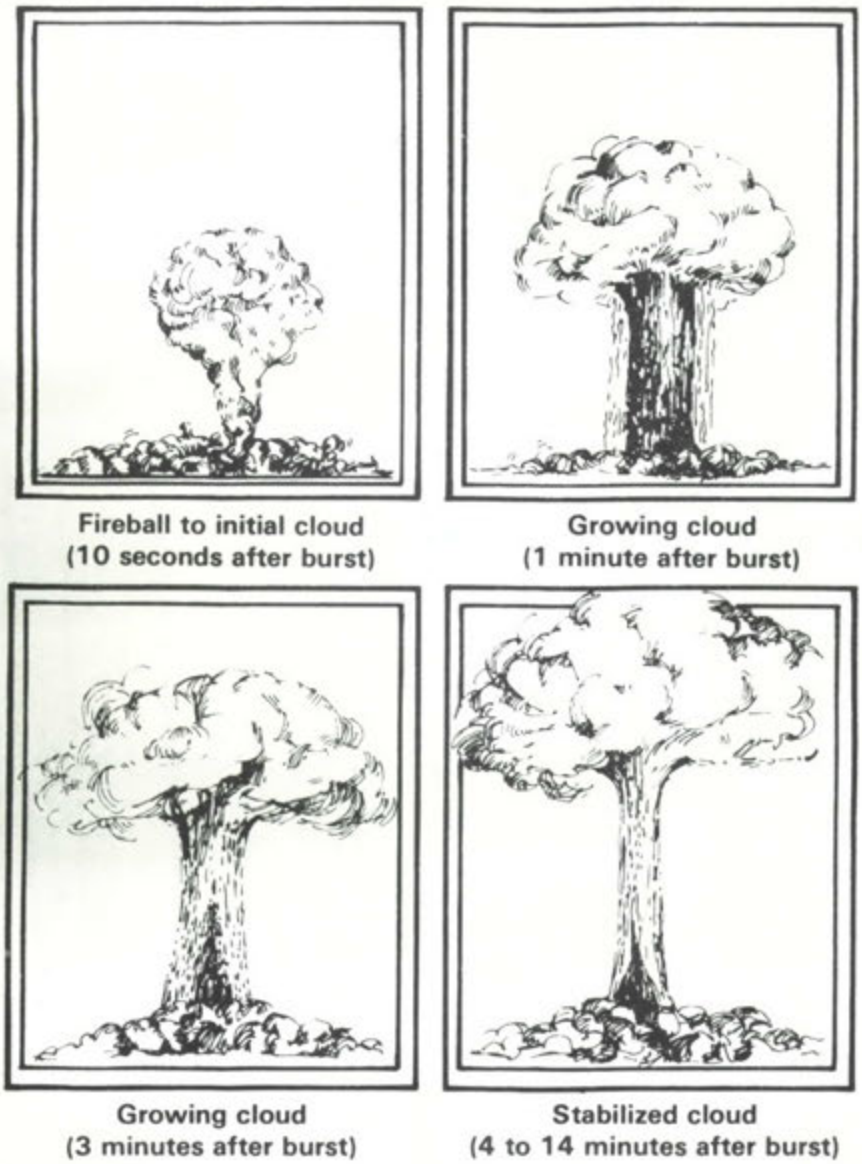


Figure 2. Cloud development of a typical surface nuclear burst.

4. Example nuclear burst reports (NBC 1):

a. Initial Report. The initial nuclear burst report is transmitted with a FLASH precedence. This example illustrates voice transmission. The observer's location is encoded for security reasons.

Example Initial Nuclear Burst Report:

FLASH 09010 ROMEO
UNCLASSIFIED
FROM REDDOG TO AMIGO
NBC 1 NUCLEAR
BRAVO I SET DELTA HOTEL BRAVO
CHARLIE GRID 182 MILS
DELTA 090907 ROMEO
HOTEL SURFACE
JULIET 60
END OF MESSAGE

b. Subsequent Report. The subsequent nuclear burst report normally is transmitted with an IMMEDIATE precedence.

(1) This example illustrates the subsequent report by voice transmission with data for letter item L obtained at 5 minutes after the burst:

IMMEDIATE 090913 ROMEO
UNCLASSIFIED
FROM REDDOG TO AMIGO
NBC 1 NUCLEAR
BRAVO I SET DELTA HOTEL BRAVO
CHARLIE GRID 182 MILS
DELTA 090907 ROMEO
HOTEL SURFACE
LIMA 280 MILS
END OF MESSAGE

(2) This example illustrates the subsequent report with letter item B in the clear and data for letter item M obtained at 10 minutes after the burst:

IMMEDIATE 090918 ROMEO
UNCLASSIFIED
FROM REDDOG TO AMIGO
NBC 1 NUCLEAR
BRAVO ECHO-TANGO-054066
CHARLIE GRID 182 MILS
DELTA 090907 ROMEO
HOTEL SURFACE
MIKE 550 MILS TOP
END OF MESSAGE

5. A method of gathering data for the report of a chemical attack is outlined below.

a. Immediately mask, take cover, and check your watch. Record the local time reading, to the nearest minute, as letter item D.

b. When the attack ends, again note the time and record as letter item E.

c. Use detection equipment to identify the type of agent employed and record as letter item H.

d. Your position is reported as letter item B, the location of the attack is letter item F, and, if you could identify the means of attack, that becomes letter item G.

6. Examples of initial and subsequent NBC 1 chemical reports:

Company A, 2d Battalion, 1st Brigade, is under artillery chemical attack. The callsign of the 2d Battalion is REDDOG and of the 1st Brigade, VICTOR. Examples of initial and subsequent NBC 1 chemical reports from the company through the battalion are given below. The actual message format follows the unit SOP.

a. Actions by Company A. First, the company alerts its subordinate units on the company net with a FLASH precedence brevity code, "GAS."

(1) Initial NBC 1 chemical report. The company alerts the 2d Battalion (S3) with an initial NBC 1 report, as follows:

FLASH
201408 HOTEL
FROM ALPHA
TO REDDOG
NBC 1 CHEMICAL

BRAVO MARVILLE
DELTA 201405 HOTEL
FOXTROT LIMA BRAVO 205305 ESTIMATED
GOLF ARTILLERY
HOTEL AIR

The actual message might be transmitted as follows:

FLASH FLASH, REDDOG REDDOG, NBC 1 CHEMICAL, FROM ALPHA, 201408 HOTEL, BRAVO MARVILLE, DELTA 201405 HOTEL, FOXTROT LIMA BRAVO 205305 ESTIMATED, GOLF ARTILLERY, HOTEL AIR, END OF MESSAGE.

(2) Subsequent NBC 1 chemical reports.

(a) When the chemical agent used in the chemical attack has been identified, the company submits a subsequent NBC 1 report, using the strike serial number assigned by the CBRE to the initial NBC 1 report and giving followup data, as follows:

IMMEDIATE
201418 HOTEL
FROM ALPHA
TO REDDOG
NBC 1 CHEMICAL
ALPHA 02
ECHO 201412 HOTEL
HOTEL NERVE

(b) If a persistent chemical agent was used in the attack and the contaminated area is located, the company submits another subsequent NBC 1 report, giving followup data and using the same strike serial number, as follows:

IMMEDIATE
201438 HOTEL
FROM ALPHA
TO REDDOG
NBC 1 CHEMICAL
ALPHA 02
X-RAY LIMA BRAVO 208303, 208308, 203303, 203308

REFERENCES:

FM 21-40, Chemical, Biological, Radiological, and Nuclear Defense, C1, May 71 (app E, sec II, page E-2 thru E-6)

TASK NUMBER: 092-503-3007

PREPARE SUPPLIES AND EQUIPMENT FOR NBC ATTACK

CONDITIONS:

Your unit is operating in a field location and opposing forces have the capability of delivering NBC weapons into your area. The commander has directed you to prepare for an enemy attack.

STANDARDS:

1. Supplies and equipment are covered to protect against contamination.

2. Supplies and equipment are secured to protect against nuclear blast effects.

PERFORMANCE MEASURES:

1. Protect supplies and equipment from chemical or biological contamination or fallout.

a. Cover important items of equipment. Plastic sheets serve as excellent covers because they are nonporous. If plastic material is not available, tarpaulins or other suitable material may be used. If no other cover is available, dense foliage will provide some protection.

b. Cover ammunition or keep in its containers as long as possible.

c. Cover weapons or disperse under foliage when possible.

d. Keep instruments, such as those used for fire control, in their containers when not being used.

e. Locate vans to take advantage of any available natural shielding. If possible, vans are located so that the air conditioners are opposite the prevailing wind direction. Personnel responsible for the operation of the vans should make every effort possible to reduce leakage in vans and components such as the air conditioners.

f. Locate vehicles in woods or under bushes, or disperse and cover, if possible.

g. Cover communication equipment not housed in shelters. Protect the headsets on radios and the mouthpieces on telephones from contamination by covering with plastic.

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h. Provide overhead cover for field latrines.

i. Keep food packages sealed until ready for consumption.

j. Store unpackaged food in field iceboxes and refrigerators (sealing gaskets must be serviceable).

k. Keep water in sealed containers.

2. Protect supplies and equipment from nuclear attack.

a. Disperse supplies and equipment, particularly explosives and flammables.

b. Clear area of loose debris.

c. Secure loose items of equipment to prevent them from becoming missiles.

d. Store supplies and equipment below ground level (dig in when possible). Considering mission requirements, turn off electronic equipment, remove power cables and antennas, and locate the equipment inside bunkers and armored vehicles to protect against Electro-Magnetic Pulse.

REFERENCES:

FM 3-12, Operational Aspects of Radiological Defense, C1 & 2, Aug 68, (chap 3, sec IV, page 3-7 thru 3-9)
FM 21-40, Chemical, Biological, Radiological and Nuclear Defense, C1, May 71, (chap 4, page 4-10 thru 4-11, para 4-8, 9, and 11)

TASK NUMBER: 092-503-3002

INITIATE UNMASKING PROCEDURES

CONDITIONS:

Given the absence of command guidance, enemy has employed chemical agents (simulated, training only). Personnel are masked and chemical agent detector is or is not available in a field environment.

STANDARDS:

1. Determine the absence of chemical agents when a chemical agent detector is available.

2. Determine the absence of chemical agents when no chemical agent detector is available.

PERFORMANCE MEASURES:

1. **Unmasking when chemical agents are employed.** Individuals do not unmask until authorized by their immediate commander or, in the absence of command guidance, the procedures described in 2 or 3 below are followed. The procedures are followed as a safety measure on the assumption that highly lethal agents may have been employed by the enemy.

2. **Procedure when a chemical agent detector is available.** The unit chemical agent detector kit is used to test for the presence of chemical agents. After determining the absence of chemical agents:

a. Have two or three individuals unmask for 5 minutes and then remask for 10 minutes.

b. Check individuals for chemical agent symptoms.

c. After the individuals have been examined in a shady area for chemical agent symptoms and no symptoms appear, others in the group may then safely unmask.

NOTE: Bright sunlight will cause contraction of the pupils of the eyes, which could erroneously be interpreted as a nerve agent symptom. However, limited exposure to a low concentration of nerve agent, not detectable by the chemical agent detector kit, will cause no ill effects other than a runny nose, tightness of the chest, and sometimes pinpointing of the pupils of the eyes. These effects are usually relieved by one injection of atropine/antidote.

3. **Procedure when no chemical agent detector is available.**

NOTE: This is an emergency field expedient when no chemical agent detector kit can be obtained.

a. Have two or three individuals perform the following:

(1) Take a deep breath, hold it, break the seal of the mask, and keep eyes wide open for about 15 seconds.

(2) Reestablish the mask seal and wait for about 10 minutes.

(3) If no symptoms develop after 10 minutes, the same individuals again break the mask seal, take three or four breaths, and then reseal the masks.

(4) After 10 minutes, if no symptoms have developed, these same individuals unmask for 5 minutes and then remask.

b. After 10 minutes, if no symptoms appear, others in the group may then safely remove their masks. However, all should remain alert for the appearance of chemical agent symptoms.

4. **Unmasking when irritant agents are employed.** When it is determined that only irritant agents are present, individuals unmask singly when the agent cloud has dispersed in their particular area. Each soldier breaks the seal of his mask around the face and takes several breaths to make sure that the area is clear before removing his mask.

REFERENCES:

FM 21-40, Chemical, Biological, Radiological, and Nuclear Defense, C1, May 71 (chap 4, page 4-11 thru 4-12, para 4-12)

TASK NUMBER: 092-503-1109

CROSS A CONTAMINATED AREA

CONDITIONS:

In a simulated or actual NBC environment, given that you and your squad are wearing the standard chemical protective clothing, protective mask, and have all necessary radiac equipment, and a requirement to cross a contaminated area.

STANDARDS:

Take all actions and precautions before, during, and after crossing the contaminated area IAW the performance measures below.

PERFORMANCE MEASURES:

NOTE: The commander will normally determine when a contaminated area must be crossed. If the mission allows, a contaminated area should be bypassed. All protective measures should be observed, particularly when passing close to such an area.

1. When crossing a contaminated area is necessary, it is always best to determine the nature and extent of the contamination, if possible. (The unit has trained survey/monitoring personnel for this purpose.) If this is not possible, then measures must be taken to guard against all known possible NBC hazards.

2. **Before crossing, you must:**

a. Close all openings, button and fasten all protective clothing, and cover up, if possible.

b. Mask.

c. Plan to use the shortest and least hazardous route (if possible), e.g., travel high ground.

d. Fasten M8 detector paper on your equipment (chemical contamination).

e. Begin continuous monitoring (nuclear contamination).

f. Close all doors, windows, and hatches on vehicles.

g. Sandbag the floor of all vehicles used to provide shielding (nuclear only).

3. **During crossing, you must:**

a. Avoid contact with surfaces of buildings, debris, and foliage.

b. Avoid all low areas such as gullies, trenches, cellars, and puddles where agent may collect.

c. Avoid stirring up dust and dirt.

d. Check detector paper (chemical contamination) and radiac instruments (nuclear contamination) frequently.

4. **After crossing, you must:**

a. Check detector paper (chemical contamination) and radiac instruments (nuclear contamination) to determine amount of exposure.

b. Check for casualties.

c. Decontaminate as much as mission allows.

REFERENCES:

FM 21-40, Chemical, Biological, Radiological, and Nuclear Defense, C1, May 71 (chap 8, pages 8-2 thru 8-7 and 8-9, para 8-4, 8-13)

TASK NUMBER: 092-503-1108

OPERATE THE AUTOMATIC CHEMICAL AGENT ALARM

CONDITIONS:

Given TM 3-6665-225-12; an automatic chemical agent alarm consisting of an M43 detector unit, an M42 alarm unit, an M10 power supply, an M229 refill kit, a BA3517/U battery, and four BA3030 batteries; and a requirement to place the alarm into operation. Preparation checks, prestart operations, and installation have been accomplished.

STANDARDS:

Place the alarm into operation IAW performance measures below.

PERFORMANCE MEASURES:

1. To place the automatic chemical agent alarm system into operation, you must make:

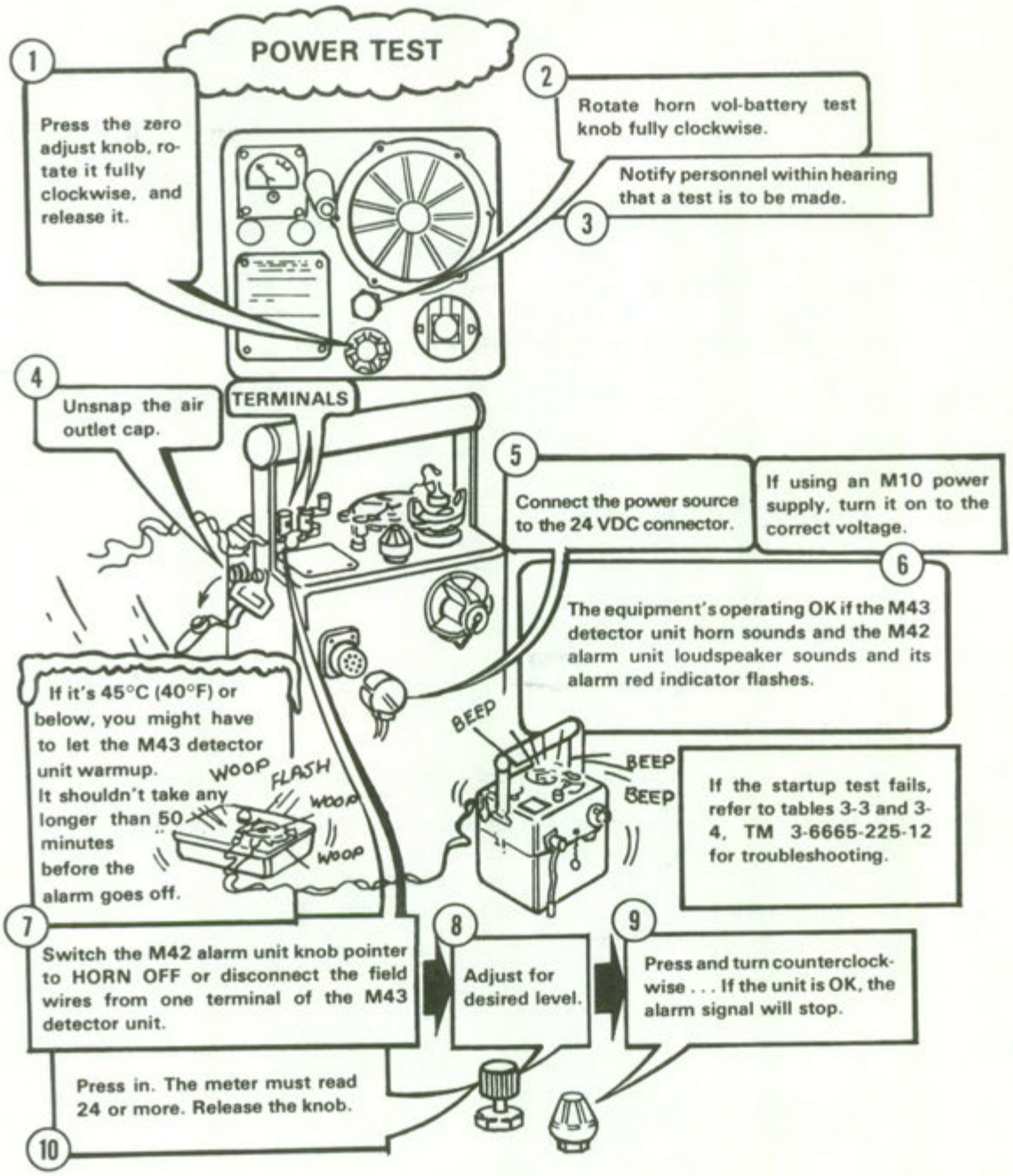
   a. A power test.

   b. An airflow test.

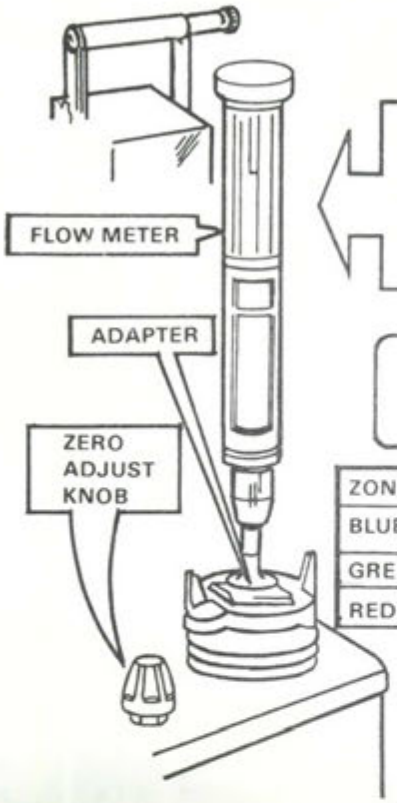
   c. A sensitivity check.

All three steps must be performed in the sequence given above.

2. Once put into operation, the automatic chemical agent alarm will function on a 12-hour cycle. (In severe or sustained cold weather, the cycle may be reduced.) Each 12-hours, in order to service the alarm, you must replace the reservoir assembly and filter and again make the power test, airflow test, and sensitivity check.


POWER TEST
1
Press the zero adjust knob, rotate it fully clockwise, and release it.
2
Rotate horn vol-battery test knob fully clockwise.
3
Notify personnel within hearing that a test is to be made.
4
Unsnap the air outlet cap.
TERMINALS
5
Connect the power source to the 24 VDC connector.
If using an M10 power supply, turn it on to the correct voltage.
6
The equipment's operating OK if the M43 detector unit horn sounds and the M42 alarm unit loudspeaker sounds and its alarm red indicator flashes.
If it's 45°C (40°F) or below, you might have to let the M43 detector unit warmup. It shouldn't take any longer than 50 minutes before the alarm goes off.
WOOP
FLASH
WOOP
WOOP
BEEP
BEEP
BEEP
If the startup test fails, refer to tables 3-3 and 3-4, TM 3-6665-225-12 for troubleshooting.
7
Switch the M42 alarm unit knob pointer to HORN OFF or disconnect the field wires from one terminal of the M43 detector unit.
8
Adjust for desired level.
9
Press and turn counterclockwise . . . If the unit is OK, the alarm signal will stop.
Press in. The meter must read 24 or more. Release the knob.
10

AIRFLOW TEST



Remove flow meter from handle and snap it on to the adapter.

If airflow is OK, the ball will float in the correct zone.

ZONE	OPERATION CONDITIONS
BLUE	-40°C. to 0°C. (-40°F. to 32°F.) or 10,000 Ft. altitude
GREEN	0°C. to 32°C. (32°F. to 90°F.)
RED	32°C. to 54°C. (90°F. to 130°F.)

If it's cold (45°C. or below) the pump assembly may be stiff and require additional warmup.

1. Press in zero adjust knob and rotate it fully clockwise. This will turn off the pump assembly while it's warming up. It will also turn on the horn.

2. Check airflow every 2 minutes after pressing in the zero adjust knob.

After 10 minutes . . correct airflow . . .

Press in the zero adjust knob while you press in the handcrank and turn it 50 times clockwise.

Release handcrank and set the zero adjust knob for a meter reading in the blue zone.

Check in 5 minutes . . . reset if necessary.

Unscrew the cap from the sensitivity check bottle.

2 Disconnect the power source from the 24 VDC connector.

3 Switch the M42 alarm knob pointer to HORN ON or reconnect the field wires.

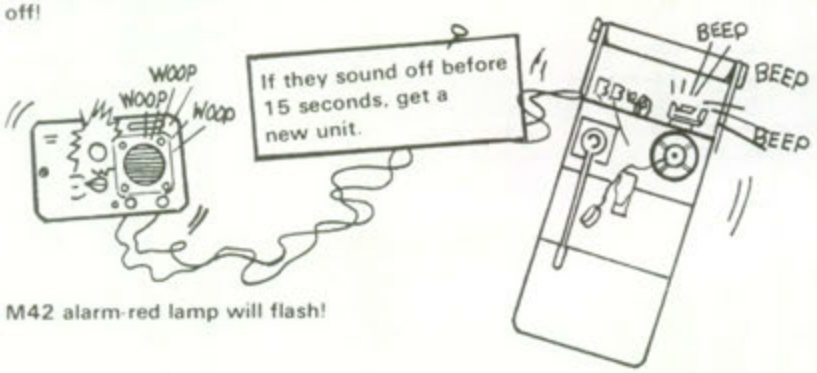
4 Unscrew air filter plug. Slide out air filter. Squeeze two drops (no more) of liquid from the sensitivity check bottle on to the black (top) part of air filter.

CAUTION: IF YOU ACCIDENTALLY GET SIMULANT ON THE WHITE PLASTIC, YOU'VE RUINED IT. TOSS THE AIR FILTER OUT, AND GET A NEW ONE . . . AND TRY AGAIN.

5 Immediately slide air filter in M43 detector and screw in the air filter plug.

6 Press and hold in the zero adjust knob. Connect power to 24 VDC; hold knob in for 5 seconds.

- Within 15 seconds to 5 minutes, M43 detector unit and the M42 alarm units will sound off!



- The M42 alarm red lamp will flash!

IMPORTANT

If it doesn't work the first time, give it a couple of chances. Disconnect the power and repeat starting with step 4.

7. Disconnect the power source to stop the alarm signals.

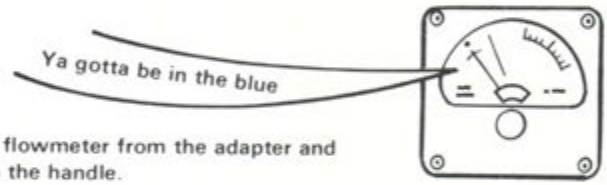
8. Replace the used air filter with a new one.
Remember: BLACK SIDE UP!

9. Connect power source again.

10. One last check . . .

Press in and turn the zero adjust knob to set the meter reading in the blue zone.

11. After 5 minutes, check the meter reading the same way. (Reset if necessary.)



12. Remove the flowmeter from the adapter and screw it into the handle.

13. If it's raining or sleeting, or if the M43 detector unit is mounted on a vehicle, unscrew the rainshield from the handle and snap in on the adapter.

If it's snowing or if it's below freezing 0°C (32°F), leave adapter installed.

Otherwise . . . unscrew it, snap it onto the rainshield, and stow them both in the handle. Turn the air inlet to open. Screw on the air inlet cap.

Remember: service the equipment every 12 hours of operation.

REFERENCES:

TM 3-6665-225-12, Alarm, Chemical Agent, Automatic: Portable, C1, Aug 75 (chap 2, page 2-6 thru 2-9, para 2-9 and 2-10)

TASK NUMBER: 092-503-3008

IMPLEMENT MISSION-ORIENTED PROTECTIVE POSTURE

CONDITIONS:

In the field or garrison, given the commander's guidance for MOPP, and all TOE chemical protective clothing and equipment.

STANDARDS:

1. Conduct normal associated duties and tasks in MOPP as directed by the commander for a period of not less than six hours.

2. Adjust the MOPP for heat stress and fatigue in accordance with performance measures below.

PERFORMANCE MEASURES:

1. Mission-Oriented Protective Posture is a flexible system of protection for operations in a toxic chemical environment. It requires the individual to wear his protective clothing and equipment consistent not only with the chemical threat and mission, but also with the heat stress, fatigue, and psychological stress that results from wearing extra clothing for long periods of time.

2. Intelligence indicates that threat forces have a powerful offensive NBC capability and that our Army may have to operate in a high level of MOPP for extended periods of time. Although the commander will normally direct when and what level of MOPP to assume, it will fall upon you as a leader to insure necessary allowances are made for heat, psychological stress, and fatigue consistent with your unit mission. In an isolated situation, you may be required to determine the MOPP level.

3. Your unit SOP will have different levels of MOPP.

a. The lowest level of MOPP requires the individual to dress only in his duty uniform and carry his protective mask stowed in the carrier.

b. The highest level of MOPP will require the individual to wear, in addition to his duty uniform and equipment, protective clothing, gloves, over boots, and protective mask with hood. Table 1 gives examples of the various levels of MOPP, as determined by work rate and temperature. Notice the examples of work rate levels at the bottom of the table.

Table 1. Example Variations of the Mission-Oriented Protective Posture.

WORK RATE[1] (para 8-8b)	TEMPERATURE RANGE		
	Cool (50°-70° WBGT)[1]	Warm (70°-85° WBGT)[2]	Hot (85°-100° WBGT)[2]
Low	Wear full protective clothing and equipment.	Progressively open mask hood and clothing.	Remove and carry mask and hood, and gloves. Remove some protective clothing or duty uniform.
Moderate	Wear full protective clothing and equipment.	Remove and carry mask and hood, and gloves. Open protective clothing and duty uniform.	Remove and carry mask and hood, and gloves. Remove some protective clothing or duty uniform.
Heavy	Remove and carry mask and hood, and gloves. Progressively open and/or remove some protective clothing or duty uniform.	Remove and carry mask and hood, and gloves. Remove some protective clothing or duty uniform.	Remove and carry mask and hood, and gloves. Remove protective clothing or duty uniform.

[1]*Examples:*
Low: Motorized movement or administrative work.
Moderate: Improvement of defensive position or reserve position activity.
Heavy: Infantry dismounted assault or forced march.
[2]See footnote in paragraph 8-8b, FM 21-40.

Table 2. Work Pacing Guidance for Personnel Dressed in Chemical Protective Clothing[1]

WARNING: This table is intended as a guide only and should be used with table 1.

WORK RATE (para 8-8b)	SUGGESTED MAXIMUM SAFE UNIT WORK TIME TO MINIMIZE MODERATE RISK OF HEAT ILLNESS[2, 3]					
	Temperature Range[4]					
	Cool[5] (50°-70°F)		Warm (70°-85°F)		Hot (85°-100°F)	
	Open Suit[6]	Closed Suit[7]	Open Suit[6]	Closed Suit[7]	Open Suit[6]	Closed Suit[7]
Low	60 up[8]	40-60[8]	45-60[8]	25-40	30-45	15-25
Moderate	45-60[8]	30-45	30-45	20-30	20-30	15-20
Heavy	20-30	15-20	15-20	10-15	10-15	5-10

[1]This applies to personnel dressed in standard-A chemical protective clothing or standard-B impregnated clothing (para 4-2), FM 21-40.
[2]Time is in minutes (derived empirically by extrapolation of laboratory and troop test data and by evaluation of psychological factors for trained troops).
[3]Rest periods are primarily temperature dependent. Required rest breaks to dissipate heat build-up will range from normal breaks at cool temperatures to indefinitely long breaks at hot temperatures. (Little or no heat load can be dissipated at hot temperatures.) In the warm temperature range, troops should be able to repeat similar work effort for the same periods after resting approximately twice as long as they have worked.
[4]The specific temperatures in parentheses at a relative humidity of approximately 75 percent do not differ significantly from the WBGT described in paragraph 8-8b, FM 21-40.
[5]In temperatures below 50°F, normal work pacing will be sufficient if adequate environmental clothing is removed.
[6]Open Suit refers to protective clothing and duty uniform worn *open*, and carrying mask and hood, and gloves.
[7]Closed Suit refers to protective clothing and duty uniform worn *closed*, and wearing mask and hood, and gloves.
[8]Sixty minutes is intended to indicate the time for a normal break period. The 60-minute break period may be exceeded if in the judgment of the unit commander there will be no hazard to personnel.

NOTE TO TRAINERS: This task should be accomplished in conjunction with Skill Level 1 task: *Put on and wear protective clothing.* If protective overgarments and liner ensembles are unavailable for training, the rubber rainsuit, field gloves, and rubber overboots are acceptable substitutes.

4. Table 2 is a guide by which to determine how long an individual should remain in a certain MOPP level based upon the rate at which he must work and temperature.

5. As a small unit leader, you must check your soldiers for:

a. The proper fit and seal on the protective mask.

b. Proper fit of protective clothing. Require the soldiers to assume "stressed" positions such as bending, twisting, and stretching.

6. In a contaminated or potentially contaminated environment, you can reduce stress and fatigue by:

a. Rotating heavy work among individuals. For example, heavy work would be preparing a fighting position, or assaulting an enemy position.

b. Allowing more frequent rest periods. This must be considered along with the mission.

c. Making maximum use of mechanical aids. An example might be riding in your APC as much as possible.

d. Providing adequate water supply.

REFERENCES:

FM 21-40, Chemical, Biological, Radiological, and Nuclear Defense, C1, May 71 (chap 8, pages 8-4 thru 8-7, para 8-8 thru 8-12)

TASK NUMBER: 092-503-1106

PREPARE AUTOMATIC CHEMICAL AGENT ALARM FOR OPERATION

CONDITIONS:

Given TM 3-6665-225-12; an automatic chemical agent alarm consisting of an M43 detector unit, an M42 alarm unit, an M10 power supply, an M229 refill kit, a BA3517/U battery, and four BA3030 batteries; and a requirement to prepare the alarm for operation.

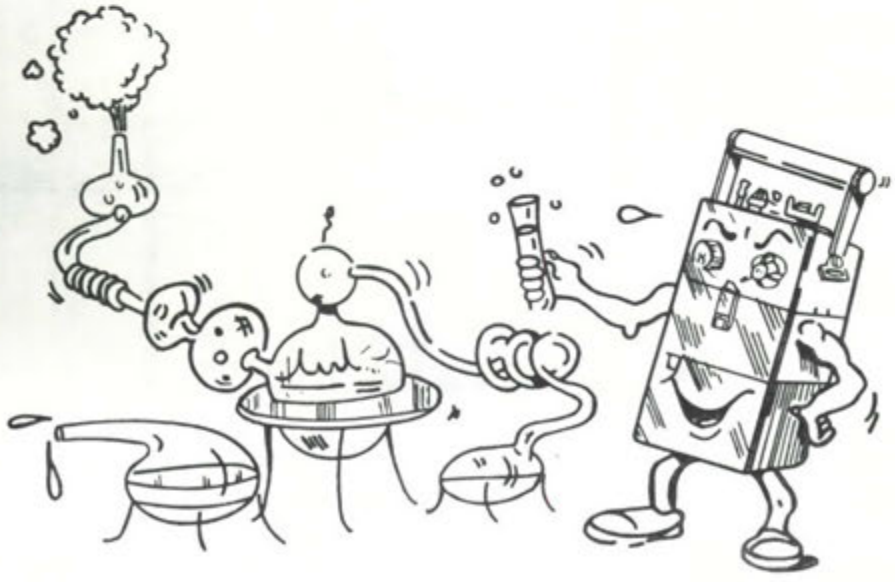
STANDARDS:

Perform preoperation checks and prestart operations for the alarm IAW performance measures below.

PERFORMANCE MEASURES:

1. **The automatic chemical agent alarm system.**

a. The automatic chemical agent alarm is an automatic miniature chemistry laboratory which continuously samples the air around it and sounds an alarm when it detects nerve agent (G or V), blood agent (cyanide compounds), or choking agent (phosgene).



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b. There are five different setups for the system. The M16, M17, and M18 alarm systems include an M10 power supply.

1

MANPACKED (M8)

2

FIXED EMPLACEMENT

3

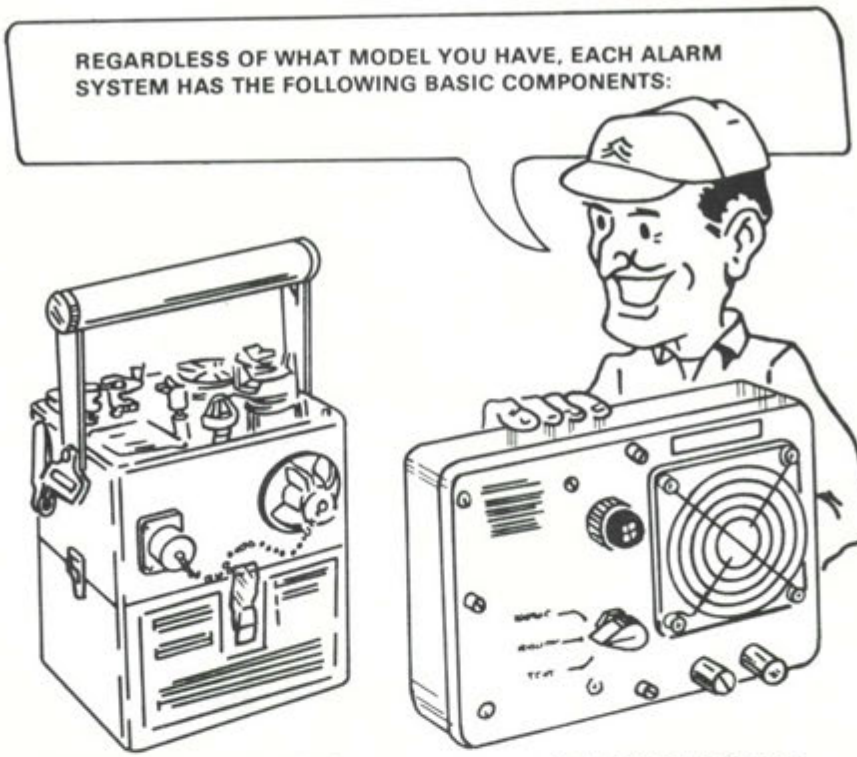
M11 alarm system installed in a ¼-ton utility truck.

4

M13 alarm system installed in a 2½-ton truck.

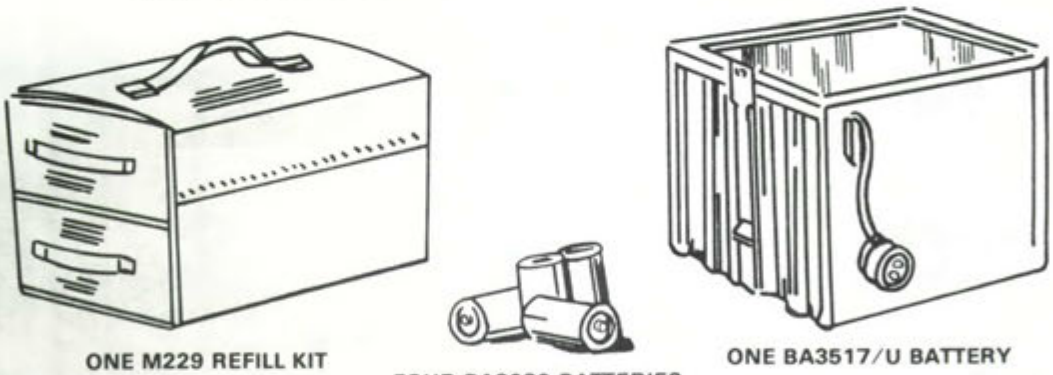
5

M13 alarm system installed in a ¾-ton truck.



ONE M43 DETECTOR UNIT

ONE M42 ALARM UNIT



ONE M229 REFILL KIT

FOUR BA3030 BATTERIES

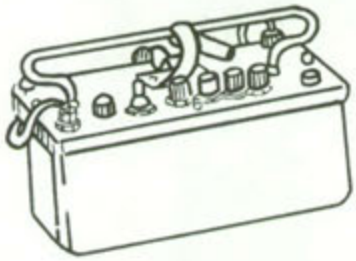
ONE BA3517/U BATTERY

c. If you have a mobile or mobile/fixed model, you will also have:

ONE INSTALLATION KIT

ONE MOUNTING KIT

The fixed and mobile/fixed models are issued with an additional item:



ONE M10 POWER SUPPLY

Units using the M8 or M10 system in temperatures below -6.7°C. (20°F) are authorized:

ONE WINTERIZATION KIT

Units using the M8 in a backpack are authorized:

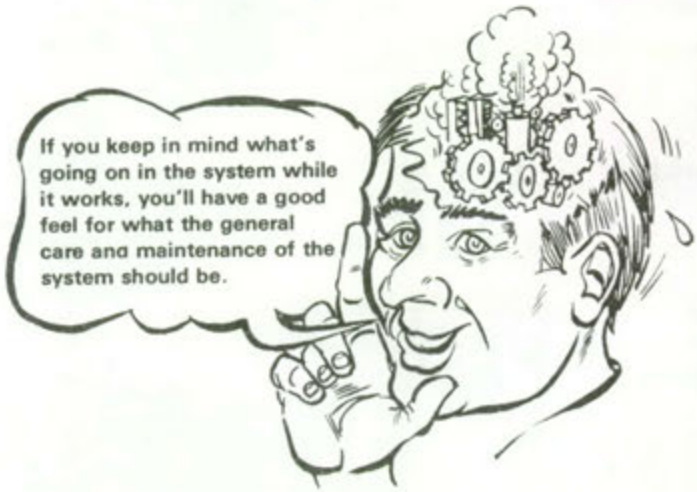
ONE RUCKSACK AND SHELF

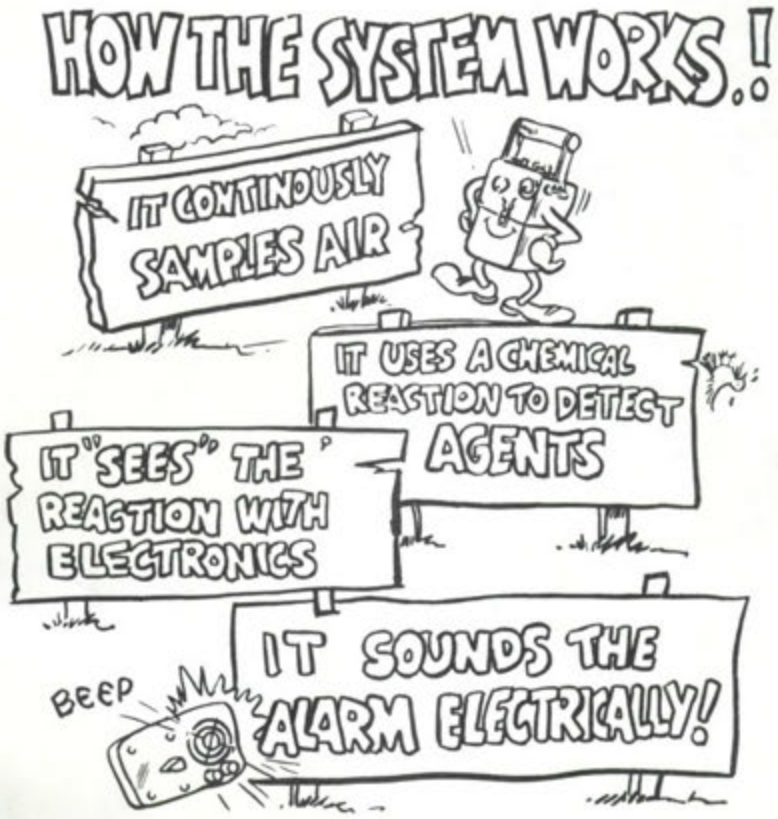
Units must requisition two reels of conductor telephone cable (WD-1) to connect M42 alarm units to the M43 detector unit.

ORDER IT IF YOU NEED IT!

(COMES IN 1-MILE REELS)

2. **Operating and maintaining the alarm system.**



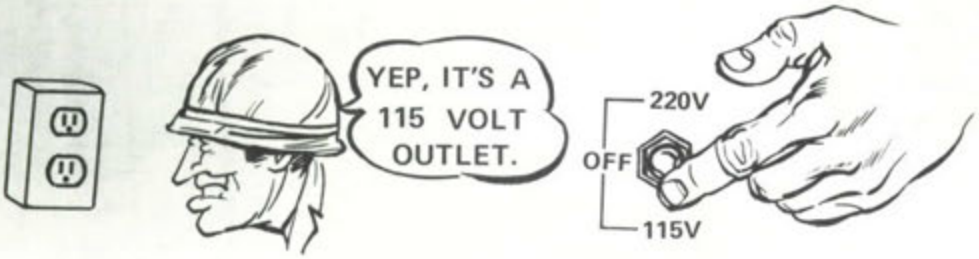


3. **Preparing the alarm system for operation.** To prepare the automatic chemical agent alarm for operation, you must:

a. Perform preoperation checks.

M10 Power Supply

(1) Make sure power switch is off. Check your power source voltage. 115V? 220V?



(2) Plug in the 115V-220V cable connector and set the switch to the right voltage. The lamp should go on.

(3) Set annunciator.

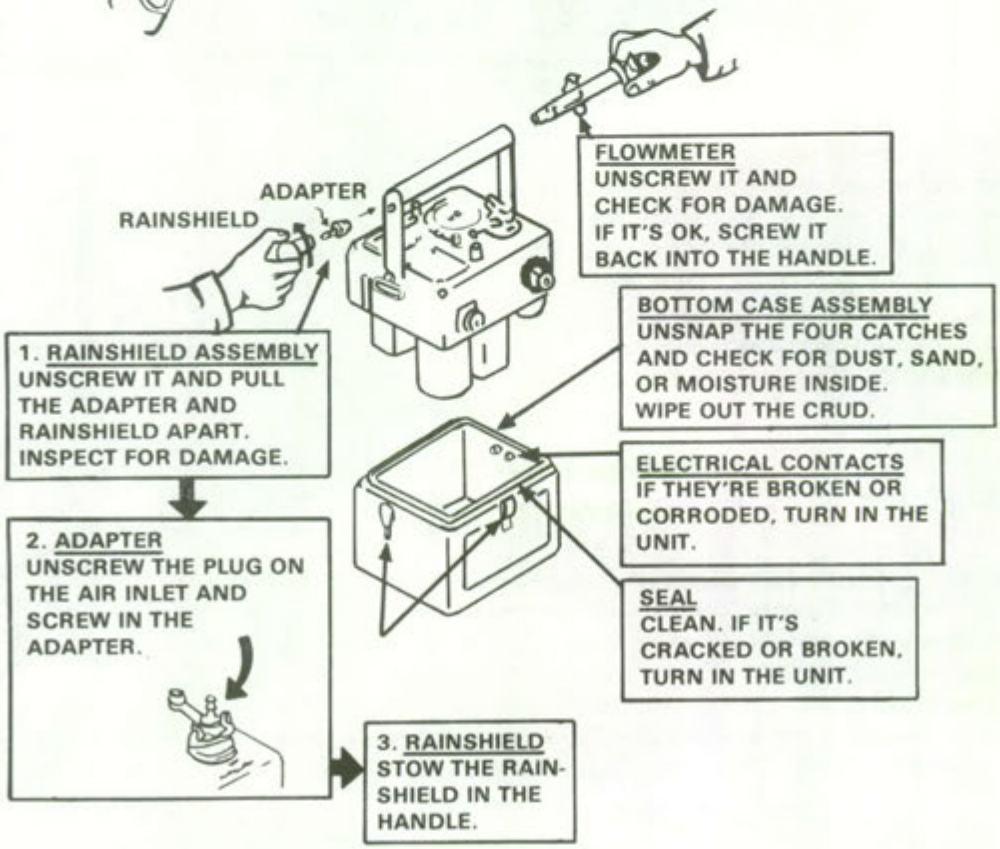
(4) Flip the power switch off.

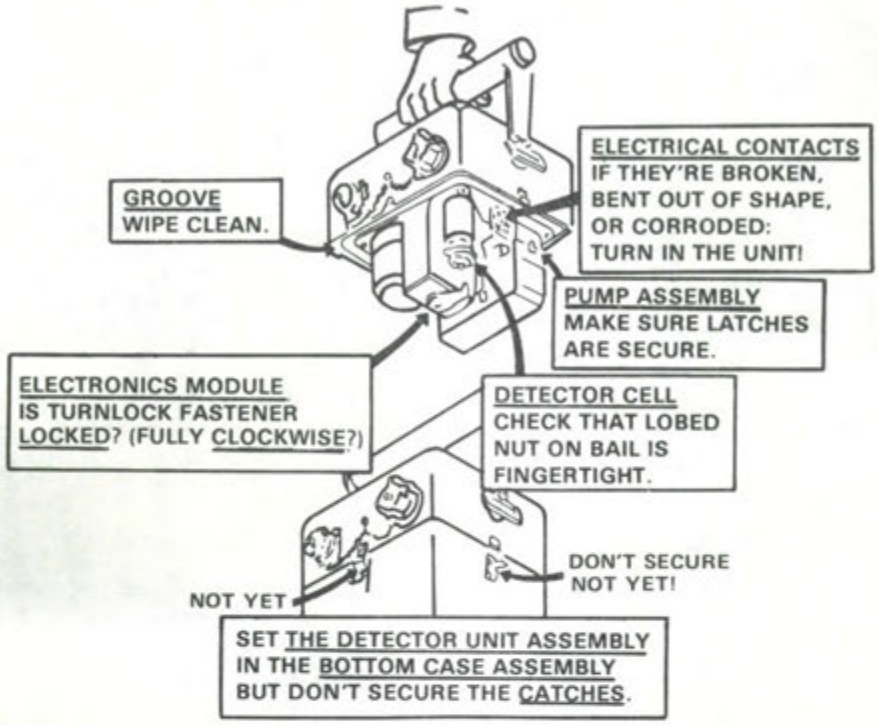
(5) Pull the power plug.

EYEBALL THE M43 DETECTOR UNIT

CHECK IT OUT UNDER COVER, ESPECIALLY IF IT'S RAINING, SNOWING OR SLEETING, OR IF THERE'S A CHANCE OF BLOWING SAND OR DUST GETTING INSIDE THE UNIT WHEN YOU OPEN IT UP.

CHECK FOR CRACKS, BREAKS, LOOSE OR MISSING PARTS.

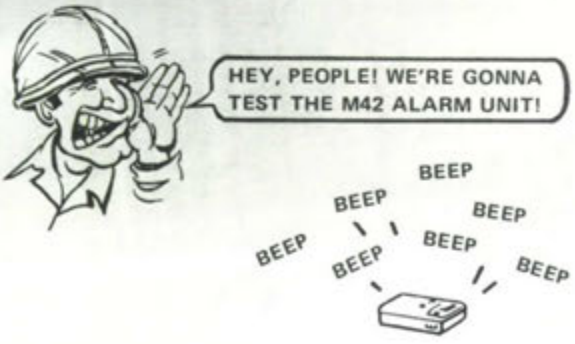




CHECK OUT THE M42 ALARM

CASE
LOOK IT OVER CAREFULLY. IF YOU FIND ANY CRACKS, BREAKS, LOOSE OR MISSING PARTS, TURN IT IN.

TEST NOTIFY PERSONNEL WITHIN HEARING THAT A TEST IS TO BE MADE.



PLACE THE SWITCH TO "TEST."

PLACE THE SWITCH TO "HORN OFF."

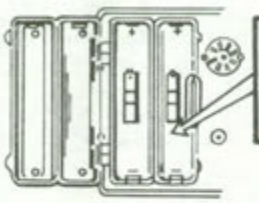
IF THE ALARM-RED INDICATOR DIDN'T FLASH AND IF THE LOUD-SPEAKER DIDN'T BEEP, REPLACE THE BATTERIES.

REPLACING THE BATTERIES

1. LOOSEN THE FOUR KNURLED SCREWS ON THE COVER AND SEPARATE THE FRONT PANEL FROM THE CASE.

2. FLIP THE FRONT PANEL OVER AND TAKE OUT THE OLD BATTERIES.

PULL BACK SPRING CATCH AND LIFT COVER.



INSTALL FOUR FRESH BA3030 BATTERIES WITH POLARITY AS INDICATED.

3. CLOSE THE BATTERY COVER. MAKE SURE THE SPRING IS FULLY ENGAGED.

4. POSITION THE SWITCH TO "TEST" AND THEN TO "HORN OFF."

5. REASSEMBLE THE FRONT PANEL TO THE CASE. MAKE SURE THE FOUR KNURLED SCREWS ARE SCREWED DOWN TIGHT.

6.IF THE M42 ALARM STILL DOESN'T WORK, TURN IT IN.

BATTERIES AND CABLES

- BA3517/U BATTERY

  - Inspect cable for breaks or cracked insulation
  - Make sure connector pins aren't bent
  - Check case for cracks or missing catches

- BB501/U BATTERY (Cold weather operations)

  - Check case for cracks or dents
  - Check connector for bent or corroded pins

- M163 CABLE (Cold weather operations)

  - Make sure insulation is not frayed, cracked, or missing
  - Check that connector pins are not corroded or bent

- MOUNTING KITS (Vehicle installations)

  - Look inside the cab, under the hood, and on the outside to be sure that the insulation on the cables isn't bad.
  - Check the cables where they make contact with corners to be sure that the insulation isn't worn away at those points
  - Be sure that the connector pins aren't bent or corroded

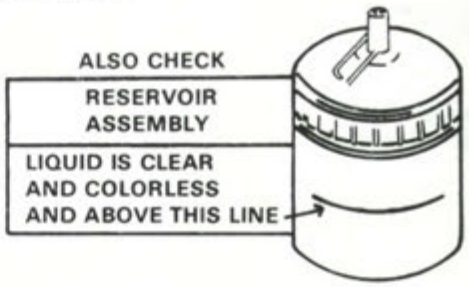
- BA3030 BATTERIES

  - Check for corrosion

M229 REFILL KIT

1. If you have a refill kit with an expired data on the cardboard sleeve, turn it in for a good kit.

2. Open the kit and make sure you have enough reservoir assemblies and air filters . . . one of each is needed for each mission.

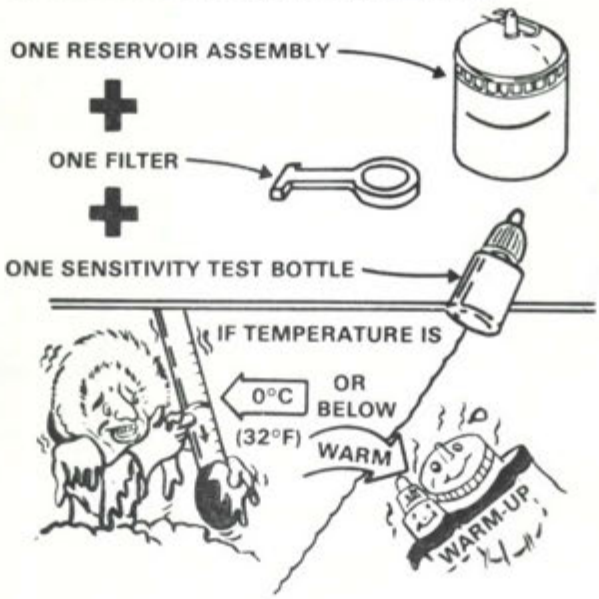


(HALF A BOTTLE LEAVES YOU 35 MISSIONS.)

SENSITIVITY CHECK BOTTLE
MAKE SURE YOU'VE GOT ENOUGH SIMULANT FOR THE AMOUNT OF MISSIONS YOU HAVE TO RUN.

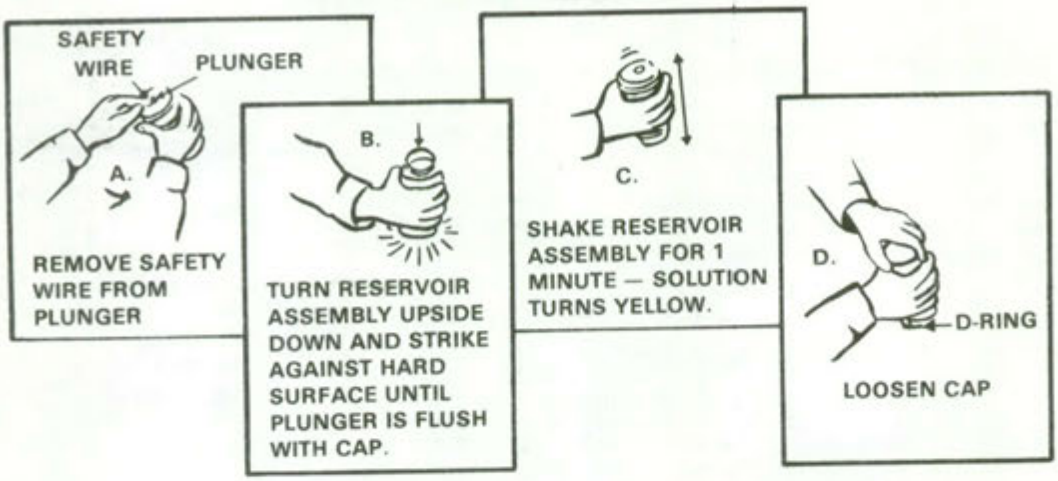
b. Perform prestart operations.

OPEN YOUR 229 REFILL KIT AND TAKE OUT:

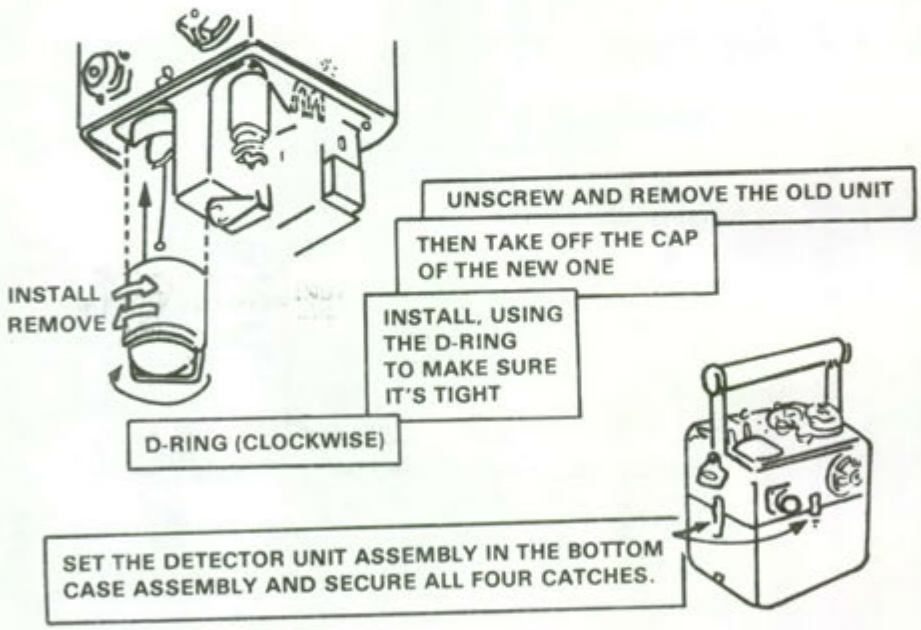


THE RESERVOIR ASSEMBLY AND SENSITIVITY TEST BOTTLE

PREPARE THE SOLUTION



INSTALL THE RESERVOIR ASSEMBLY



REFERENCES:

TM 3-6665-225-12, Alarm, Chemical Agent, Automatic: Portable, C1, Aug 75 (chap 2, page 2-1 thru 2-6, para 2-1 thru 2-8)

TASK NUMBER: 092-503-1107

PERFORM AUTOMATIC CHEMICAL AGENT ALARM SHUTDOWN OPERATIONS

CONDITIONS:

Given TM 3-6665-225-12 and a functioning, complete automatic chemical agent alarm (in any configuration).

STANDARDS:

Perform less-than-72-hour and more-than-72-hour shutdown operations IAW performance measures below.

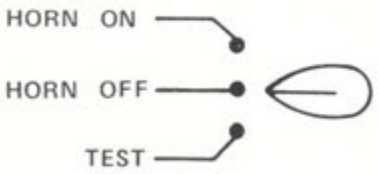
PERFORMANCE MEASURES:

1. The procedures for shutting down an automatic chemical agent alarm for less than 72 hours differ from procedures for shutting it down for more than 72 hours.

2. To perform less-than-72-hour shutdown operations:

a. Set M10 power supply switch to OFF.

b. Set M42 alarm unit switch to HORN OFF.



c. Press horn vol-battery test knob on M43 detector unit to check battery. If meter reads less than 24, discard BA3517/U battery or turn in a BB501/U battery for recharging.

d. Disconnect power source from 24 VDC connector. Install the cover.

e. Disconnect the wires from the binding posts.

f. Release the four catches and lift the detector unit assembly from the bottom case assembly.

g. Unscrew the solution reservoir and discard the solution according to SOP. Screw the empty reservoir assembly back in place.

h. Set the detector unit assembly in the bottom case assembly. Latch the four catches.

i. Make sure that the rainshield and adapter are in the handle, that the air inlet is closed, and that the plug is screwed in securely.

j. Snap the cap over the air outlet.

k. Pull the handcrank up to its storage position.

3. To perform more-than-72-hour shutdown operations:

(Remove the units from vehicles first.)

a. M10 power supply (if used).

(1) Set the switch to OFF.

(2) Disconnect the detector power cable from the M43 detector unit.

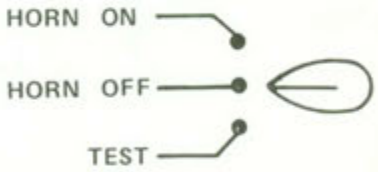
(3) Disconnect the standby battery cable from the BA3517/U battery.

(4) Disconnect the 115V/220V cable from the power source.

(5) Secure the cables to the handle with the strap.

b. M42 alarm unit.

(1) Set the switch to HORN OFF.



(2) Disconnect the wires from the binding posts.

(3) Remove the BA3030 batteries.

(4) Be sure the four front panel screws are secure.

c. M43 detector unit.

(1) Disconnect the power source from the 24 VDC input connector.

(2) Release the four catches and lift the detector unit assembly from the bottom case assembly by the handle.

(3) Unscrew the reservoir assembly. (Protect the weight assembly from dirt.)

(4) Discard the solution according to SOP.

(5) Rinse the reservoir assembly with distilled water. Fill it about two-thirds with distilled water.

(6) Install the reservoir assembly using the D-ring to make sure it's tight.

(7) Set the detector unit assembly in the bottom case assembly. Latch the four catches.

(8) Make sure that the air outlet and the air inlet are open.

(9) Connect cable from a BA3517/U battery to the 24 VDC input connector. If the horn sounds, press the zero adjust knob and turn it fully counterclockwise.

(10) Press the handcrank in, rotate it 50 times, and release it. (Don't pull it out . . . just release it!)

(11) After the M43 detector unit runs for 4 minutes, disconnect the battery.

(12) Release the four catches and separate the unit.

(13) Unscrew the reservoir assembly, discard the liquid, and reinstall the empty reservoir assembly.

(14) Secure the detector unit assembly to the bottom case assembly with the four catches.

(15) Button up the unit for storage:

- Snap on the air outlet cap.
- Set the air inlet to CLOSED.
- Install the cover to protect the 24 VDC input connector.
- Pull the handcrank up to its storage position.

REFERENCES:

TM 3-6665-225-12, Alarm, Chemical Agent, Automatic: Portable, C1, Aug 75, (chap 2, page 2-10, para 2-13)

TASK NUMBER: 071-327-0202

LEAD PHYSICAL CONDITIONING ACTIVITIES

CONDITIONS:

Given a platoon or company size unit in formation, with a requirement to conduct a specified physical activity. (Activity will be predesignated so that time is available for preparation.)

STANDARDS:

1. Be physically fit to lead physical conditioning activities.

2. Give enough time between commands to permit the average man to understand the preparatory command before the command of execution is given.

3. Be able to form and control the extended rectangular formation, circle formation, and double-time column (while performing the run portion of physical conditioning activities).

4. Lead each exercise in accordance with FM 21-20.

5. Demonstrate each exercise (at least three repetitions) with cadence.

6. Follow guidance given concerning what, when, where, and how long activity is to be conducted.

PERFORMANCE MEASURES:

1. **How to prepare.** Once guidance is given concerning the conditioning requirement, preparations must be made.

a. What is the requirement? You must be familiar with the exercises in FM 21-20 if leading them is your requirement. This will require study and practice. It is also your responsibility to insure that your assistant instructors (if available) know the exercises so they can effectively supervise and demonstrate. If your requirement is, or includes, a conditioning run, you must insure that your road guards (if used), pace men, lead rank, and assistant instructors are proficient enough runners to set a good pace (and example) for the rest of the group.

b. When? An assigned starting time is just that. It is your responsibility to insure that the requirement does start on time and a system is set up to deal with late arrivals. Your assistant instructors should note the name of any individual who is late, then place him in the formation. He still needs to take part in the conditioning; he can be sent to his supervisor to explain and be dealt with after the formation.

c. Where? Once given a location to perform the requirement, you must determine if it is feasible to do it there and what plans must be made to best fit the requirement to the area. The area must be large enough. If it is a controlled area, you must insure that only you have planned to use it during your requirement time period. If the area becomes useless during bad weather (for example, knee deep in mud when it rains), an alternate area must be secured.

d. How long? You will be given a period of time in which to complete the requirement. Plans should be made with an eye to coming as close as possible to the required time **without going over it** since improper use of time can snowball through a training day and wreck a unit's schedule and morale. Timing is a function of practice. Rehearse exercises. On a run, match a realistic pace to an appropriate distance. You, not the pace man, are responsible for the pace. Allow yourself a small time leeway and don't make the instructor for the next period suffer for your lack of timing.

2. **Preparatory commands and commands of execution.** The **preparatory command** describes and specifies what is required, and the **command of execution** calls into action what has been prescribed. All preparatory commands are given with a rising inflection. The interval between commands is long enough to permit the average man to understand the first one before the second one is given.

3. **Extended rectangular formation** (figure 1). The formation used most frequently for carrying on physical training activities is the extended rectangular formation (figure 1). This formation is the best type to use for large numbers of men because it is easy to control. The following commands are given to form this formation.

NOTE: In figure 1 the baseman is represented by a white circle.

a. FALL OUT AND FALL IN ON THE BASEMAN. At this command, all personnel run to the designated area and re-form. This procedure is preferred to marching the unit into position. If more control is desired, the unit may march at double time to the vicinity of the baseman and then be directed to fall out and fall in on him. Time is wasted in the field due to needless maneuvering of troops at quick time in an effort to position the unit on the exact spot for the exercises.

b. A company size unit assumes the extended rectangular formation from a column of three's or four's at normal intervals between squads. This extension can also be executed from a company mass without interval

between platoons. In extending either a platoon or company size unit take your place at the head of the column and command.

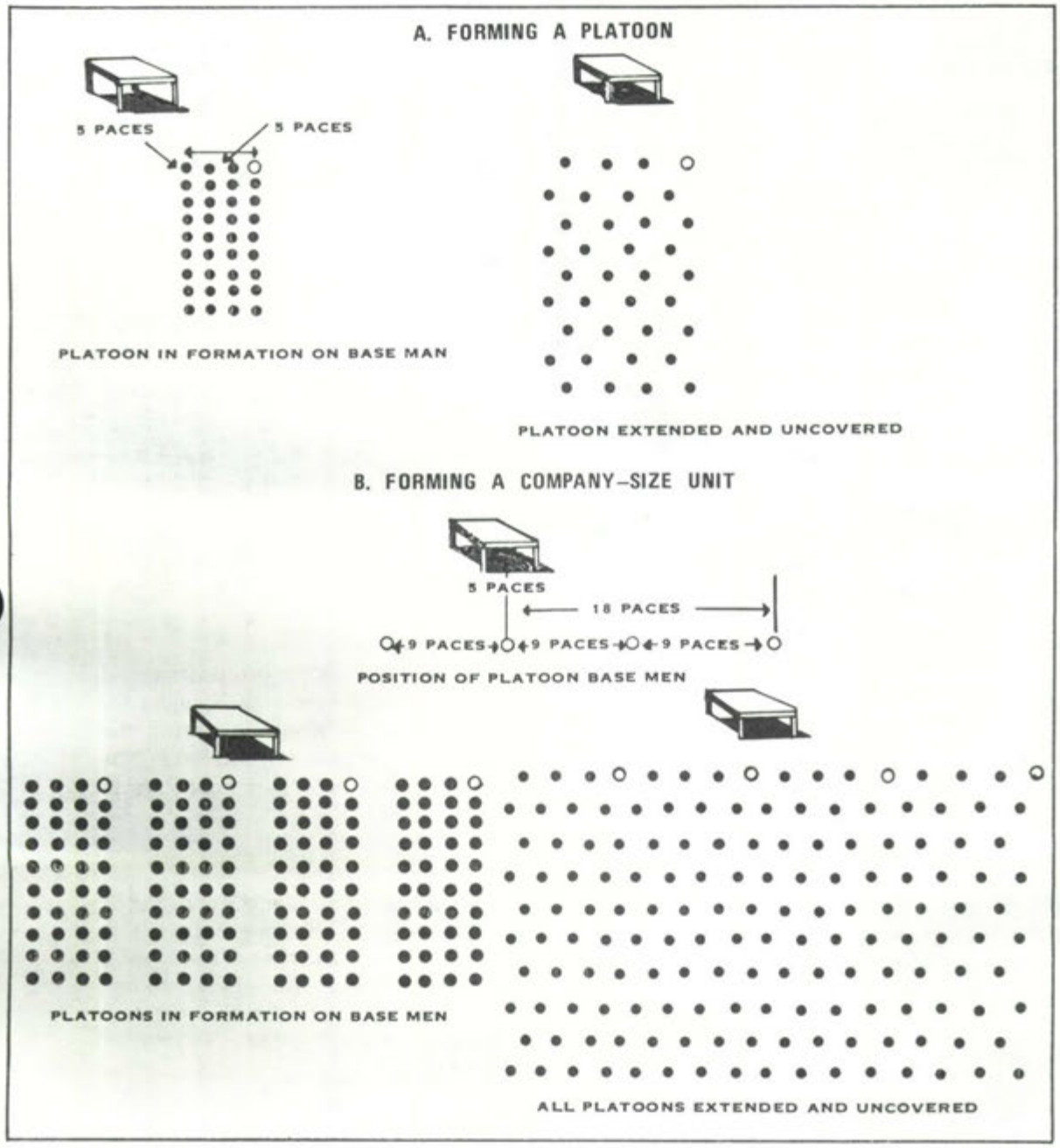


Figure 1. Forming the extended rectangular formation.

(1) **EXTEND TO THE LEFT, MARCH.** At this command, the men in the right flank file stand fast with arms extended sideward. All other men turn to the left and run forward at double time. After taking a sufficient number of steps, all men face the front with both arms extended sideward. The distance between fingertips is about 12 inches and dress is right.

315-389 O - 80 - 6

(2) **ARMS DOWNWARD, MOVE.** At this command, the arms are lowered smartly to the sides.

(3) **LEFT, FACE.**

(4) **EXTEND TO THE LEFT, MARCH.** At this command, the men in the right flank file stand fast with arms extended sideward. All other men turn to the left and run forward at double time. Spacing is the same as in (1) above and dress is right.

(5) **ARMS DOWNWARD, MOVE.** Same as in (2) above.

(6) **RIGHT, FACE.**

(7) **FROM FRONT TO REAR, COUNT OFF.** At this command, the leading man in each column turns his head to the right rear, calls off "one" and faces the front. Successive men in each column call off in turn, "two", "three", "four", "five", in the same manner.

(8) **EVEN NUMBERS TO THE LEFT, UNCOVER.** At this command, each even numbered man stride-jumps to the left, squarely in the center of the interval. In doing this, he swings his left leg sideward and jumps from his right foot to his left foot and smartly brings the right into position against the left.

c. To assemble the unit, command: **ASSEMBLE TO THE RIGHT, MARCH.** At this command, all return to their original position in the column at double time and reform on the baseman.

d. It is recommended that the area for grounding equipment and weapons be at the edge of, or well away from the area to be used for exercising. To conserve time and insure proper position of the unit, the baseman or, if the unit is composed of several platoon size groups, the various basemen may precede the unit and establish their positions in relation to the instructor's platform.

4. **Circle formation.** The circle formation is effective for the conduct of various exercise activities (figure 2). This formation has an advantage in that the supervision of all men is facilitated and a moving formation is available which provides control. Guerrilla exercises, grass drills, and some forms of running, are examples of activities which are more easily conducted in the circle formation than in the extended rectangular formation.

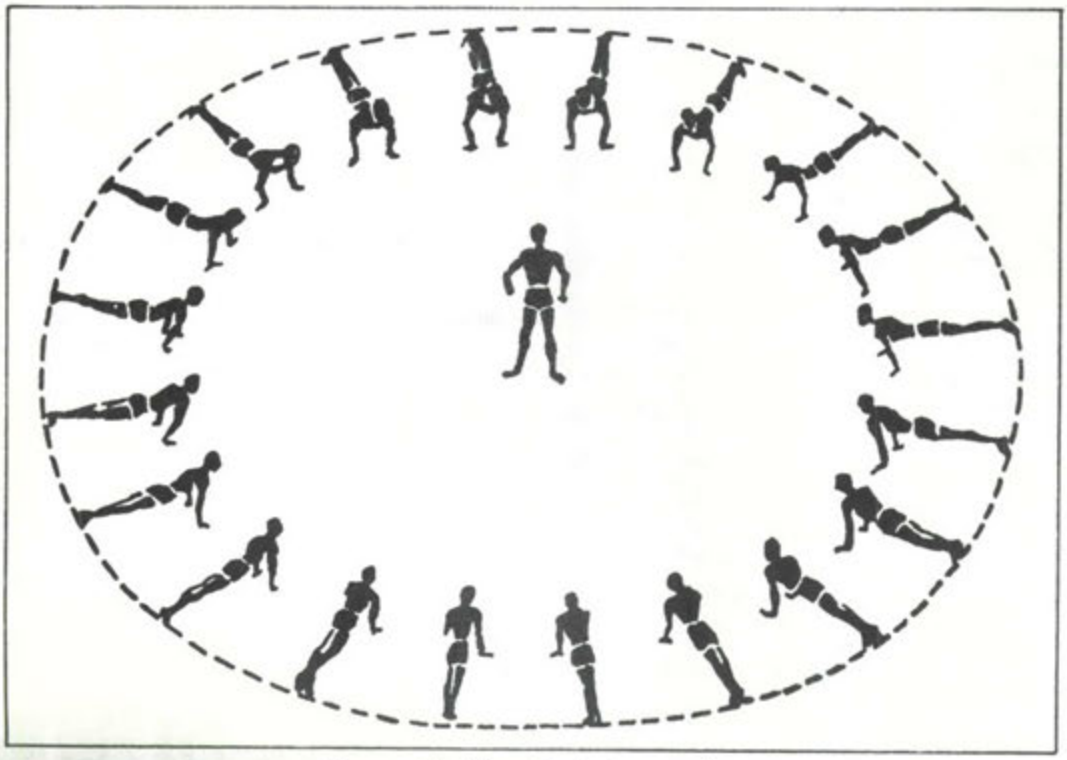


Figure 2. The circle formation.

a. When a platoon is to form a circle, the commands are **CIRCLE FORMATION, MARCH, FOLLOW ME.** Upon this command the right flank squad of the column moves forward at double time with the leader of the platoon group gradually forming a circle in a counterclockwise direction. Each succeeding file falls in behind that on the right. After the rough outline of the circle is formed, the leader commands, **PICK UP A FIVE YARD INTERVAL.** This is to insure the interval between men is uniform prior to starting exercises.

b. The group may be halted and faced toward the center, or, if instruction is not necessary, the exercise activity may be executed without stopping the platoon.

5. **Conditioning run.** This is nothing more than a column moving over a prescribed course at double time. Reflector-vested road guards must be placed ahead of and behind the column if the course follows a road or vehicle trail. A designated pace man runs in the right guide position and, under the direction of the instructor in charge, sets and maintains the pace for the run. Routes should be selected and announced, if necessary, in accordance with post and unit SOPs.

6. **Leadership Techniques.**

a. Unless you experience all of the exercises you cannot appreciate how strenuous they are, what movements are the most difficult, where the errors in performance are likely to occur, and what the proper cadence should be.

b. You must give all the men careful supervision and participate in the exercises to show that you can do them. When you participate, your assistant instructors should supervise because it is difficult for you to supervise and exercise simultaneously.

c. The men should never be kept too long in one position, especially a constrained one. They should never have to perform so many repetitions of an exercise that they lose the correct form. Slight deviations from the proper form reduce the value of the exercise.

d. Avoid long explanations. As a rule, it should be necessary to give a full explanation of new exercises only once. Minor corrections should be made to the entire class while the exercise is in progress (for example, "heads up", "knees straight"). If necessary, follow this correction by the name of the man who is at fault.

e. The heavy demand on your voice can be lightened by training assistant instructors to assume some of the instruction and by employing mass cadence.

f. Insure each exercise is performed in accordance with FM 21-20. Review and practice is usually required in order to perform them properly.

g. Use of a cue card (3 x 5 or scrap of paper) is recommended while leading exercises. This will prevent forgetting any exercise and help present a smooth period of training.

REFERENCE:

FM 21-20, Physical Readiness Training, C1, Mar 73 (chap 10, pages 35 to 41)

TASK NUMBER: 071-331-0820

ANALYZE TERRAIN USING THE 5 MILITARY ASPECTS OF TERRAIN

CONDITIONS:

Given any tactical mission which involves a specified route or location on the ground or map.

STANDARDS:

Analyze route or location in terms of the military aspects of terrain (observation and fire, concealment and cover, obstacles, key terrain, and avenues of approach) and determine how each affects the mission.

PERFORMANCE MEASURES:

Terrain is analyzed in terms of its five military aspects (observation and fire, concealment and cover, obstacles, key terrain, and avenues of approach) to determine the effect of terrain on the general courses of action available to friendly and enemy forces.

1. **Observation and Fire.**

a. Observation depends on conditions of terrain which permit a force to locate the enemy either visually or through the use of surveillance devices. The best observation generally is obtained from the highest terrain features in an area. The effects of visibility on observation are analyzed with weather. Visibility and observation are analyzed independently because visibility varies with weather conditions, whereas observation varies with terrain conditions which are relatively permanent.

b. Fire encompasses the influence of the terrain on the effectiveness of direct and indirect fire weapons. The fires of indirect fire weapons are affected primarily by terrain conditions within the target area. Fields of fire for direct fire weapons are primarily affected by terrain conditions between the weapon and target.

c. You, the squad leader, must identify those terrain features within and adjacent to the area of operation which afford the friendly or enemy force favorable observation and fire. You consider them in your subsequent analysis of concealment and cover, key terrain, and enemy forces.

2. **Concealment and Cover.** Concealment is protection from observation; cover is protection from the effects of fire. As a squad leader, you must determine the concealment and cover available to both friendly and enemy forces.

a. Concealment may be provided by terrain features and vegetation such as woods, underbrush, or cultivated vegetation, or by any other feature which denies observation. Concealment does not necessarily provide cover.

b. Cover may be provided by terrain features or manmade features. Areas that provide cover from direct fire may or may not protect against the effects of indirect fire; however, most terrain features that offer cover also offer concealment.

3. **Obstacles.**

a. An obstacle is any natural or artificial terrain feature which stops or impedes military movement.

b. Consideration of obstacles is influenced by the mission.

c. An obstacle may be an advantage or disadvantage and must be considered on its own merits, in view of a specific mission. For example, obstacles perpendicular to a direction of attack favor the defender by slowing or canalizing the attacker. Obstacles parallel to the direction of attack may assist in protecting a flank of the attacking force.

4. **Key Terrain.** A key terrain feature is any locality or area whose seizure or control affords a marked advantage to either force. The term "seizure" clearly implies physical occupation of the terrain by a force, whereas the term "control" may or may not include physical occupation. The selection of key terrain varies with the level of command, the type of unit, and the mission of the unit.

5. **Avenues of Approach.**

a. An avenue of approach is a route for a force of a particular size to reach an objective or key terrain. To be considered as an avenue of approach, a route must provide enough width for the deployment of the size force for which the avenue of approach is being considered.

b. The analysis of an avenue of approach is based on the following considerations:

(1) Observation and fire. (Favorable observation and fire for the force moving on the avenue of approach.)

(2) Concealment and cover. (Provides favorable conditions of concealment and cover -- this consideration is frequently in conflict with the preceding one.)

(3) Obstacles. (Avoids those which are perpendicular to the direction of advance and, whenever practical, takes advantage of those which are parallel to the direction of advance.)

(4) Utilizes key terrain.

(5) Provides adequate maneuver space.

(6) Ease of movement.

c. The analysis of an avenue of approach is based solely on terrain considerations.

REFERENCES:

FM 30-5, Combat Intelligence, Oct 73 (app B, pages B-1 thru B-5)
TEC Lesson 935-071-1027-F, Analyze Weather and Terrain

TASK NUMBER: 113-587-3003

PERFORM OPERATOR MAINTENANCE ON A SQUAD RADIO

CONDITIONS:

Given an AN/PRR-9 (Receiving Set), AN/PRT-4 (Transmitting Set), TM 11-5820-549-12, DA Form 2408, and DA Form 2404.

STANDARDS:

1. Perform before-, during-, and after-operation maintenance on the radio IAW instructions in TM 11-5820-549-12, chap 4, pages 4-1 thru 4-4, para 4-1 thru 4-8.

2. Identify maintenance deficiencies/shortcomings and correct those within the operator's capability.

3. Cross-reference uncorrectable faults against the DA Form 2408-1.

4. Prepare a DA Form 2404 to notify organizational maintenance of previously reported uncorrectable faults or repairs which require a part.

5. Perform troubleshooting procedures on the equipment IAW TM 11-5820-549-12, chap 4, page 4-4, para 4-6.

PERFORMANCE MEASURES:

1. Operator maintenance follows procedures outlined in the preventive maintenance services section of TM 11-5820-549-12, chap 4, pages 4-1 thru 4-2, para 4-4.

2. To correct deficiencies/shortcomings, refer to TM 11-5820-549-12, chap 4, page 4-4, para 4-6.

3. Previously reported faults beyond the operator's capability to repair or those requiring parts are recorded on the Uncorrected Fault Record (DA Form 2408-14) in the logbook. This form is completed by organizational maintenance.

4. Faults which the operator cannot correct or which require a part are recorded on DA Form 2408 IAW procedures outlined in para 3-4, TM 38-750.

REFERENCES:

TM 11-5820-549-12, Receiving Set, Radio AN/PRR-9, Transmitting Set, Radio AN/PRT-4 and AN/PRT-41, C8, Oct 66 (chap 4, pages 4-1 thru 4-4, para 4-1 thru 4-8)
TM 38-750, Army Maintenance Management System (TAMMS), C2, Nov 72, (chap 3, page 3-4, para 3-4)
TEC Lesson 010-071-1001-F, Introduction to the Squad Radio
TEC Lesson 010-071-1002-F, Operation of the Squad Radio

TASK NUMBER: 113-587-2006

PREPARE/OPERATE SQUAD RADIO

CONDITIONS:

Given an operable squad radio (AN/PRR-9 and AN/PRT-4 w/antennas in place), one BA-505/U battery and one BA-399/U battery, callsign, and a distant station within range.

STANDARDS:

Within 2 minutes, assemble the radio set and establish communication with a distant station IAW performance measures below.

PERFORMANCE MEASURES:

1. **Receiving Set, Radio AN/PRR-9** (figure 1).

a. Inspect receiving set to insure that all components (and battery) are present:

(1) Receiving set, radio AN/PRR-9.

(2) Antenna AS 1998/PRR-9.

(3) Battery, dry BA-505/U.

(4) Headset, electrical.

(5) Slide, harness.

(6) Lanyard assembly.

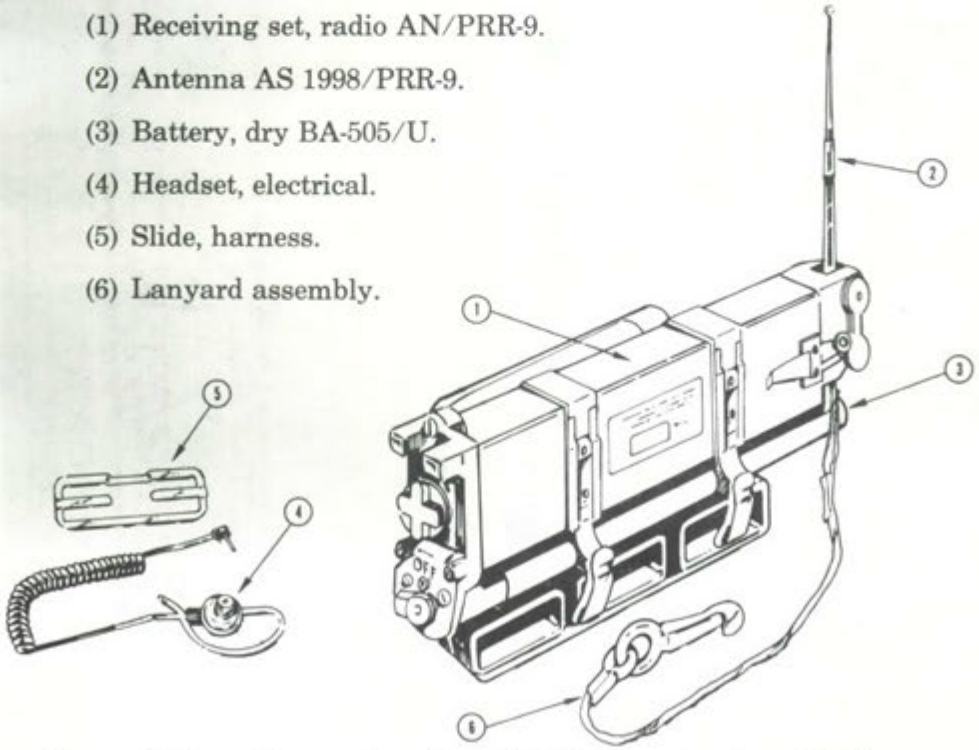


Figure 1. Receiving set, radio AN/PRR-9 control and jack.

b. To operate receiver:

(1) Insert battery, dry BA 505/U, through battery clip and into mating connector of receiver.

(2) Clip receiver to helmet.

(3) Loosen antenna retaining screw and rotate antenna upright. Tighten screw.

(4) Receiver control:

(a) For receiving with squelch: Turn the receiver control clockwise from its off position. Set to a comfortable listening level when voice or tone is received. If control is turned to its maximum clockwise position, squelch will be turned off (background noise will be heard). To reactivate squelch, turn control to off, then back on about halfway.

(b) For receiving without squelch: Turn the receiver control fully clockwise from its OFF position. Turn it counterclockwise for comfortable listening level. Use receiver without squelch when received signals are weak or in terrain unfavorable for good reception.

(5) Receiver may be worn on combat suspenders, or clipped to a pocket or belt if maximum range is not required. To prevent loss when the receiver is worn in this manner, place loop end of lanyard through eyelet, pull hook end through the loop, and clip to slide on suspenders.

(6) To turn set off, turn receiver control to the maximum counterclockwise position.

2. **Transmitting Set, Radio AN/PRT-4** (figure 2).

a. Inspect transmitting set to insure that all components are present.

(1) Transmitting set, radio AN/PRT-4.

(2) Antenna AS-1999/PRT-4.

(3) Battery, cell BA-399/U.

(4) Case, battery C4-6115/PRT-4.

(5) Slide, harness.

(6) Lanyard assembly.

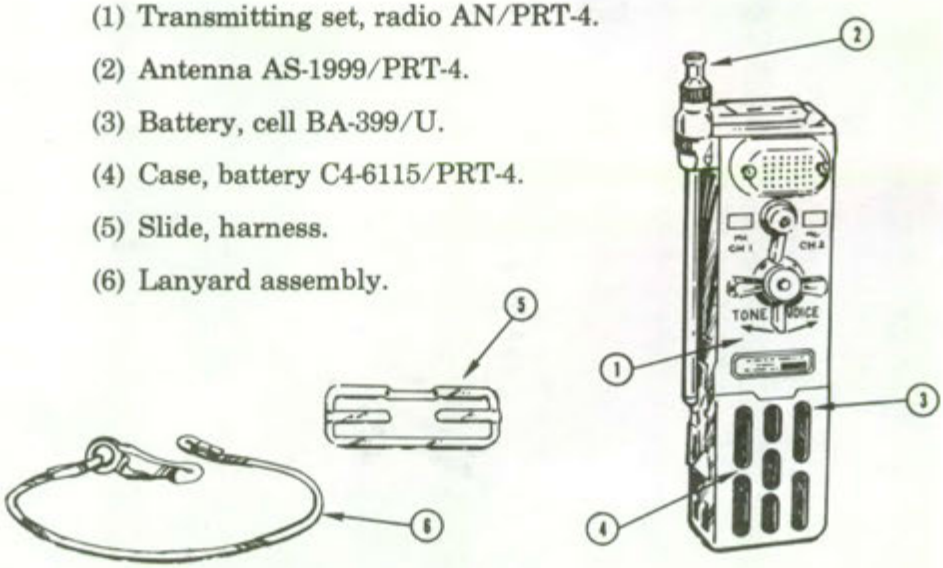


Figure 2. Transmitting set, radio AN/PRT-4 controls.

b. To operate transmitter:

(1) Raise collapsible antenna to its full height.

(2) Release both battery case clamps and remove case.

(3) Insert battery, BA-399/U, into mating connector at bottom of transmitter. Replace battery case and secure clamps.

(4) Set upper selector switch in CH-1 position for channel 1 or CH-2 position for channel 2. Channel 2 output power is approximately one-third of channel 1.

(5) Tone-voice switch.

(a) For tone signal: Press the tone-voice switch in the direction of tone arrow (clockwise) and hold in this position for as long as tone signal is desired. Release switch at end of desired time.

(b) For voice communication: Press tone-voice switch in the direction of voice arrow (counterclockwise) and hold in this position while transmitting.

(6) Speak in microphone, located above channel selector switch, in a normal tone of voice with lips about 1 inch from microphone. Release tone-voice switch at end of transmission.

(7) If only voice transmission is to be used, position the override spring to the word VOICE. In this position, the tone-voice switch can be pressed only in the VOICE direction. For tone-only use, position the override spring to the word TONE. When the override spring is in its center, detent position, the tone-voice switch can be moved in either direction.

(8) Transmitter may be clipped to pocket, belt, or combat suspenders when not in use, using clip on back of transmitter. To prevent loss, place loop end of lanyard through bale on bottom of battery retainer. Pull clasp end through this loop and clip to slide on suspenders.

REFERENCES:

TM 11-5820-549-12, Receiving Set, Radio AN/PRR-9, Transmitting Set, Radio AN/PRT-4 and AN/PRT-4A, C8, Oct 66 (chap 2, pages 2-3 thru 2-5, para 2-5 thru 2-11; chap 3, pages 3-1 thru 3-4, para 3-1 thru 3-9)
TEC Lesson 010-071-1001-F, Introduction to the Squad Radio
TEC Lesson 010-071-1002-F, Operation of the Squad Radio

TASK NUMBER: 071-329-1014

LOCATE AN UNKNOWN POINT ON A MAP OR ON THE GROUND BY INTERSECTION

CONDITIONS:

In a field location, given a standard 1:50,000 scale military map of the area, the location of two known points, compass, coordinate scale and protractor, pencil, and an object or terrain feature for which you must determine the location (grid coordinates).

STANDARDS:

Within 7 minutes (15 minutes, if you must measure azimuths), determine the 100,000-meter square identification letters and six-digit grid coordinates to within 100 meters.

PERFORMANCE MEASURES:

Intersection is a method used to locate unknown points on a map by intersecting lines from two known points.

For example: a magnetic azimuth from a known observation post (OP) to an unknown point is changed to a grid azimuth and drawn on the map. Another magnetic azimuth from another known OP location to the same unknown point is changed to a grid azimuth and drawn on the same map. Where the two lines intersect on the map is the location of the distant point.

1. **Map and Compass Method** (figure 1).

NOTE: Map not to scale and an easterly G-M angle of 10° is used.

a. Determine the G-M angle of the map you are using.

b. Locate and mark your position on the map.

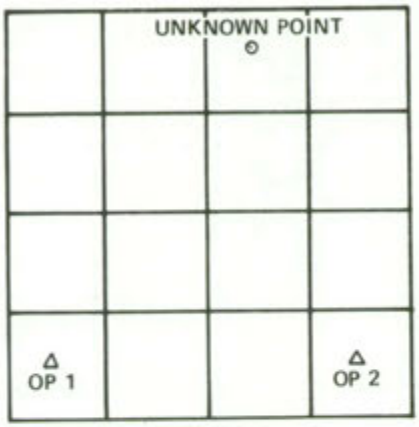
c. Measure the magnetic azimuth to the unknown point (22°); change it to a grid azimuth. From the magnetic azimuth you found, subtract the G-M angle if it is westerly; add if it is easterly. In the example, the G-M angle used was 10° easterly.

d. Place the protractor on the map, insuring that the zero degree indicator on the protractor is pointing to the top of the map (north) and the index point is placed center mass on your location (figure 1). Place a tick mark on the number of degrees you want to plot. Draw a line on the map from your position on this grid azimuth (32°).

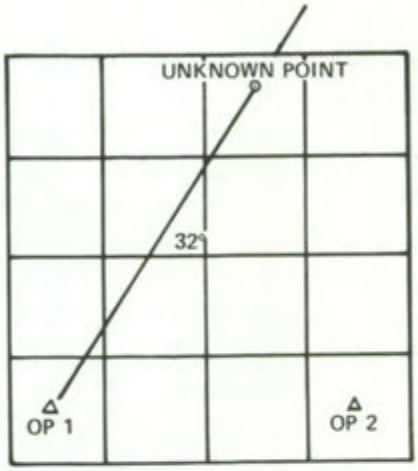
e. Move to or call a second known position from which the unknown point can be seen. Locate this position on the map.

f. Repeat c and d above.

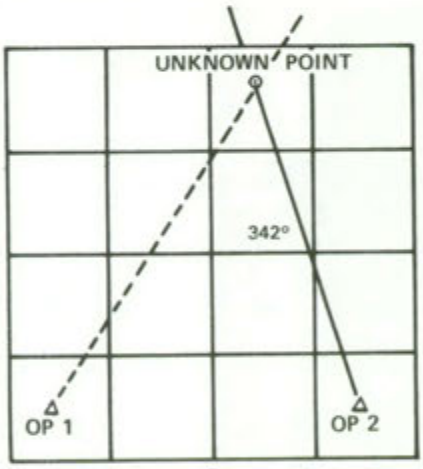
g. Where the lines cross is the location of the unknown point.



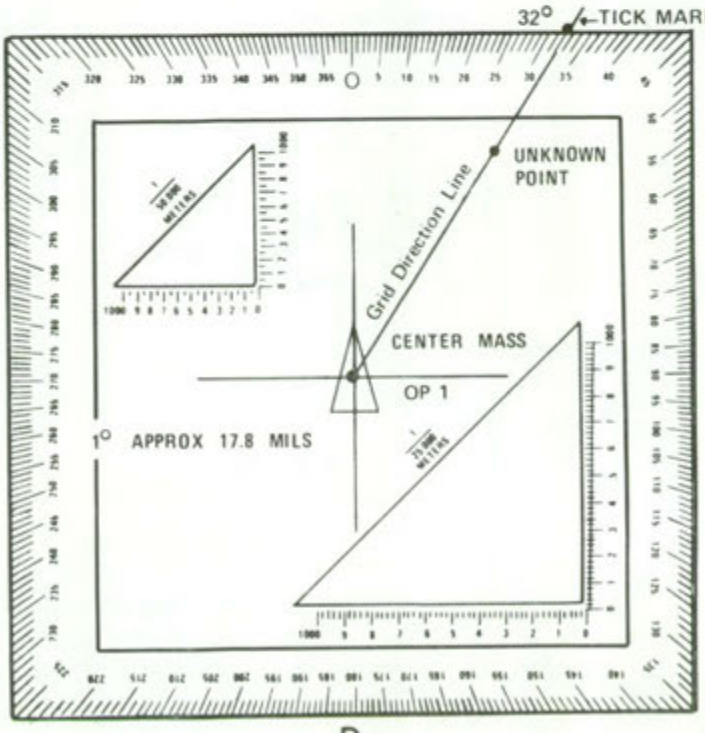
A.



B.



C.



D.

Figure 1.

2. **Straightedge Method (when no compass is available)** (figure 2).

a. (See task: **Orient a map to the ground by map-terrain association.)**

b. Locate and mark your position on the map.

c. Lay a straightedge on the map with one end at user's position (A) as a pivot point and rotate the straightedge until the unknown point is sighted along the edge.

d. Draw a line along the straightedge.

e. Repeat the above procedure at position (B) and for a check on accuracy at a third position.

f. The intersection is the location of the unknown point (C).

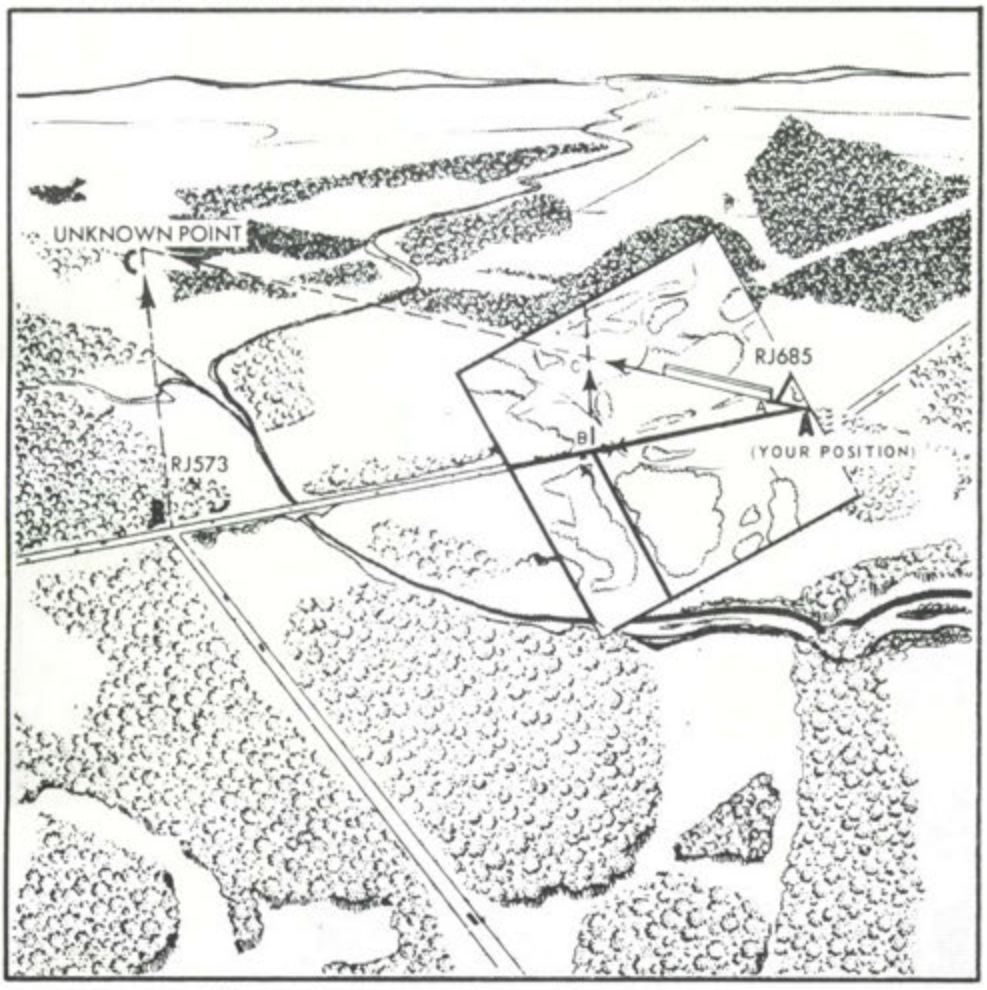


Figure 2. Intersection without compass.

REFERENCES:

FM 21-26, Map Reading, C1, Jan 69 (chap 5, page 5-14, para 5-9)
TEC Lesson 930-071-0018-F, Navigating with Map and Compass

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TASK NUMBER: 071-329-1015

LOCATE AN UNKNOWN POINT ON A MAP OR ON THE GROUND BY RESECTION

CONDITIONS:

In a field at an unknown location, given a standard 1:50,000 scale military map of the area, a compass, straightedge, coordinate scale and protractor, pencil, and two terrain features visible from your location and identifiable on the map.

STANDARDS:

Within 10 minutes, determine the 100,000-meter square identification letters and six-digit coordinates of your location to within 100 meters of the actual grid coordinates.

PERFORMANCE MEASURES:

RESECTION is a way to locate one's position on a map. Magnetic azimuths are measured to two points on the ground which can be identified on the map. These magnetic azimuths are changed to grid azimuths, and the back azimuths of these grid azimuths are determined. Next, the converted back azimuths are drawn from the known points on the map. Where these two/three lines resect (cross) is your location.

1. Map and Compass Method (figure 1).

NOTE: a 10° easterly G-M angle is used in the examples. Map not to scale.

STEP 1: Determine the G-M angle of the map that you are using.

STEP 2: Locate two known positions on the ground and mark them on your map (figure 1a).

STEP 3: Measure the magnetic azimuth to one of the known locations: change this to a grid azimuth (figure 1b).

a. If it is a westerly G-M angle, subtract the number of degrees in the G-M angle to your magnetic azimuth.

b. If it is an easterly G-M angle, add the number of degrees in the G-M angle to your magnetic azimuth.

STEP 4: Change this grid azimuth to a back azimuth.

STEP 5: Place the protractor on the map insuring that the zero degrees indicator on the protractor is pointing to the top of the map (north) and the index point is placed center mass on this location. Place a tick mark on the number of degrees you want to plot. Remove protractor from the map and draw a line on the map from this position on the grid back azimuth you found, in the direction of your unknown position.

STEP 6: Repeat steps 3 through 5 for a second and third known position.

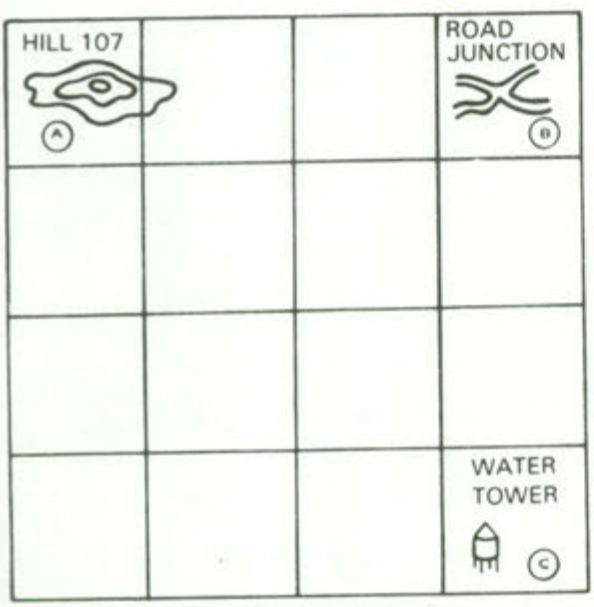


Figure 1a.

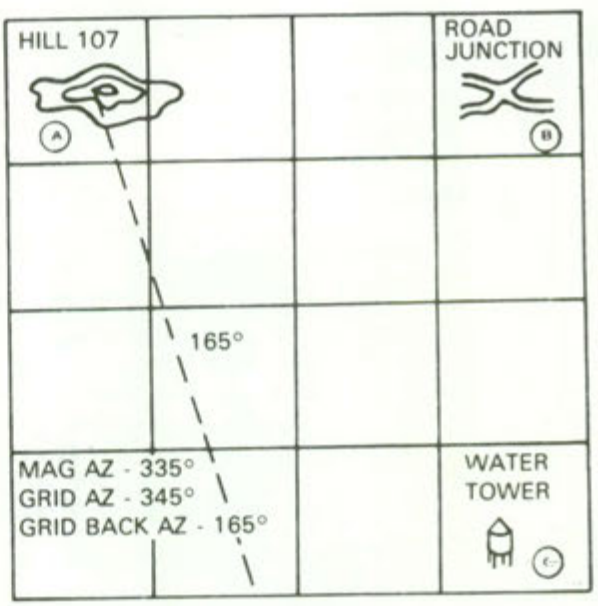


Figure 1b.

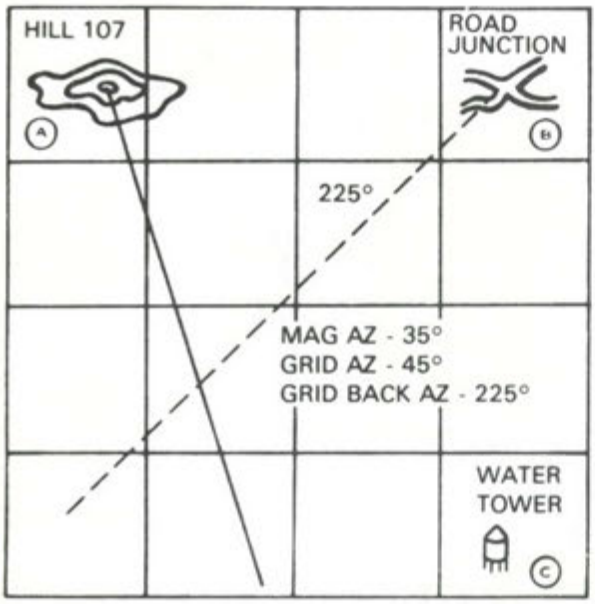


Figure 1c.

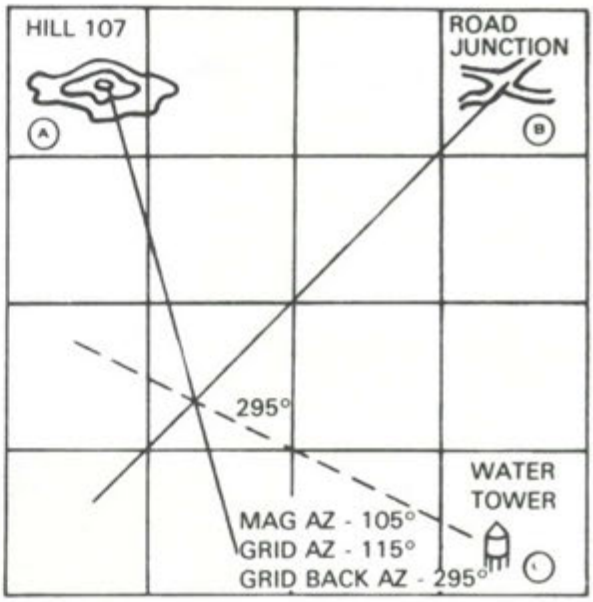
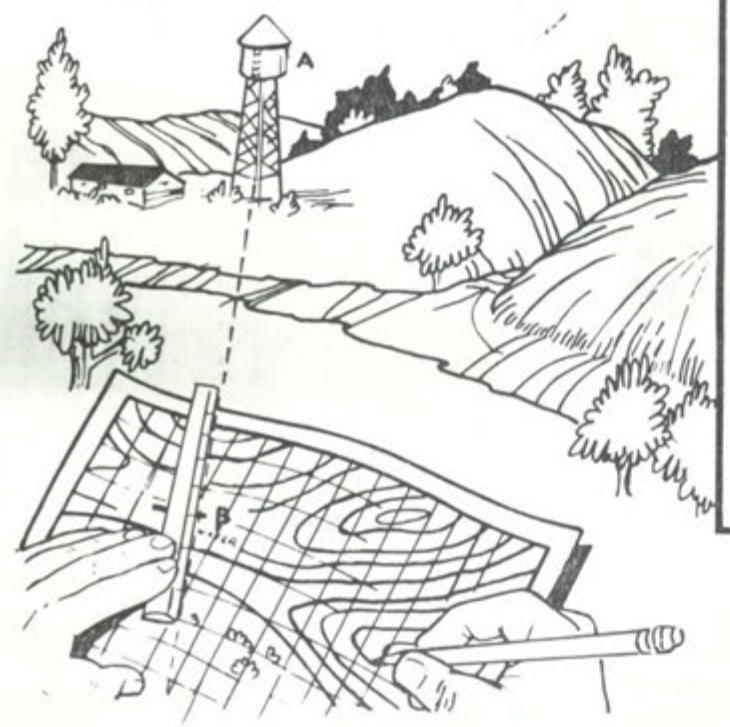


Figure 1d.

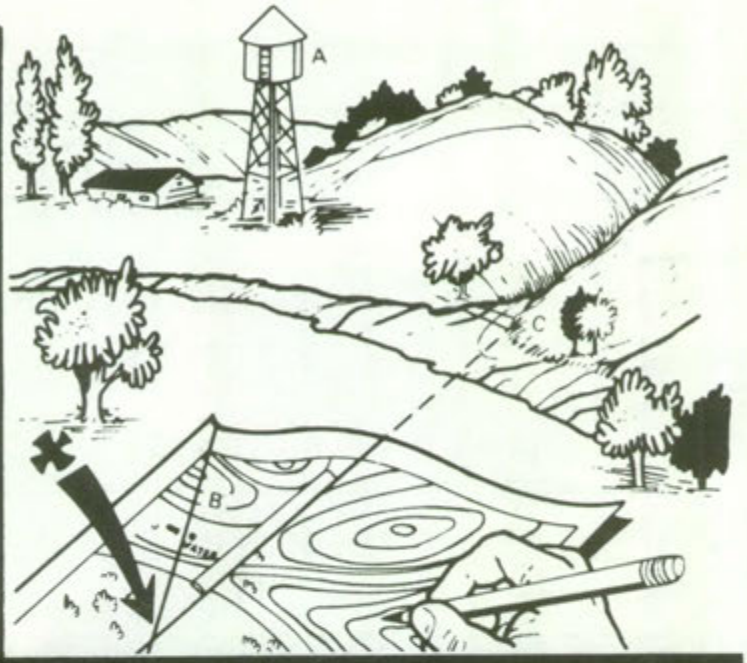
Figure 1.

RESECTION WITHOUT A COMPASS



Orient your map as closely as you can using one of the ways you've learned about finding direction—compass, sun watch, or stars. Then, look for some feature—like a water tower (A)—that you can also find on the map. Put a ruler or straightedge on the map, and place its edge right next to the water tower symbol (B) on the map. Then aline the straightedge so that it points exactly at the real water tower. Draw a line along the ruler (the line will cross the symbol for the water tower on your map).

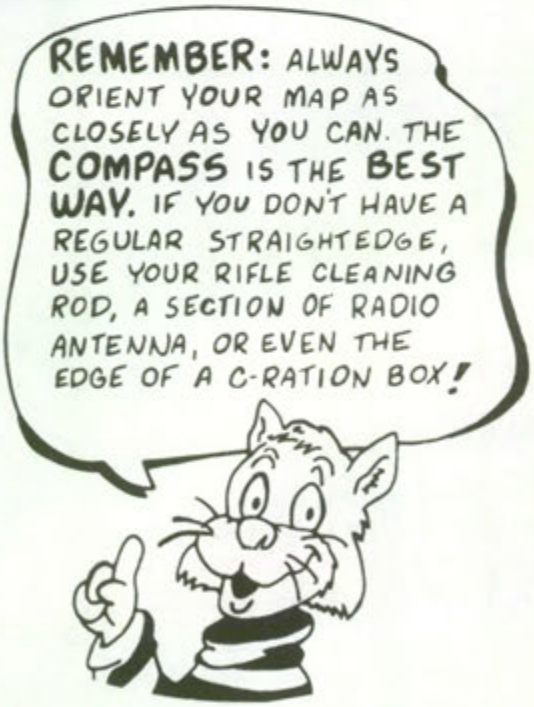
Next, find another feature—like a road junction, and do the same thing. Lay the straightedge on your map and point it at the real road junction (C), while at the same time its edge crosses over the road junction (D) on the map. Draw another line along the ruler until it crosses (intersects) the first line. The point where the lines cross is your location (X). If you do the same thing with a third line, it may help locate your position more accurately.



REMEMBER: Don't move your map once you've got it properly oriented.

MODIFIED RESECTION

First orient your map, then find some feature that you can also find on the map, such as the water tower in the previous example. Just like before, put a straightedge through the water tower on the map and aline the straightedge so that it points exactly at the real water tower. Draw a line along the ruler. The point where the line crosses the linear feature which you know you are on (road, river bank, etc.) is your location.



REFERENCES:

FM 21-26, Map Reading, C1, Jan 69 (chap 5, page 5-10)
TC 21-26, Don't Get Lost, Oct 72 (pages 35-37)

TEC Lesson 930-071-0018-F, Navigating with Map and Compass

TASK NUMBER: 071-318-2206

SUPERVISE THE PREPARATION OF PRACTICE ROCKET LAUNCHER, M190, FOR FIRING

CONDITIONS:

Given any number of practice rocket launchers, M190; any number of subcaliber 35mm practice rockets, M73, for loading in the M190; and a suitable range for live firing.

STANDARDS:

1. Insure the practice rocket launcher, M190, is loaded with a subcaliber practice rocket, M73, IAW performance measure 2 below.

2. Insure the practice rocket, M73, is unloaded if not fired, IAW performance measure 3 below.

PERFORMANCE MEASURES:

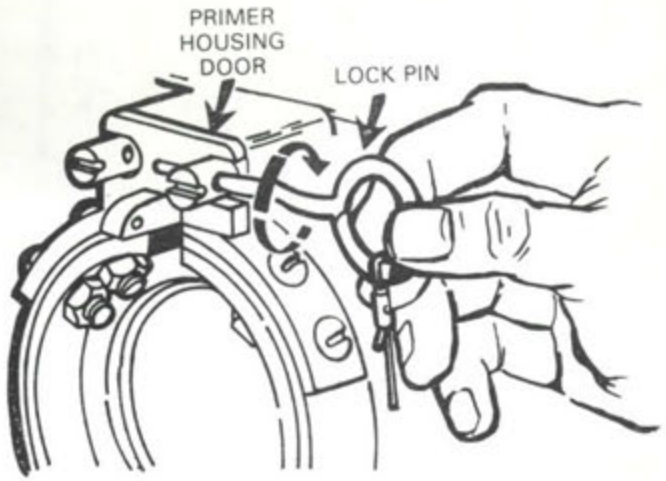
1. Launcher M190 loaded with subcaliber practice rocket, M73, forms the practice device for the 66mm LAW systems M72 series.

2. Loading Procedures:

a. Remove sling assembly if attached.

b. Twist and remove primer housing lock pin.

c. Remove primer housing door or, if new version, swing out of way of primer block entry.



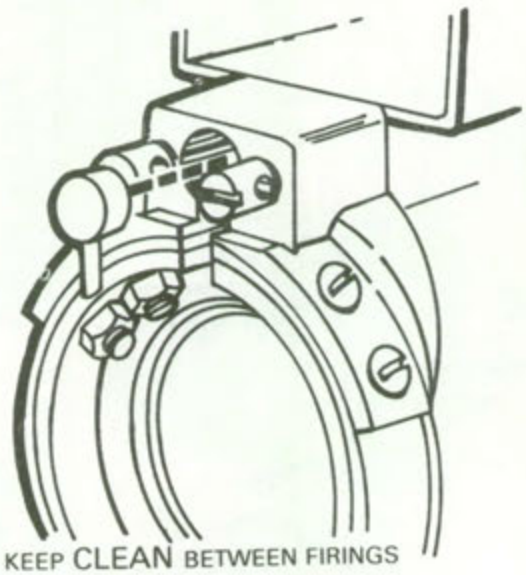
d. Remove fired primer block.

e. Inspect primer cavity.

f. Inspect subcaliber tube bore.

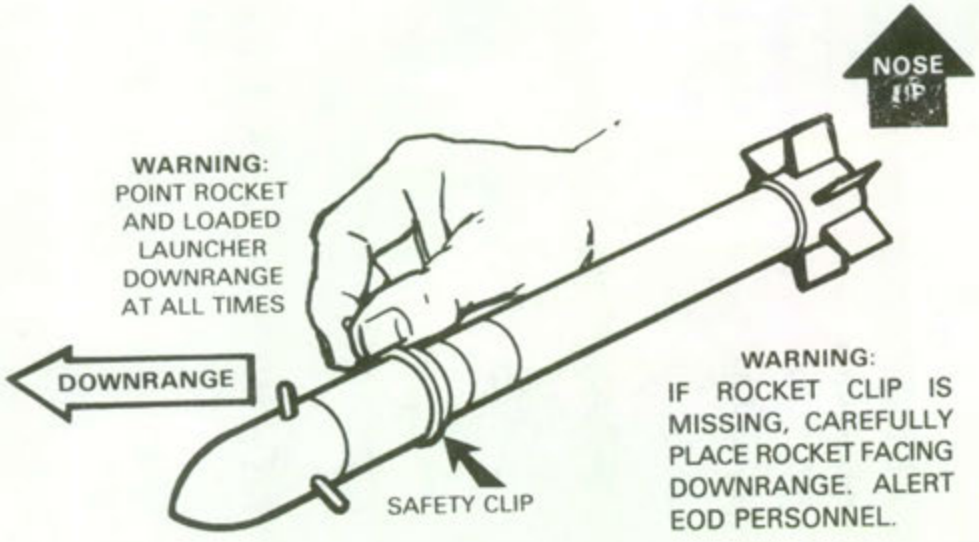
g. Swab bore with rag.

h. Blow out dust.



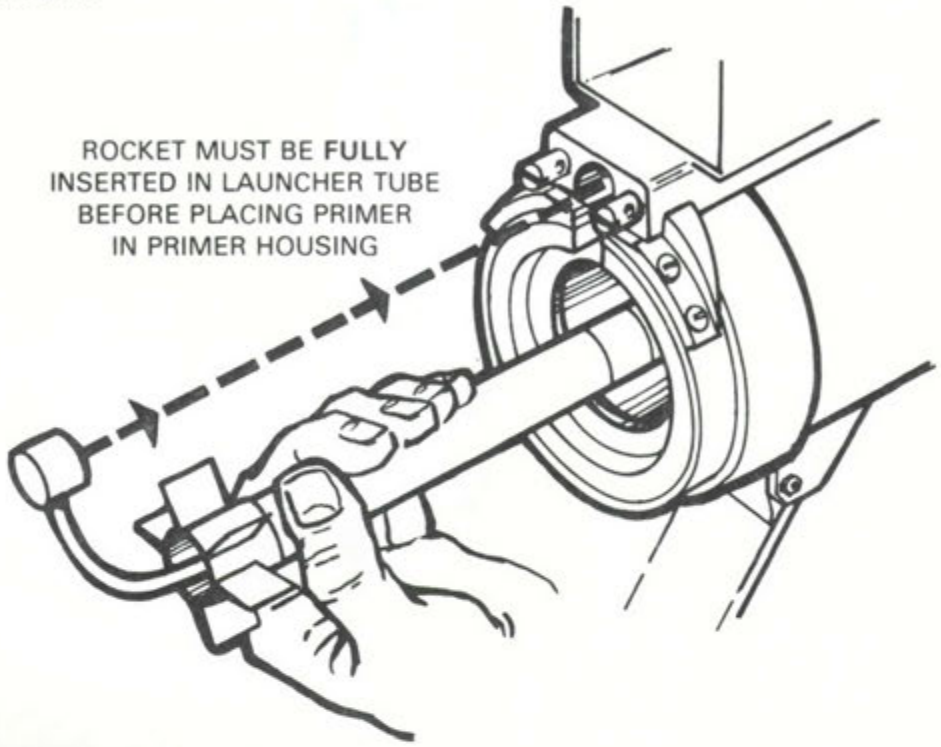
i. Open rocket container, carefully remove rocket.

j. Twist and remove safety clip from rocket; save clip in case rocket is not fired.



WARNING: DO NOT STAND TO REAR OF LAUNCHER

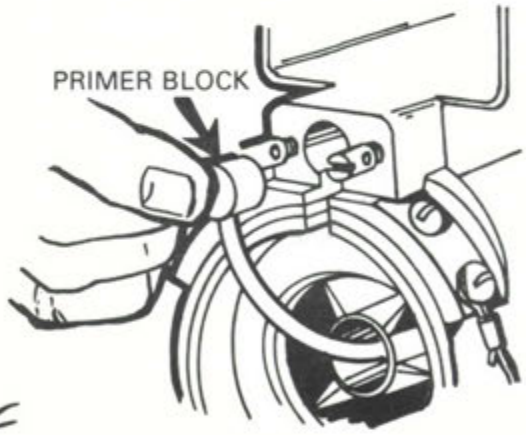
k. Load rocket. Line up primer on rocket with primer housing on launcher.

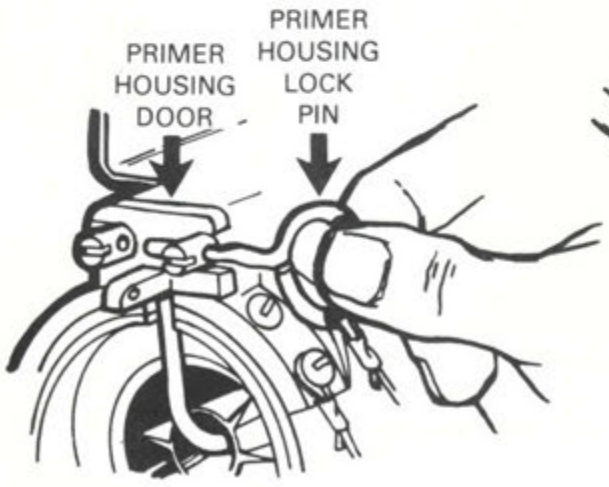


l. Guide primer block into housing.

m. Replace primer housing door.

n. Insert primer housing lock pin.

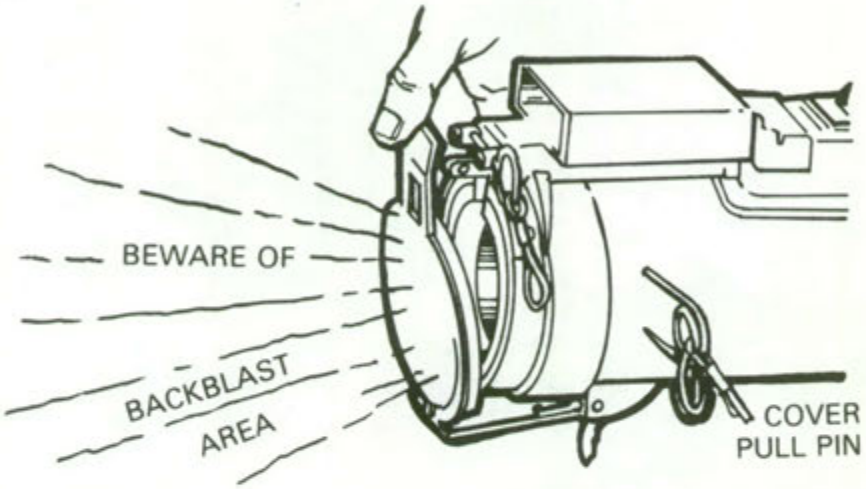


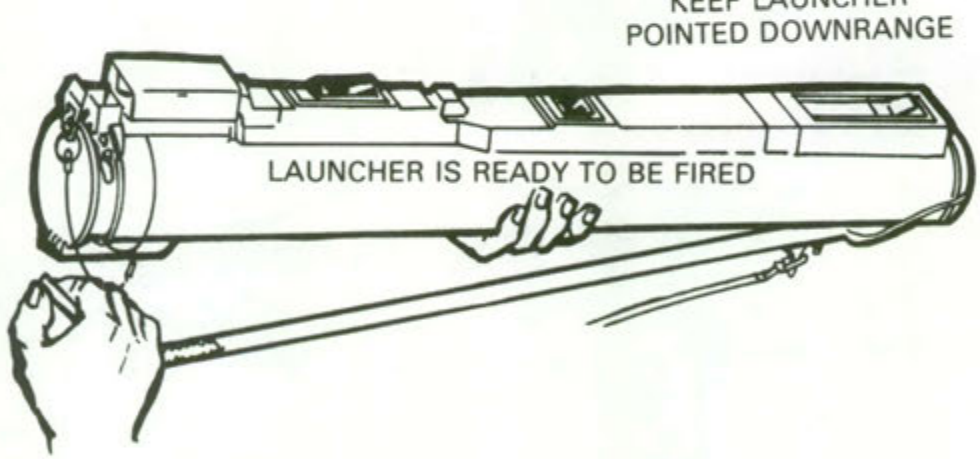


o. Replace cover.

p. Replace cover pull pin.

q. Replace sling assembly.





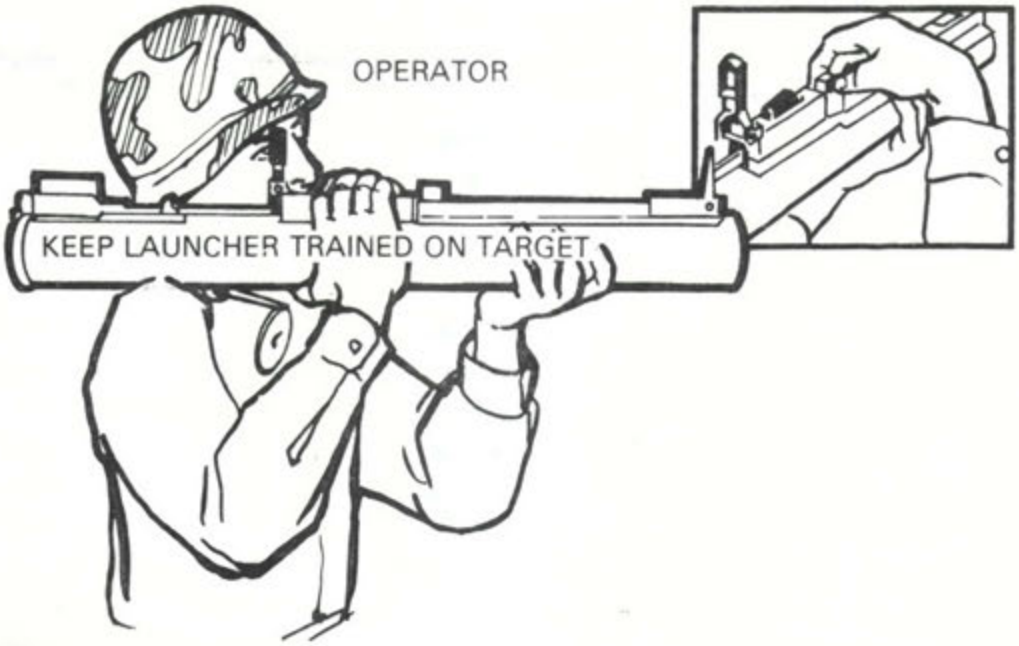
If loaded weapon is not used immediately, instructor should carefully place closed weapon pointing downrange.

Launcher tubes should be kept clean and the sling assembly replaced between firings. Launchers used and reused several times should be lightly cleaned with dry cloth.

WARNING: Weapon should be used, or unloaded, as soon as possible.

3. Unloading:

a. Return safety to SAFE.



b. Remove weapon from shoulder keeping it pointed down range.

c. Partially collapse launcher.

d. Remove primer housing lock-pin.

e. Open primer housing door.

f. Remove primer from housing.

g. Remove rocket.

h. Replace safety clip on the rocket.

i. Place rocket in original container.

REFERENCE:

TM 9-1340-203-20, Rocket Launcher M190 with subcaliber 35mm practice rocket M73, 30 July 1973 (pages 21 thru 33)

TASK NUMBER: 071-318-2205

CONTROL THE EMPLOYMENT OF A SQUAD'S M72A2 LAWs

CONDITIONS:

In a field environment, given a squad with the authorized number of M72A2 LAWs, in a defensive or offensive posture.

STANDARDS:

Establish procedures for LAW employment and control the fires of your squad LAWs to defeat an enemy armor threat, so that:

1. LAW fires are held until target is within range.

2. The method of engagement selected is applicable to the disposition of the LAWs and the nature of the threat.

3. The method selected is used by squad members.

PERFORMANCE MEASURES:

1. Employment Techniques. Three techniques that you can use to achieve a high probability of hit/kill against armored vehicles with your LAWs are: **BLIND, HALT, DESTROY.**

a. BLIND THE ENEMY. See figure 1 for techniques on blinding the enemy.

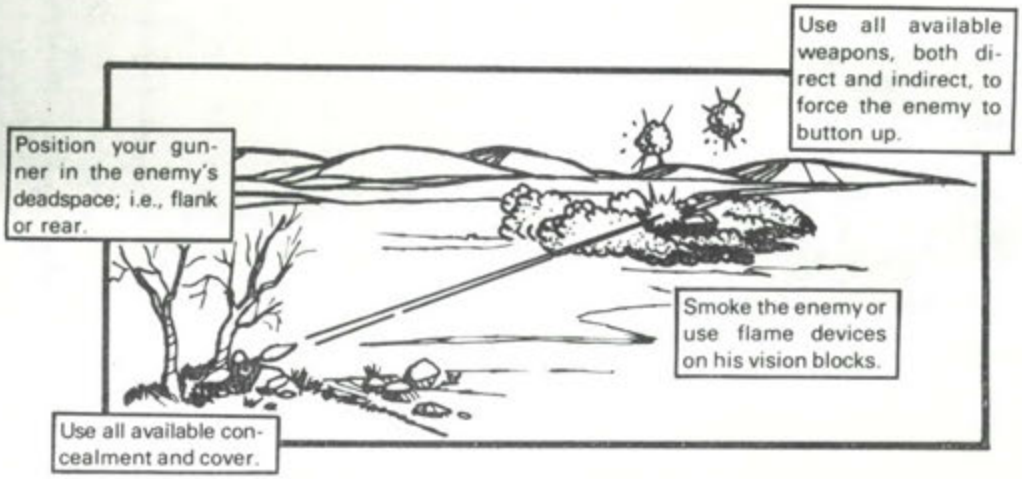
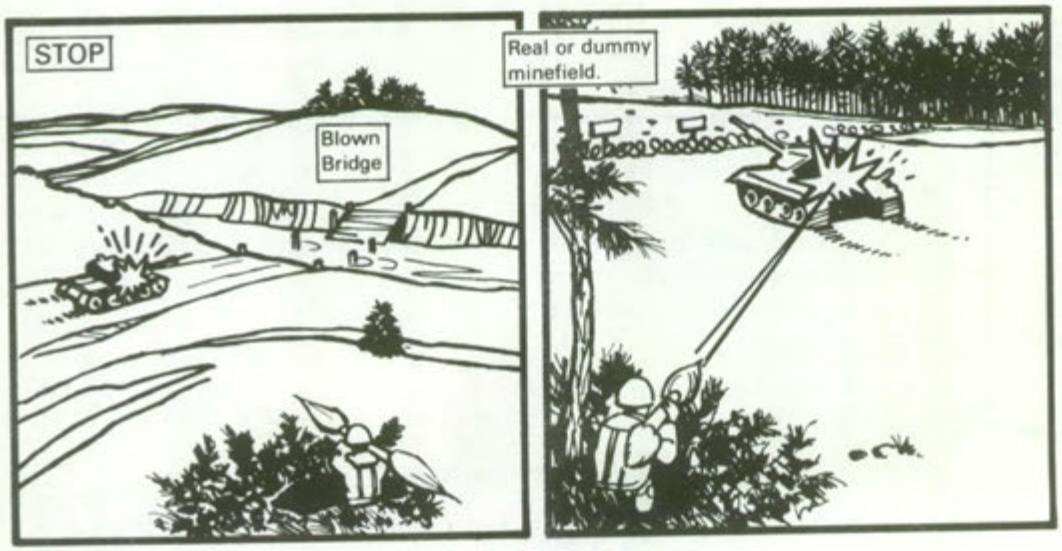


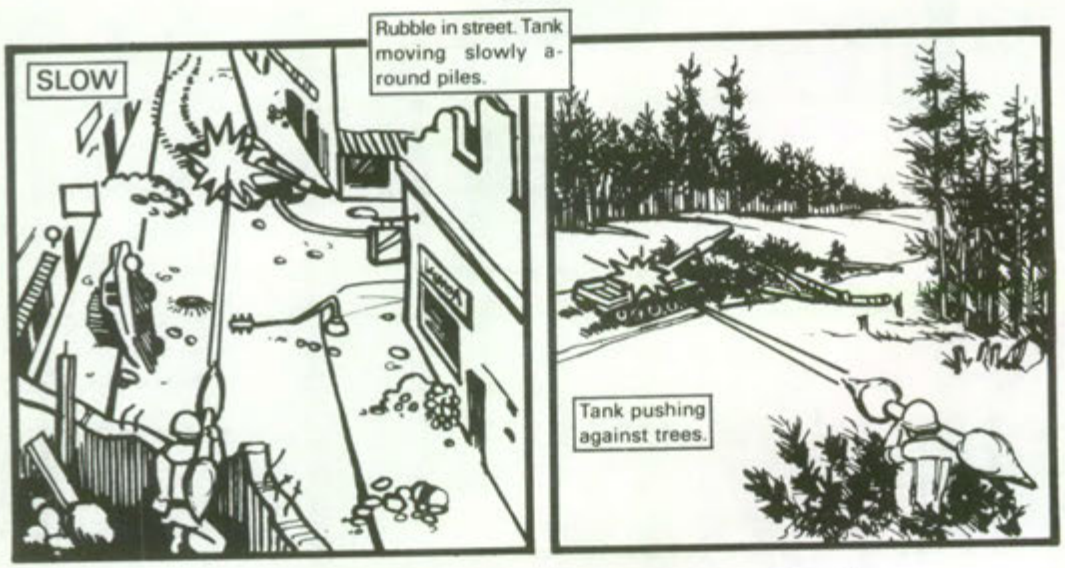
Figure 1.

b. HALT THE ENEMY. Any tactic used to slow or stop the enemy, if only for a few seconds, allows you more time to engage with succeeding shots and therefore gives you a higher hit probability. See figure 2 for some techniques on halting or slowing the enemy.

STOP



SLOW



The LAW is most effective at 250 meters or less. Therefore, LAW should be positioned within 250 meters of these obstacles.

Figure 2.

c. **DESTROY THE ENEMY.** This is the critical step in the employment of your LAWs because the enemy is within approximately 250 meters of your position. Figures 3 and 4 demonstrate the items you should consider.

(1) Range (see figure 3).

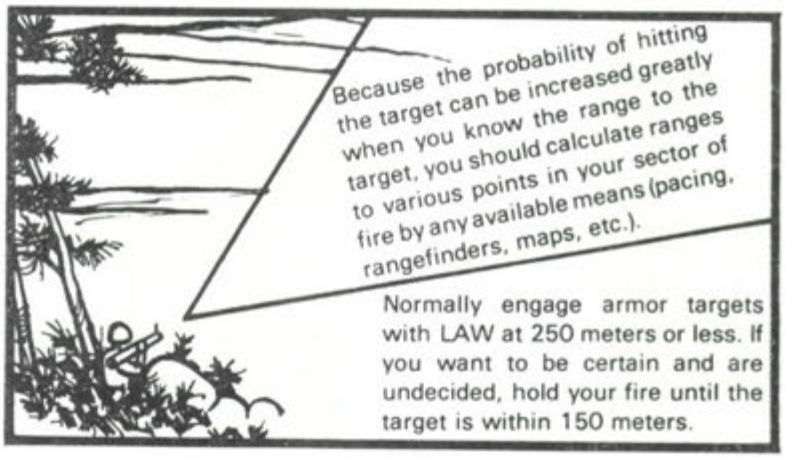


Figure 3.

(2) Tank vulnerability. The most vulnerable areas are those where armor is thinnest (figure 4). When possible, you must direct your attack against the most vulnerable areas.

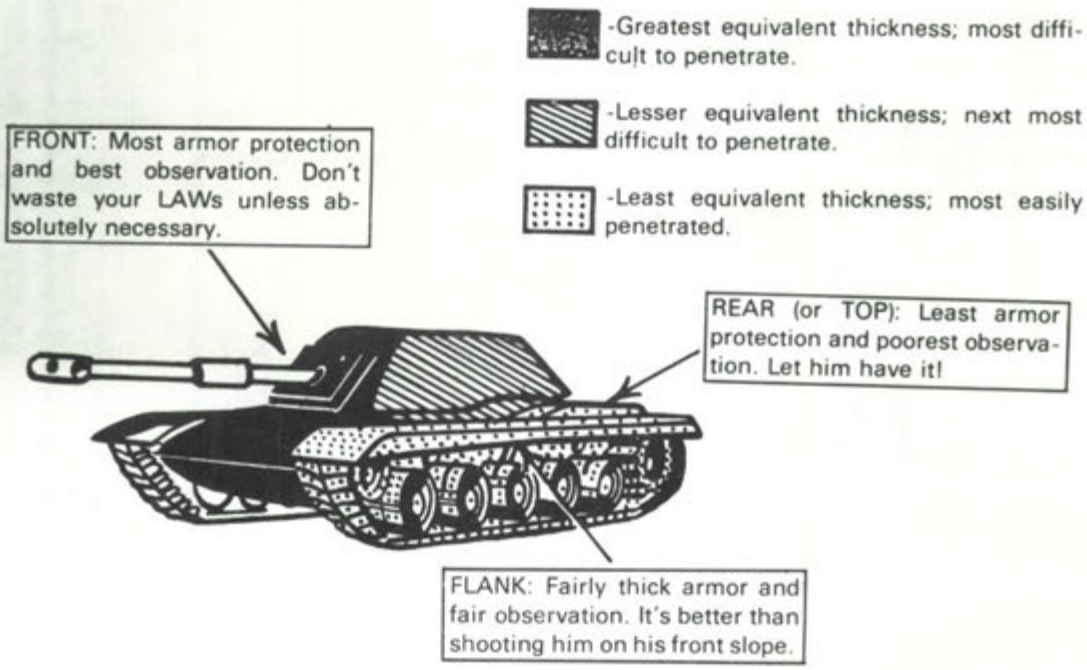


Figure 4.

2. Methods of Engagement. There are four methods which are used to engage with LAWs.

a. Single firing. A target is engaged by one individual firing one LAW, with no succeeding shots. This method is the least desirable due to the odds against achieving a killing shot.

b. Sequence firing. The target is engaged by one individual with two or more LAWs. The two or more LAWs have been extended prior to engaging the target. He observes the impact of his first round and makes adjustments to the range and lead of succeeding rounds until a hit is achieved. The individual will then keep firing until the target is destroyed. See figure 5.

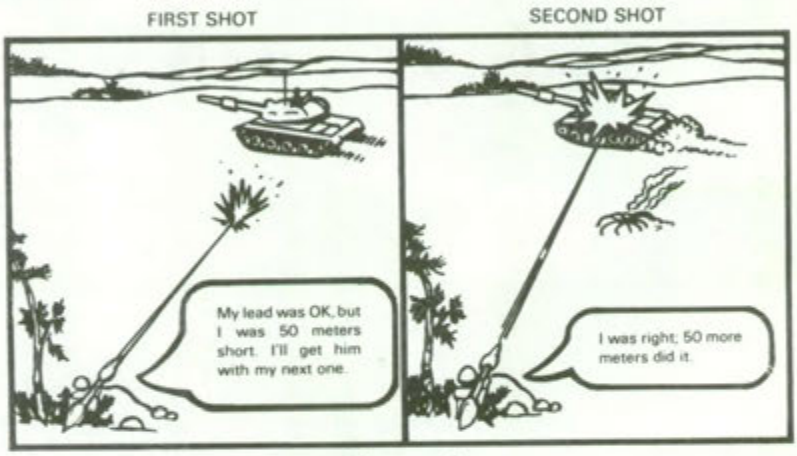


Figure 5.

c. Volley firing. A target is engaged simultaneously by more than one individual, each firing one LAW; on command, succeeding volleys are fired until the target is destroyed (figure 6).

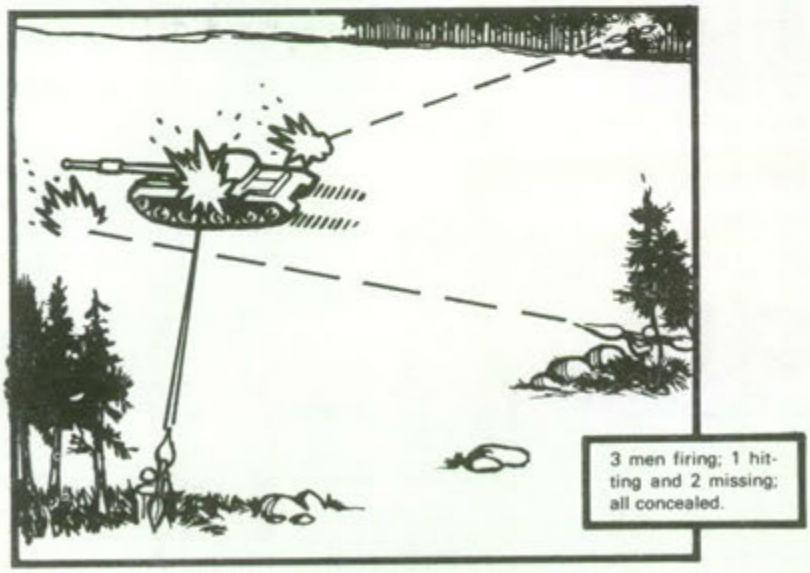


Figure 6.

d. Pair firing. One target is engaged by two or more individuals, each individual with two or more LAWs. The first individual announces the estimated range and leads he will use, and fires. The second individual observes the impact of the first round, announces a revised estimate of range and leads, and fires. The individuals continue exchanging range and lead information until a hit is achieved (figure 7). Both gunners continue to fire until the target is destroyed.

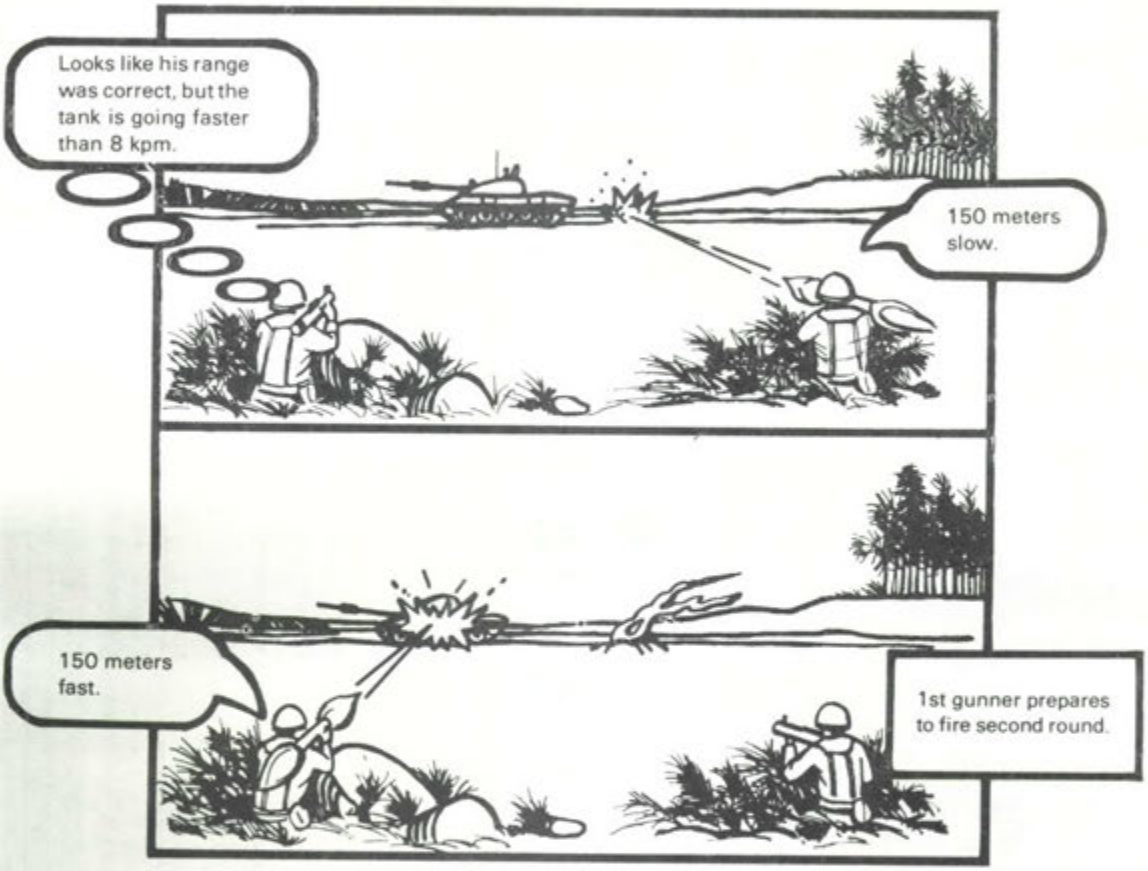


Figure 7.

- REMEMBER -

- Engage with volley method when possible to insure maximum chances of a kill.

- Blind the enemy. Slow or stop him. Then destroy him.

- Use concealed firing positions.

- Hold your fire until you can get a sure hit.

- Engage from flank or rear with single, sequence, pair, or volley method of engagement.

- When range and lead are unknown, use sequence or pair fire to determine them.

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3. Fire Control. A squad leader controls the LAW fires either directly, by voice commands or arm-and-hand signals to the individual doing the firing, or indirectly, through his fire team leaders.

a. Control measures. The squad leader uses the following control measures, either directly or indirectly, to control LAW firings:

(1) Selection of Target and Gunners to Fire. Use target reference points (TRPs), easy to identify, within the squad sector of responsibility to identify the location of the target. Select gunners or teams of gunners to fire on the target.

(2) Method of Engagement. The squad leader determines which method of engagement is appropriate -- single, sequence, pair, or volley fire.

(3) When to Fire. The squad leader gives the command to fire.

(4) When to Cease Fire. The squad leader makes the decision to cease fire only when he determines that the target is destroyed.

b. Fire commands. There are no formal fire commands for a squad leader to remember. A leader can devise his own format or use a local unit SOP (if applicable), but he must always tell the gunner/gunners:

- Who is to shoot (select gunners to fire).
- Where to shoot (target description and location).
- How they must fire (method of engagement to use).
- When they must fire and cease firing.

Method of control may be prearranged and given as part of the oral squad order.

REFERENCES:

TC 7-24, Antiarmor Tactics and Techniques for Mechanized Infantry, Sep 75 (app D, page D-2-25)

RESERVE COMPONENT

TASK NUMBER: 071-319-3612

PLAN AND CONTROL 106-MM RCLR SECTION FIRES

CONDITIONS:

Situation 1: As a 106-mm RCLR section leader, given two vehicle-mounted 106-mm RCLR systems with complete crews and a mission to cover a specific sector of fire (armor kill zone).

Situation 2: Targets move into your sector of fire.

STANDARDS:

Situation 1: The section leader will establish means of fire control to include:

a. Coordinating for mutual antiarmor weapon support.

b. Informing squad leaders of:

(1) Engagement priorities.

(2) Sectors of fire.

(3) Target reference points (TRP).

(4) Phase lines.

(5) Fire patterns.

Situation 2: The section leader will give fire commands so that each squad leader knows what target(s) is to be engaged.

PERFORMANCE MEASURES:

1. **Fire control (see Task: Control 106-mm RCLR squad fires).**

2. **Coordination of Fire.** The section leader coordinates fire within his sector(s) by the use of a fire plan which consists of control measures, a target list, the locations of all firing positions for the 106-mm RCLR in his section, and the targets they can cover from each position. This is a three-step process.

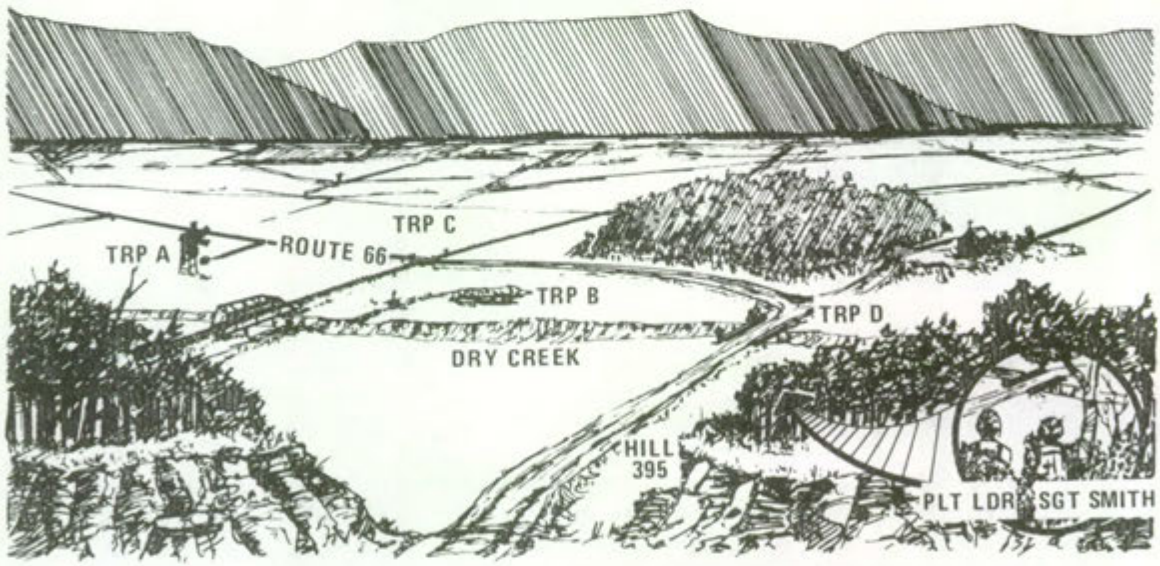
Step 1: The AT platoon leader, company commander, or the weapons platoon leader gives initial directions to the 106-mm RCLR section leader. The directions include:

Primary Sector of Fire	The sector of fire that is covered from the primary firing position.
Secondary Sector of Fire	The sector of fire that the section is prepared to cover, on order.
Target Reference Points	Easily recognizable terrain features which are used to control the massing and shifting of fire.
General Location of Firing Positions	Positions that can cover the sector(s) of fire, while optimizing the capabilities of and providing protection for the crew.

NOTE: If the section leader determines he cannot cover the assigned sector -- because of terrain limitations, etc. -- he must report this immediately to the man who assigned him the sector.

Step 2: The 106-mm RCLR section leader and squad leader pick exact firing positions (primary, several alternates, hide, and supplementary) to cover the assigned sectors of fire, and point out the TRPs to the crews. If required, the section leader may select additional TRPs in the primary sector of fire.

AN EXAMPLE: AT PLT LDR GIVING MISSION TO SECTION LDR



"Sgt Smith, your sector of fire is west of Farmers Highway between Dry Creek and Route 66. Select firing positions in the vicinity of 3d Platoon on Hill 395. Be prepared to fire in Sgt Brown's sector of fire which is east of Farmers Highway and north of Dry Creek, or into Sgt Jones' sector of fire, which is north of Route 66, east of the RR, and west of the cemetery. Mark the target reference points: the windmill is A; the water hole is B; the RT 66 RP intersection is C; RT 66 bridge is D. We are in general support, so take your fire commands from me."

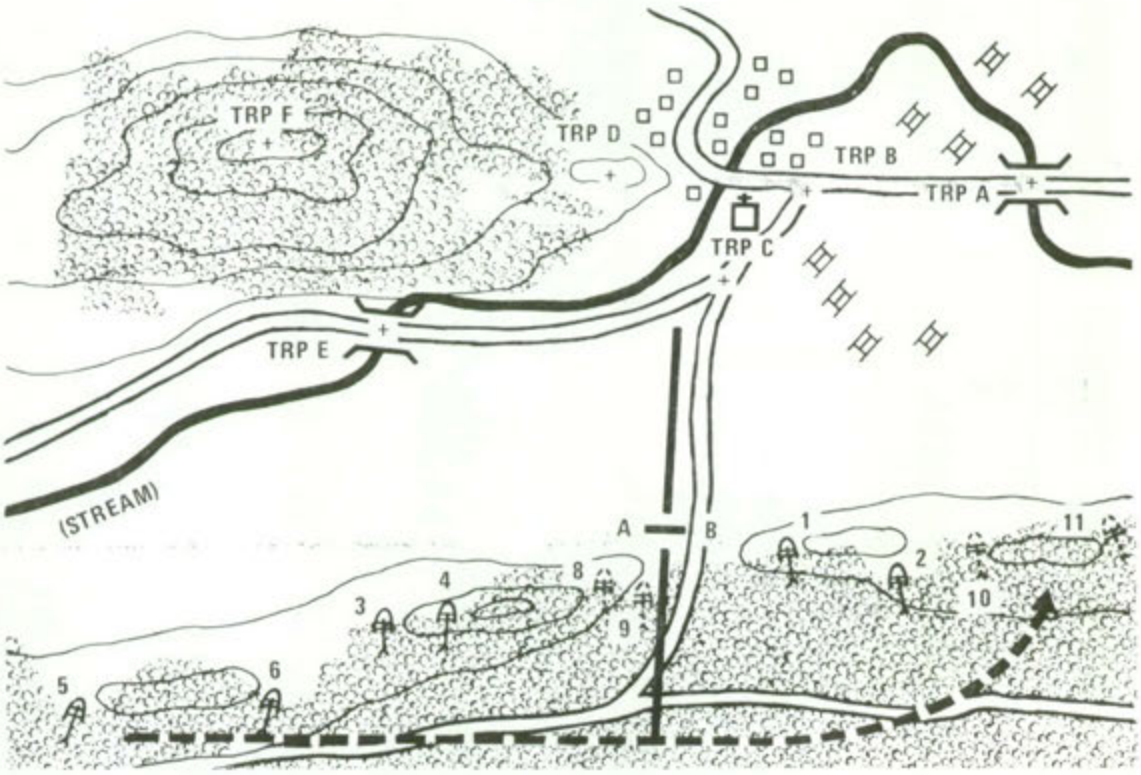
Step 3: The 106-mm RCLR section leader prepares a firing plan and forwards it to his commander as soon as possible after the occupation of a firing position. This plan gives the location of the 106-mm RCLR firing positions and the coverage of TRPs. A TRP is not listed as covered unless the area around the TRP is also coverable by 106-mm RCLR fire. The plan is used as a basis for higher level fire planning. An example of a firing plan would be --

Unit	2d section
Location	QL137432 QL136430
TRPs covered from primary positions	25, 13, 22
TRPs covered from supplementary positions	41, 11

3. **Range Cards (see Task: Prepare an antiarmor range card (106-mm RCLR).** Range cards are always prepared for the primary firing position and for as many supplementary positions as time permits. They are used as a **ready** reference by the 106-mm RCLR gunner for quick and accurate fire.

4. **Control engagement of targets moving into your sector.** Sector leader will issue the correct fire commands so that each squad leader knows what targets are to be engaged. Section leader should plan radio, wire, and/or visual communications to insure that he can issue timely and understandable orders to subordinates.

5. **Fire Control Scenario.** Seldom will the force know exactly when, and in what strength, enemy armor formations will appear; therefore, 106-mm RCLRs will displace often from their primary positions to engage targets in other areas, or to reinforce the fires of other 106-mm RCLRs and/or tanks. Reaction to these unexpected threats is faster and less confusing when on-order firing positions have been identified and reconnoitered (time permitting), and TRPs have been identified. All firing positions that the 106-mm RCLR section might be ordered to occupy and their respective TRPs should be marked on the section leader's map. If time permits, the section leader should reconnoiter these positions. The following illustration gives an example of the use of planned firing positions and TRPs to engage targets in another portion of the battalion sector.



Bn 106 section (attached to Co A) at 5 and 6 is detached and reattached to Co B.

AT Plt Ldr or Plt Sgt picks up section at road, briefs them on situation, and leads them to new sector.

Guide from Co B picks up section, briefs on situation; section enters Co B radio net and moves to prepared positions 10 and 11.

Section occupies new position and engages targets in relation to TRPs as directed.

REFERENCE:

TC 7-24, Antiarmor Tactics and Techniques for Mechanized Infantry, Sep 75 (chap 2, page 2-13 thru 2-17, para 3)

TASK NUMBER: 071-316-2601

PLAN AND CONTROL TOW SECTION FIRES

CONDITIONS:

Situation 1: As a TOW section leader, given two vehicle-mounted TOW systems with complete crews and a mission to cover a specific sector of fire (armor kill zone).

Situation 2: Targets move into your sector of fire.

STANDARDS:

Situation 1: The section leader will establish means of fire control to include:

a. Coordination for mutual antiarmor weapon support.

b. Inform squad leaders of:

(1) Engagement priorities.

(2) Sectors of fire.

(3) Target reference points (TRP).

(4) Phase lines.

(5) Fire patterns.

Situation 2: The section leader will give fire commands so the squad leader knows what target(s) is to be engaged.

PERFORMANCE MEASURES:

1. **Fire Control.** See task: **Control TOW Squad Fires.**

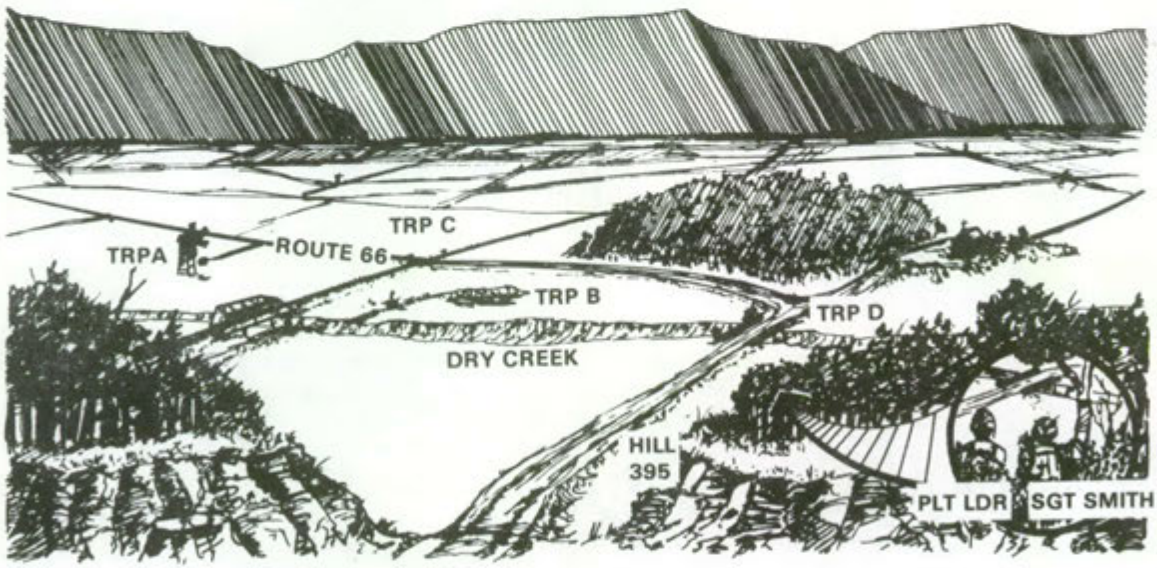
2. **Coordination of Fire.** The section leader coordinates fire within his sector(s) by the use of a fire plan which consists of control measures, a target list, the location of all firing positions for the TOWs in his section, and the targets they can cover from each position. This is a three-step process.

STEP 1: The AT platoon leader, company commander, or the weapons platoon leader gives initial directions to the TOW section leader. The directions include:

Primary sector of fire.	The sector of fire that is covered from the primary and alternate firing positions.
Secondary sector of fire.	The sector of fire that the section is prepared to cover, on order, from the primary or an alternate firing position.
Target reference points.	Easily recognizable terrain features which are used to control the massing and shifting of fire.
General location of firing positions.	Positions that can cover the sector(s) of fire, while optimizing the capabilities of and providing protection for the crew.

NOTE: If the section leader determines he cannot cover the assigned sector -- because of terrain limitations, etc. -- he must report this immediately to the man who assigned him the sector.

AN EXAMPLE: AT PLT LDR GIVING MISSION TO SECTION LDR



"Sgt Smith, your sector of fire is west of Farmers Highway between Dry Creek and Route 66. Select firing positions in the vicinity of 3d Platoon on Hill 395. Be prepared to fire in Sgt Brown's sector of fire which is east of Farmers Highway and north of Dry Creek, or into Sgt Jones' sector of fire, which is north of Route 66, east of the RR, and west of the cemetery. Mark the target reference points; the windmill is A; the water hole is B; the RT 66 RR intersection is C; RT 66 bridge is D. We are in general support so take your fire commands from me."

STEP 2: The TOW section leader and squad leader pick exact firing positions (primary and several alternates) to cover the assigned sectors of fire, and point out the TRPs to the crews. If required, the section leader may select additional TRPs in the primary sector of fire.

STEP 3: The TOW section leader prepares a firing plan and forwards it to the AT platoon leader as soon as possible after the occupation of a firing position. This plan gives the location of the TOW firing positions and the coverage of TRPs. A TRP is not listed as covered unless the area around the TRP is also coverable by TOW fires. The plan is used as a basis for higher level fire planning. An example of a firing plan would be --

Unit	2d section
Location	QL137432 QL136430
TRPs covered from primary positions	25, 13, 22
TRPs covered from supplementary positions	41, 11

3. **Supervise Preparation of Range Cards.** (See Task: **Prepare an Antiarmor Range Card (TOW).**) Range cards are always prepared for the primary firing position, and for as many supplementary positions as time will permit. They are used as a ready reference by the TOW gunner for quick and accurate fire.

REFERENCES:

FM 23-34, TOW Heavy Antitank Weapons System, (TBP)

TASK NUMBER: 051-192-3029

DIRECT A MINEFIELD SITING PARTY

CONDITIONS:

During daylight or darkness, under any environmental conditions, given three men, squad TOE equipment, wooden stakes 2″ x 2″ x 12″ or pickets, and marking tape on reels.

STANDARDS:

On orders from the OIC, the siting party NCO will insure that the following are accomplished:

1. Place boundary stakes or pickets at the beginning and end of each mine strip and at points where strips change direction.

2. Lay marking tape on the centerline of each strip, lane, and traffic path as directed.

3. Augment other parties as directed.

PERFORMANCE MEASURES:

NOTE: The standard pattern minefield can be laid from left to right or right to left when facing the enemy.

1. The OIC will indicate the location of the starting point of the last lettered strip (strip C).

a. Two members of the siting party drive a stake or picket to mark the location.

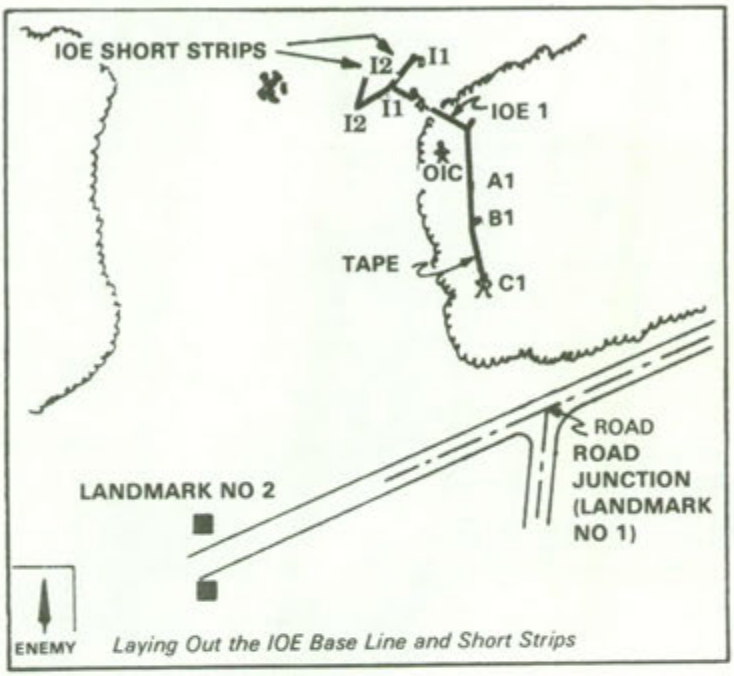
NOTE: In this task summary, an example minefield with three lettered strips laid right to left when facing the enemy will be used.

b. The OIC will then move toward the enemy and indicate the location of the starting point of strip B.

(1) Two members drive a stake or picket to mark the location and two members lay the boundary tape between the two stakes. The tape is fastened to the ground at frequent intervals to prevent movement.

NOTE: The strip centerlines should not be parallel and must be at least 15 meters apart.

(2) The procedure described above will be followed until the starting points of each lettered strip and the TOE strip have been staked and the marking tape laid along the boundary, as shown below.



Laying Out the IOE Base Line and Short Strips

NOTE: Tape reels are left where tape runs out. All stakes are driven flush with the ground.

2. Laying out the irregular outer edge (IOE) base line and its short strips.

a. At the boundary stake of the IOE strip, the OIC will give instructions and a sketch on how to site the IOE base line and the regular mine strip centerlines.

b. The NCO will then move to the first turning point of the base line of the IOE strip and two members of the siting party will drive a stake or picket to mark the location.

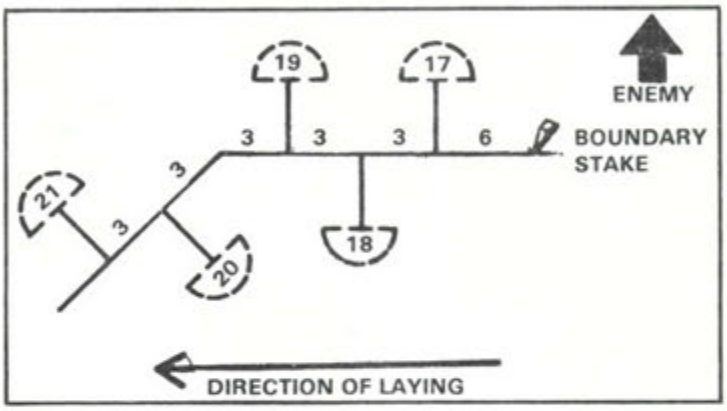
(1) No mine clusters are placed on the IOE base line.

(2) The turning points are marked in consecutive order beginning with I1.

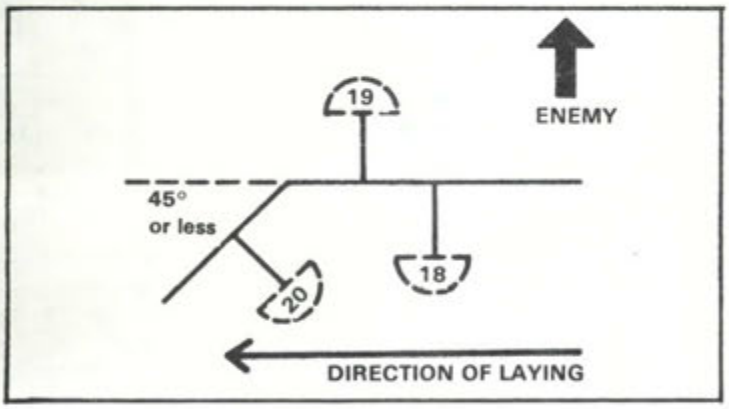
(3) From the base line of the IOE, short strips are extended from the turning points at irregular angles (toward and only on the enemy side) and are identified by turning point markers. At the end of each of these short strips, a stake is driven and, for recording purposes, marked in consecutive order beginning with I1.

3. Siting a regularly lettered strip.

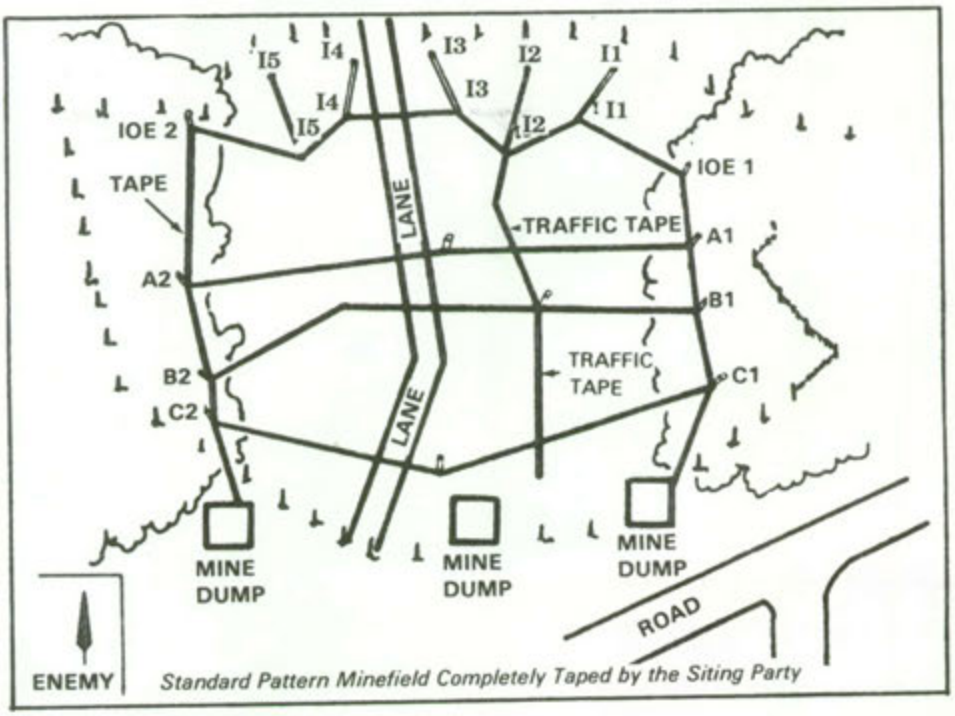
a. When siting a segment of a regularly lettered minefield strip, insure that the turning point (end of the segment) falls on a 3-meter increment along the strip centerline from the base mine of the last cluster in that segment. If the distance from the last cluster in the segment to the turning point is less than 3 meters/4 paces, adjust the turning point so that you will have 3 meters/4 paces, as shown below.



b. The angle at any given turning point must not exceed 45 degrees. A maximum of a 45-degree angle at the turning point will insure the 2-meter minimum between clusters.



4. After completing the staking of centerlines, install lane tapes and traffic tapes, in that order. Traffic tapes are needed to reduce the amount of walking by laying party personnel when obtaining mines from dumps, and to assist in camouflage by reducing the amount of traffic on strip centerlines. Traffic tapes are laid approximately perpendicular to the minefield trace at about 100-meter intervals. Tapes to mark safety lanes for vehicles and patrols also can be used as traffic tapes, as shown below.



Standard Pattern Minefield Completely Taped by the Siting Party

5. Upon completion, the siting party augments other parties as directed.

REFERENCE:

FM 20-32, Mine/Countermine Operations at the Company Level, Nov 76 (app H, pages 189 thru 194)

TASK NUMBER: 051-192-3030

DIRECT A MINEFIELD LAYING PARTY

CONDITIONS:

Under any environmental conditions, with a properly sited minefield, six to eight men, TOE tools and equipment, required landmines, mission directive that specifies cluster composition, and a notebook or strip feeder report.

CAUTION: NO ANTIHANDLING DEVICES ARE AUTHORIZED FOR USE WHEN INSTALLING A DELIBERATE PROTECTIVE MINEFIELD. ALL STANDARDS AND PERFORMANCE MEASURES REFERRING TO ANTIHANDLING DEVICES WILL BE OMITTED WHEN THIS TASK IS APPLIED TO DELIBERATE PROTECTIVE MINEFIELDS.

STANDARDS:

The NCOIC of the laying party will:

1. Organize the laying party into layers and fuzers.
2. Designate the location for the base mine of each cluster.
3. Place the mines of each cluster exactly where they are to be buried.
4. Indicate each mine to be equipped with antihandling device(s).
5. Record the type and location of each mine equipped with an antihandling device.
6. Enforce minefield discipline.
7. Collect and turn over to the platoon sergeant all safety pins/clips.
8. Check mine strip for police and proper camouflage of all mines.

PERFORMANCE MEASURES:

1. Organize the laying party.

a. Designate all personnel in the laying party as layers except two men designated as fuzers.

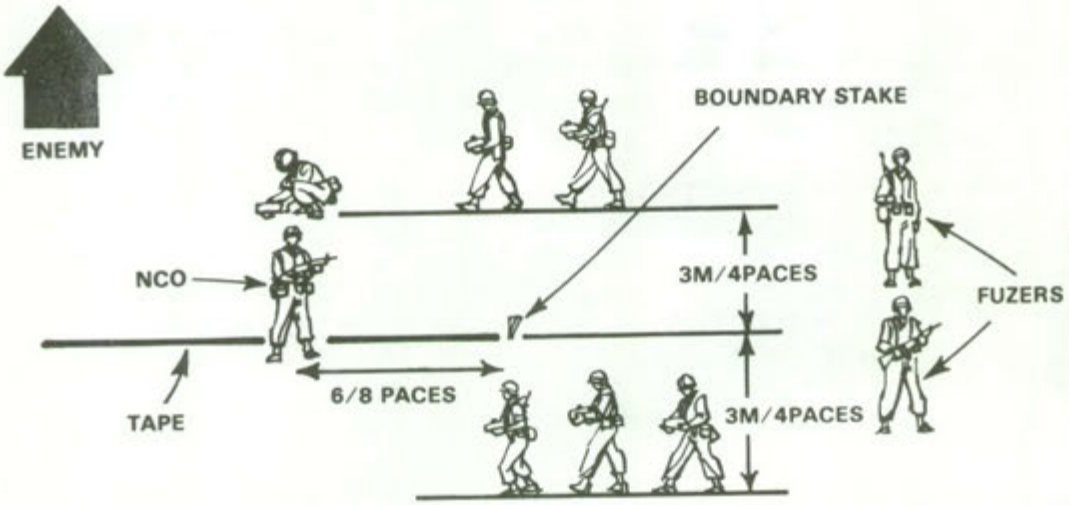
b. The fuzers are to fuze and arm all mines.

2. Install mines in a regular lettered strip.

a. At the mine dump, the NCO will have the layers pick up a maximum load of mines (AT mines, 60 pounds; AP mines, one crate).

b. The fuzers carry all fuzes and detonators.

c. The NCO will then move to the boundary stake of the strip to be laid, and form the layers in two columns to his rear and 6 meters apart, centered on the strip centerline, as shown below.



Laying Mines on a Standard Strip

d. The NCO then measures along the centerline 6 meters/8 paces and then, on the enemy side of the strip, indicates the placement of the base mine of the first cluster. The first layer on that side of the strip places a mine on the ground where the NCO indicates.

(1) The NCO then measures 3 meters/4 paces along the centerline and then, on the friendly side of the strip, indicates the location of the base mine of the second cluster.

(2) As the initial load of mines is laid, each layer returns to the nearest mine dump for another load.

(3) This procedure is followed until the last cluster, located 6 meters/8 paces from the other boundary stake, is laid.

(4) The NCO then has the layers get AP mines from the mine dump and tells them the number and types of mines to be placed next to the base AT mine of each cluster.

(5) As the AP mines are being placed, the NCO goes along the strip placing all AP mines in each cluster (within a 2-meter semicircle of the base mine) where he wants them. He also places a spool of tripwire next to each

mine that is to be tripwire-actuated, and indicates the AT mines to be equipped with antihandling devices by turning them upside down.

e. The cluster composition for each strip is specified by the OIC and the following must be observed.

(1) The number of AP mines in each cluster must be the same.

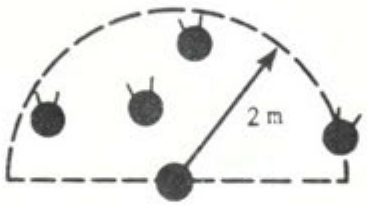
(2) Different clusters may contain different types of AT mines.

(3) Different types of AP mines may be used in a cluster.

f. Individual mine clusters can consists of:

(1) Single, individually laid AT or AP mines.

(2) One AT mine plus up to four AP mines within or on a 2-meter semicircle of the base mine, as shown below.



(3) The base mine of a cluster is normally an AT mine. If no AT mine is to be installed in the cluster, the largest metallic AP mine must be used as the base mine so that it is easily detectable.

g. Tripwire-actuated AP mines must always be placed on the enemy side of each mine strip with not more than one tripwire-actuated mine in a cluster. Tripwires should be angled toward the enemy and should not be within 2 meters of a cluster or the border of a minefield lane or boundary. Tripwires will not exceed the casualty radius of the mine. Tripwires will not be considered as antilifting devices when employed with M16 or M18A1 mines.

h. Numbering clusters.

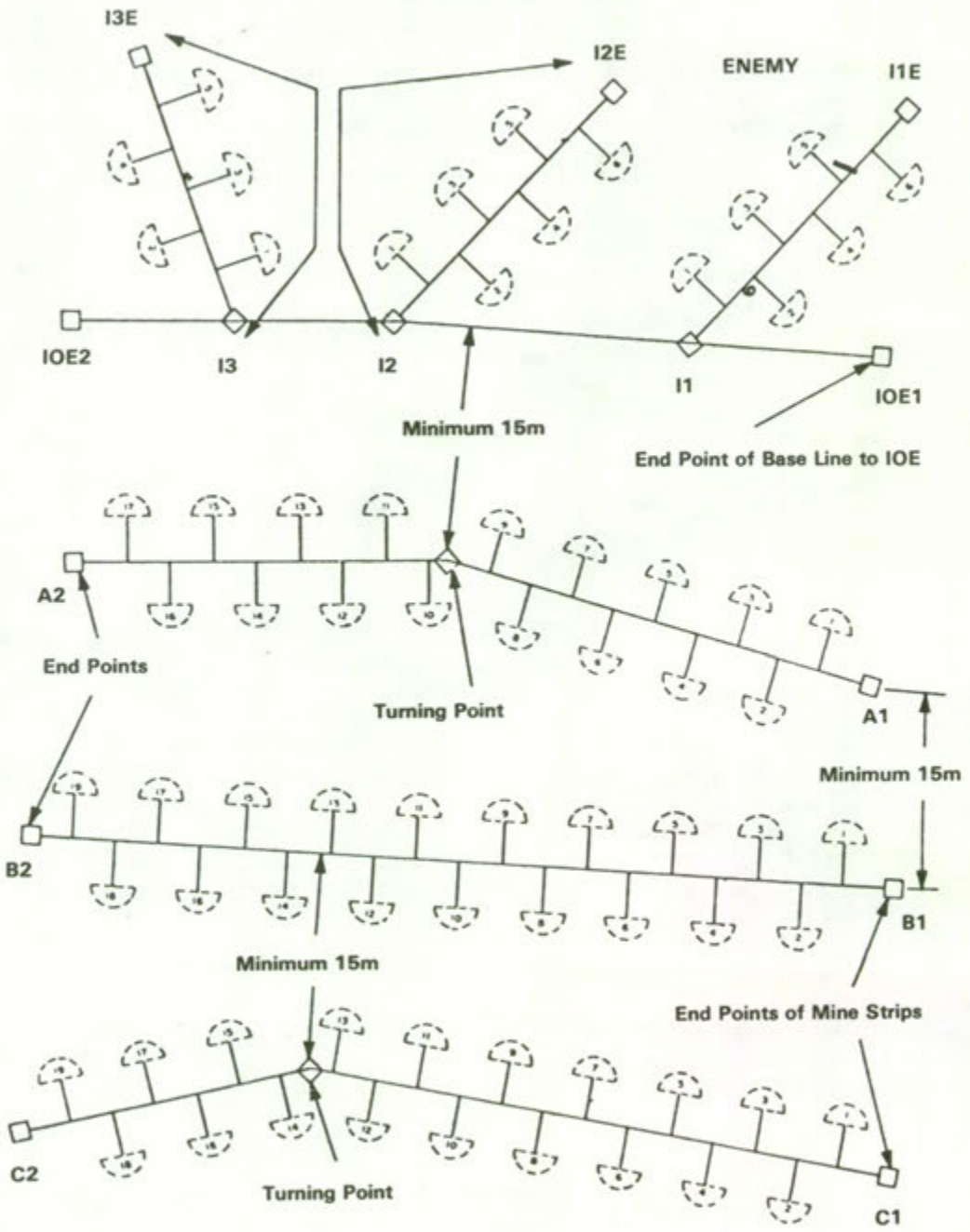
(1) Clusters are numbered to facilitate identification for recovery or removal of mines and also to identify in the NOTES section of the DA Form 1355 mines with tripwires, mines with antihandling devices, and omitted clusters.

(2) All clusters in each strip are assigned a number. All clusters on the enemy side will be assigned odd numbers. Examples of how to number clusters in a minefield, whether working from right to left or left to right when facing the enemy, are shown below.

315-389 O - 80 - 9

Method of Numbering Clusters in a Minefield Laid from Right to Left

Marking of Short Mine Strips of IOE



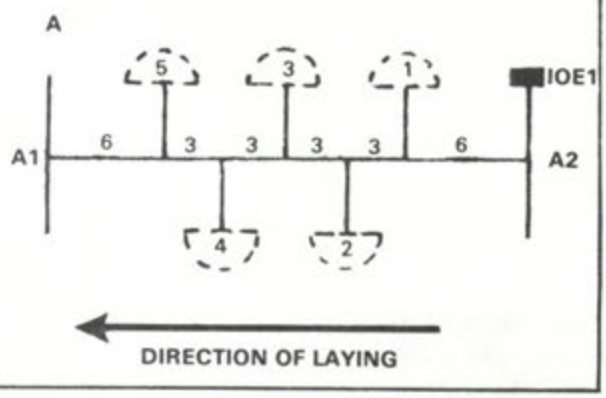
NOTES

(1) Marking of end points with A1 and A2, for example, will indicate laying direction of a minefield.

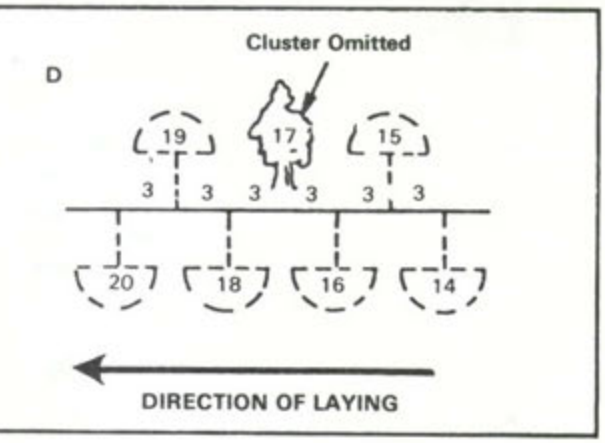
(2) Laying will always begin at Point No. 1.

(3) Odd numbers on enemy side of the strip.

The first cluster and last cluster on any given strip is 6 meters from any boundary. One will always have the safe distance of 2 meters from the edge of the cluster to the boundary or line.



If terrain conditions prevent laying of a cluster, the minefield pattern will be maintained.
The omitted cluster is to be listed in the minefield record.



i. When all mines are positioned, layers get shovels or intrenching tools. Each layer is assigned to dig the holes for all mines in one cluster. The spoil removed in digging the holes is placed in sandbags and left beside the hole for the base mine. Each layer checks the positioning of mines in holes, but leaves the mines beside the holes, not in them. Layers also anchor any tripwires with nails or stakes, and wrap the loose ends around the fuzes. (Tripwires must not be longer than the casualty radius of the mine.)

j. When digging has progressed at least 25 meters from the starting point, the fuzers begin the arming operation.

(1) One man arms all mines in a cluster, beginning with the mine farthest from the centerline and working back, places mines in holes, packs dirt around mines, attaches tripwires, arms and camouflages mines, and then places sandbags containing soil on the centerline tape opposite the base mine of the cluster.

k. The fuzers, when arming mines, will keep their feet toward the centerline and stay at least 25 meters from other personnel at all times.

l. When a cluster contains a mine to be equipped with an antihandling device, that cluster is usually left unarmed until all clusters within 30 meters/40 paces are armed and all personnel are a safe distance away.

m .Mines located in lanes are not buried initially. They are placed there to prevent confusion in counting cluster numbers. Holes for these mines are not dug and the mines are carried to the lane entrance for storing as directed by the OIC. These mines may be buried later to close lanes.

n. The NCO must receive the safety clips/pins from the fuzers and verify the count.

o. After all mines are armed and concealed, the NCO checks the strip and organizes the party to pick up sandbags, tape, and debris.

p. Upon completion of this task, the NCO must turn over all safety clips/pins to the platoon sergeant, and all information required pertaining to that particular strip to be recorded in the NOTES section of the DA Form 1355 to the recording party NCO.

q. A recommended method is to construct and use a STRIP FEEDER REPORT. An example format for a strip feeder is shown below.

NOTE: The strip cluster composition is normally given by the OIC.

3. Install mines in the IOE (irregular outer edge) strip.

NOTE: As a squad leader, you can be placed in charge of laying the IOE, a regular lettered strip, or both, during the installation of a minefield.

a. The NCO in charge of laying the IOE will be informed of the IOE cluster composition, and the total number of clusters to contain mines.

b. The procedures followed for laying out the mines, fuzing, arming, and digging the holes are the same as for a regular lettered strip with the exception of the short strips of the IOE.

c. The first cluster in the IOE short strip will always be on the side of the strip centerline closest to the enemy direction of approach. (If a short strip is parallel to the enemy approach, the NCO determines which side of the short strip centerline will be numbered odd or even.)

d. Clusters on the short strips may not be closer than 2 meters to the IOE base line, another cluster, or the left or right hand boundary markers.

SAMPLE

STRIP FEEDER REPORT

STRIP _____

1. Strip Cluster Composition: AT _____ APF _____ APB _____

2. Live Clusters: _____

3. Omitted Clusters: Lanes _____

Obstacles _____

4. Clusters with AHDs: _____

5. Clusters with tripwired AP mines: _____

6. Total mines installed by type: AT _____ / _____

APF _____ / _____

APB _____ / _____

NOTES

REFERENCE:

FM 20-32, Mine/Countermine Operations at the Company Level, Nov 76 (app H, page 173)

TASK NUMBER: 071-328-5306

ADVISE PERSONNEL PREPARING FOR SKILL QUALIFICATION TEST (SQT)

CONDITIONS:

Given required Soldier's Manuals and an appropriate SQT Notice for the individual's skill level and MOS; knowledge of where additional sources of training publications, material, and devices can be found; knowledge of the Enlisted Personnel Management System (EPMS); the available time necessary prior to the test period; and a requirement to advise soldiers under your supervision on how they should prepare themselves to take the SQT.

STANDARDS:

1. Insure that your subordinates know that Soldier's Manuals are the source document for the SQT.

2. Insure that your subordinates know that promotion to the next higher grade depends on how well they do on the SQT.

3. Insure that your subordinates know how to locate in the applicable Soldier's Manual(s) each task identified as a test item in his SQT Notice.

4. Insure that your subordinates understand what must be done to master the task as stated in the Soldier's Manual(s).

5. Provide time and assistance to those requiring it.

PERFORMANCE MEASURES:

1. **Enlisted Personnel Management System (EPMS).**

a. Under EPMS, enlisted soldiers have a complete career development program. It affects the training, evaluation, classification, assignment, and promotion of every enlisted soldier in the Army. This system is designed to provide the right number of qualified people to carry out the Army's missions. There are five skill levels that correspond to a soldier's progression in grade. A Soldier's Manual has been developed for each skill level identified below and it contains those critical tasks that the soldier must be able to perform in his MOS:

GRADE	SKILL LEVEL
E1, 2, 3, & 4	SL 1
E5	SL 2
E6	SL 3
E7	SL 4
E8 & 9	SL 5

b. Under EPMS, the soldier is to be evaluated, classified, and promoted to the next higher grade. This is a significant change from the past when a soldier was first promoted, then classified into a higher skill level, and then evaluated. Now a soldier is evaluated by his EER(s)/SEER(s) and SQT, classified by his SQT results, and promoted based on the results of both. A soldier is not eligible to compete for promotion unless he has qualified for the next higher skill level.

2. **Study References (Training Literature, Materials, and Devices).**

a. Unless it is specified in the individual's SQT Notice, **the only training literature a soldier requires in order to take and pass his SQT are those Soldier's Manuals for his skill level.** A given SM gives only that minimal information required to accomplish the task. If he feels that he wants or needs more training than what is shown in the SM, he must go to other literature, material, or devices. The following is a detailed breakdown of what SMs a soldier will require in order to prepare for his SQT, depending on his paygrade and what SQT he will take.

PAYGRADE	SL	SM(s) REQUIRED	SQT HE TAKES
E1, 2, 3, & 4	1	1 & 2	2 (for E4)
E5	2	1, 2, & 3	3
E6	3	1, 2, 3, & 4	4
E7	4	1, 2, 3, 4, & 5	5

NOTE: Currently, there is no SQT for soldiers above SL 4.

b. If a soldier feels he needs more training than that given in a SM task:

(1) He can refer to the reference section of the task(s) in question for further information on training for that particular task.

(2) Remember, the SQT is based upon the SM. You must caution the soldier that references other than the SM may contain conflicting information. If this is the case, then the SM is always correct for SQT purposes.

c. Training Materials and Devices. These are the major sources of additional training materials and devices:

(1) Training Extension Course (TEC Lessons).

(2) Unit or Individual Learning Centers (ILCs).

(3) Training Aid Support Office (TASO).

3. **The SQT Notice.**

a. Purpose. The SQT Notice is prepared to alert and inform the soldier on which tasks in his primary or secondary military occupation speciality (PMOS or SMOS) he will be tested.

b. Selection of Tasks. All tasks in the SQT Notice were taken from SMs for the MOS in which he will be tested. Task selection for testing SLs 1 through 5 is based upon the following three questions:

(1) How much does the performance of the task contribute to the successful operation or maintenance of critical combat systems?

(2) How much does the performance of the task contribute to the successful completion of critical activities and mission in the Army Training and Evaluation Program (ARTEP)?

(3) How much evidence is there that the task is often performed incorrectly?

c. Explanation of the SQT Components. The three components are:

(1) Written component (WC). It is included in all SQTs, has 30 to 50 tasks (scoreable units), uses a test booklet and answer sheet, and is given during a 6-month test period, annually. A scoreable unit (a task) has between 1 and 10 questions.

(2) Hands-on component (HOC). The HOC is included in many SQTs (it is in all 11B/C tests). It requires a soldier to perform actual tasks in a job-like situation. It is also given during a 6-month test period, annually.

(3) Performance certification component (PCC). The PCC is included in some SQTs (it is in all 11B/C tests), has 1 to 10 tasks (currently only 2 tasks for 11B), requires a soldier's supervisor to observe the soldier doing the tasks on the job, and can be given up to 9 months prior to the test period.

d. Explanation of SQT Tracking. The 11B SQTs are currently tracked only in the HOC (infantry and mechanized infantry). The 11C SQT is tracked in all three components for either the 81-mm or 107-mm (4.2-in) mortar. The SQT Notice provides requirements for the individual and the

supervisor and makes them equally responsible to insure that the correct track is taken. The supervisor is responsible for insuring that his subordinates are tested on the right equipment and bring the appropriate track selection notice, properly completed, to the test site(s). The following criteria should be used in determining the correct track for the soldier to take.

(1) If a soldier has been working in his present duty position for less than 90 days as of the date he begins taking his SQT, the soldier and his supervisor will decide which track he will take. Soldiers serving in the track for less than 90 days can choose either track, depending upon his last duty position and how much training he has received in his present duty position. The supervisor should encourage the soldier to choose the track that will give him the best advantage. See figure 1 for track selection notices.

(2) If a soldier has been working in his present duty position for more than 90 days, as of the date he begins taking his SQT, then he must take the track for that duty position. See figure 1 for track selection notices.

e. The SQT Notice also tells you the task number, task title, test unit number, how many questions there are to the unit, and how many you must answer to score a GO for that unit. The following is the listing of the number of questions a soldier must answer correctly to score a GO for a unit:

Number of Questions	Number Correct to Score a GO
1	1
2	2
3	3
4	3
5	4
6	5
7	5
8	6
9	7
10	8

The SQT Notice also has a sample question for each scoreable unit unless there is only one question to that unit. (See figure 2.) Finally, it tells you where in your SMs to study in order to pass that scoreable unit.

SQT 2, MOS 11B
TRACK SELECTION NOTICE

Soldier MUST BRING THIS NOTICE to the hands-on component and written component test sites.

Soldier's Name _____

Unit _____

Track Selection (Check one)
Track 1: Infantry _____
Track 2: Mechanized Infantry _____

_____
Supervisor's Signature

_____
Date

SQT2, MOS 11C
TRACK SELECTION NOTICE

Soldier *must* bring this notice to the **written component** test site.

SOLDIER'S NAME _____

UNIT _____

Track Selection (Check one)
81-mm Mortar (Track 1)
107-mm (4.2-in) Mortar (Track 2)

SUPERVISOR _____
DATE _____

SQT 2, MOS 11C
TRACK SELECTION NOTICE

Soldier *must* bring this notice to the **hands-on component** test site.

SOLDIER'S NAME _____

UNIT _____

Track Selection (Check one)
81-mm Mortar (Track 1)
107-mm (4.2-in) Mortar (Track 2)

SUPERVISOR _____
DATE _____

Figure 1.

Task Number	Task Title
(1) 081-831-1008	Apply First Aid Measures for Burns

Unit 1 consists of seven questions, five of which you must answer correctly to score a GO. You must know what actions you should take or not take to apply first aid measures for burns. You must also know how to administer the salt packet to a burn casualty. Refer to page 2-I-A-6.1 in your SM.

SAMPLE

General Situation. You are in a defensive position. During an enemy attack, the soldier in the position with you was burned.

QUESTION. If the size of the burn is less than one square foot, what action should you take?

A. Give the casualty the contents of the salt packet dissolved in a canteen full of cool water.

B. Have the casualty drink the water from his canteen.

C. Apply the contents of the salt packet to the burn and cover it with a sterile dressing.

Figure 2.

4. **The Skill Qualification Test (SQT).**

a. General Information. The purpose of the skill qualification test is to improve the combat effectiveness of Army units by getting soldiers to do their jobs better.

(1) Each soldier should receive his SQT Notice 60 to 90 days prior to the date he is to begin taking his SQT.

(2) PCC tasks are tasks that are not suited for either the WC or HOC. Certifiable tasks are those whose length or complexity make them unsuitable for HOC testing and currently include such tasks as individual weapons qualification, physical conditioning evaluation, and (for 11C personnel) the gunner's examination.

(3) A soldier is tested by SQT-2 on the first regularly scheduled test after his 12th month of service. Presently, personnel below paygrade E4 will not be scheduled for testing. After his first test, the soldier will be tested in his PMOS every 2 years.

(4) Secondary MOS (SMOS) testing by SQT is conducted only once during a soldier's career and will occur during the second regularly administered SQT for the MOS after the soldier attains SL 3 in his PMOS.

(5) A soldier may request to take/retake the SQT each year in order to improve his score. However, he must request it. Otherwise, as long as he has verified or qualified, he will be tested only every 2 years.

b. Scoring. The soldier's score on his SQT is used to verify his current skill level or to qualify him for promotion to the next higher skill level.

(1) If a soldier achieves the announced verification score on his SQT, he will verify his MOS and skill level of proficiency. The soldier may then choose to retake the test the next year in order to improve his score and qualify for the next higher skill level.

(2) If a soldier achieves the announced qualification score, he will qualify for the next higher skill level and he will be eligible to compete for promotion to the next higher grade.

(3) If a soldier fails to attain the verification score, he is considered unqualified at his current skill level and will be required to take the test again the following year. If he fails again, he becomes subject to reclassification.

(4) Verification and qualification scores will be established by TRADOC.

c. Year-round Training and Testing. Training for the SQTs should not be a crash effort triggered by receipt of the SQT Notice. This may leave soldiers at low levels of proficiency for many months. Training should not be schedules around SQT Notices. This is not the answer if you and your unit are serious about maintaining a ready unit at all times and being prepared for your annual ARTEP. It is suggested that a series of small SQTs, or "mini SQTs," be conducted periodically during the year by you, your team leaders, or other individuals in your chain of command.

REFERENCES:

DA Pam 350- -SQT- A Guide for Leaders

TASK NUMBER: 121-030-3501

PREPARE THE INDORSER'S SECTION OF AN ENLISTED EVALUATION REPORT (EER)

CONDITIONS:

Given DA Pamphlet 623-1, a DA form 2166-5 (with the rater's section completely filled in) and a No. 2 lead pencil.

STANDARDS:

You will, as outlined in DA Pam 623-1 (Preparation of Enlisted Evaluation Report):

1. Review parts I, II, and III of DA Form 2166-5; identify and correct all discrepancies.

2. Complete parts II, III, and IV (indorser's section) of DA Form 2166-5.

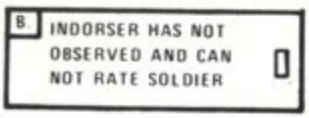
PERFORMANCE MEASURES:

1. **Parts I through VII.** Parts I and VII of the report will be completed by the Military Personnel Officer (MILPO). Review the rater's section of parts I (MILPO), II, and III to insure they are correct and complete. Complete the indorser's section of parts II, III, and IV. Part V will be completed by the individual being rated.

2. **Part II.**

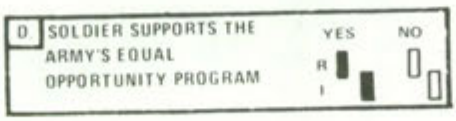
a. **Block A.** Actual duties performed by the rated soldier will be filled in by the rater.

b. **Block B.** This block is applicable only to the indorser; self-explanatory.



c. **Block C.** Two selections are possible. Check the appropriate box to indicate frequency of contact and, if applicable, also check "reports and records." The indorser will fill in the line following "I" only.

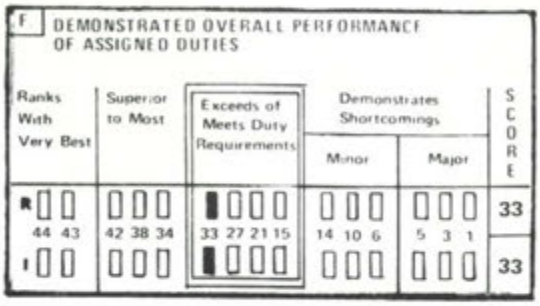
d. **Block D.** Mark the "yes" or "no" block as appropriate. A "no" response here requires explanation in Block J.



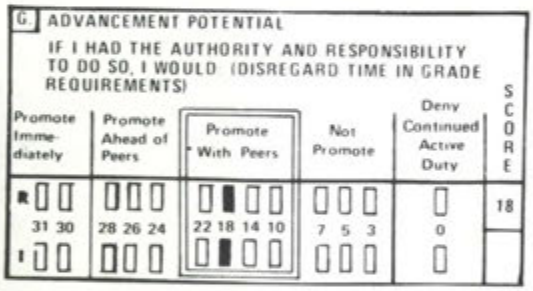
e. **Block E.** Performance Traits. Rate the individual carefully on each of the ten performance traits by marking the appropriate box for each trait. Mark ratings in soft pencil on the basis of the given rating scale. Enter the score for each trait in black ink in the score box at the right hand column under "I". Total these scores and enter in the totals box at the bottom of the column, and in the appropriate locations in Block H. Marking procedures are the same for Blocks F and G as in Block E, and the appropriate boxes in Block H. If the score for Block E exceeds 40 or is less than 10, justify in Block J (indorser's section).

E. DUTY PERFORMANCE TRAITS	RANKS WITH VERY BEST	SUPERIOR TO MOST		EXCEEDS OR MEETS DUTY REQUIREMENTS		NEEDS IMPROVEMENTS		SCORE	
						Some	Much		
		5	4	3	2	1	0	R	I
1. Is well informed on all phases of assigned duties. (Scope of knowledge about duties)	R I			■				3	3
2. Carries out orders without constant supervision. (Dependability in performing without supervision)	R I			■				3	3
3. Shows interest and enthusiasm for duties. (Attitude toward duties)	R I			■				3	3
4. Demonstrates qualities of leadership. (Exerts positive influence on others)	R I			■				3	3
5. Seeks out opportunities for self-improvement. (Effort directed toward realization of potential)	R I			■				3	3
6. Displays ability to initiate action without direction from others. (Aggressive pursuit of methods to improve duty performance)	R I					■		1	1
7. Is successful in working with others. (Ability to work in harmony with others)	R I			■				3	3
8. Personal behavior sets a good example for others. (High standards of personal conduct)	R I			■				3	3
9. Takes pride in dress and appearance. (Neat and military in bearing)	R I			■				3	3
10. Is physically fit, as required, for MOS/grade during combat. (Physical condition)	R I				■			4	4
							TOTALS	29	29

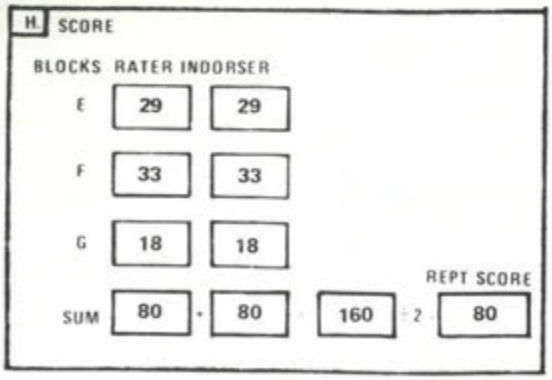
f. **Block F.** Demonstrated Overall Performance. In this section, rate the soldier's strengths and weaknesses, using overall performance. If score exceeds 42 or is below 6, justify in Block J (indorser's section).



g. **Block G.** Advancement Potential. Rate the soldier on ability to perform in the next higher grade by considering total capacity in comparison with other individuals of the same grade and length of service. If score exceeds 22 or is below 10, justify in Block J (indorser's section).



h. **Block H.** Scores. You enter the scores from the appropriate boxes from Blocks E, F, and G and total them. The sum of the scores are added up by the indorser, divided by 2, and the result entered in the block titled REPT SCORE.



i. **Block I.** Career Development. Recommendation for logical career development, such as advanced schooling and special assignments are appropriate here.

I	CAREER DEVELOPMENT (RECOMMENDATIONS ON SCHOOLING AND ASSIGNMENTS)
	Recommend DA NCO Development Course for individual.

j. **Block J.** Comments. Comments must be either typed or neatly printed.

J	1. COMMENTS ARE MANDATORY TO JUSTIFY RATINGS IN PART II AS FOLLOWS: a. BLOCK E SCORE BELOW 10 OR OVER 40, BLOCK F SCORE BELOW 6 OR OVER 42, BLOCK G SCORE BELOW 10 OR OVER 20, OR BLOCK D IF SOLDIER DOES NOT SUPPORT ARMY'S EQUAL OPPORTUNITY PROGRAM. b. INDORSER WHO CHECKS BLOCK II B. 2. REMARKS OTHERWISE OPTIONAL.
RATER	
INDORSER	

3. **Parts III, IV, and V.** Parts III and V will be reviewed by the indorser for possible discrepancies. Part IV must be typed or printed in black ink, except for signature, which will be in black ink.

PART III RATER AUTHENTICATION			
A ORGANIZATION AND DUTY ASSIGNMENT Co C, 1st Bn, 26th Inf APO NY 09039 Sqd Ldr	B NAME AND GRADE TIMOTHY E. KREBS, E6	C DATE 5 Jan 76
	D SIGNATURE Timothy E. Krebs	
PART IV INDORSER AUTHENTICATION		
A ORGANIZATION AND DUTY ASSIGNMENT Co C, 1st Bn, 26th Inf APO NY 09039 Plt Ldr	B NAME AND GRADE LARRY A. WILDMAN, 01	C DATE 5 Jan 76
	D SIGNATURE Larry A. Wildman	
PART V SOLDIER AUTHENTICATION		
A I HAVE SEEN A COPY OF THIS REPORT COMPLETE THROUGH ACTION BY THE INDORSER. I HAVE BEEN COUNSELED CONCERNING THE REPORT.	B NAME AND GRADE ROGER W. CASALENGO, E4	C DATE 6 Jan 76
	D SIGNATURE Roger W Casalengo	

4. **Counseling.** Prior to obtaining the rated soldier's signature on the evaluation form, the indorser will verify that the rater has counseled the soldier regarding the evaluation report. The indorser will further counsel the soldier and if the report is adverse, the indorser will advise the soldier of the nature of the report and inform him that the MILPO will provide guidance for submission of appeals.

5. **See figure 1a and 1b** for a completed example of an Enlisted Evaluation Report, DA Form 2166-5.

REFERENCE:

DA Pamphlet 623-1, Preparation of Enlisted Evaluation Reports, May 75 (pages 2-4)

ENLISTED EVALUATION REPORT (AR 600-200)

For preparation, see DA Pamphlet 623-1.

C. SSN

PART I PERSONAL DATA

A. GRADE (ABBR) NAME (LAST) (FIRST) (MI) SSN: E4 CASALENGO, ROGER 0000 -00- 000

B. TYPE OF REPORT: INIT ☐ ANL ■ CR ☐ SP ☐ OTHER ☐ SPECIFY

D. ORGANIZATION AND STATION: Co C, 1st Bn, 26th Inf, APO NY 09039

E. PMOSC: 11810 | F. DMOSC: 11810 | G. SMOSC: 95B10

H. PERIOD OF REPORT
BEGIN MO: ■ YR: 74
END MO: DEC YR: 85

I. NONRATED PERIOD
NO. OF MONTHS _____
REASON CODES _____

J. DUTY POSITION TITLE: Rifleman
AUTH PAY GR E-4

PART II RATINGS

A. BRIEF DESCRIPTION OF DUTIES

Soldier performs duty as rifleman in a mechanized rifle platoon. Disperses small arms fire toward enemy when required to do so.

B. INDORSER HAS NOT OBSERVED AND CAN NOT RATE SOLDIER ☐

C. REPORT BASED ON: DAILY CONTACT R ■ I ☐ | FREQ OBSN R ☐ I ■ | INFREQ OBSN R ☐ I ☐ | REPT & REC R ■ I ☐

D. SOLDIER SUPPORTS THE ARMY'S EQUAL OPPORTUNITY PROGRAM: YES R ■ I ■ | NO R ☐ I ☐

E. DUTY PERFORMANCE TRAITS

		RANKS WITH VERY BEST 5	SUPERIOR TO MOST 4	EXCEEDS OR MEETS DUTY REQUIREMENTS 3	EXCEEDS OR MEETS DUTY REQUIREMENTS 2	NEEDS IMPROVEMENTS Some 1	NEEDS IMPROVEMENTS Much 0	SCORE R	SCORE I
1. Is well informed on all phases of assigned duties. (Scope of knowledge about duties)	R			■				3	3
	I			■					
2. Carries out orders without constant supervision. (Dependability in performing without supervision)	R			■				3	3
	I			■					
3. Shows interest and enthusiasm for duties. (Attitude toward duties)	R			■				3	3
	I			■					
4. Demonstrates qualities of leadership. (Exerts positive influence on others)	R			■				3	3
	I			■					
5. Seeks out opportunities for self-improvement. (Effort directed toward realization of potential)	R			■				3	3
	I			■					
6. Displays ability to initiate action without direction from others. (Aggressive pursuit of methods to improve duty performance)	R					■		1	1
	I					■			
7. Is successful in working with others. (Ability to work in harmony with others)	R			■				3	3
	I			■					
8. Personal behavior sets a good example for others. (High standards of personal conduct)	R			■				3	3
	I			■					
9. Takes pride in dress and appearance. (Neat and military in bearing)	R			■				3	3
	I			■					
10. Is physically fit, as required, for MOS/grade during combat. (Physical condition)	R		■					4	4
	I		■						
							TOTALS	29	29

F. DEMONSTRATED OVERALL PERFORMANCE OF ASSIGNED DUTIES

Ranks With Very Best	Superior to Most	Exceeds or Meets Duty Requirements	Demonstrates Shortcomings: Minor	Demonstrates Shortcomings: Major	SCORE
R ☐☐	☐☐☐	■☐☐	☐☐☐	☐☐☐	33
44 43	42 38 34	33 27 21 15	14 10 6	5 3 1	
I ☐☐	☐☐☐	☐☐☐	☐☐☐	☐☐☐	33

G. ADVANCEMENT POTENTIAL

IF I HAD THE AUTHORITY AND RESPONSIBILITY TO DO SO, I WOULD: (DISREGARD TIME IN GRADE REQUIREMENTS)

Promote Immediately	Promote Ahead of Peers	Promote With Peers	Not Promote	Deny Continued Active Duty	SCORE
R ☐☐	☐☐☐	■☐☐☐	☐☐☐	☐	18
31 30	28 26 24	22 18 14 10	7 5 3	0	
I ☐☐	☐☐☐	☐☐☐☐	☐☐☐	☐	18

H. SCORE

BLOCKS	RATER	INDORSER
E	29	29
F	33	33
G	18	18
SUM	80 + 80 = 160 ÷ 2 =	REPT SCORE 80

Figure 1a.

RATED SOLDIER'S LAST NAME AND SSN

PART II CONTINUED

I CAREER DEVELOPMENT (RECOMMENDATIONS ON SCHOOLING AND ASSIGNMENTS)

Recommend DA NCO Development Course for individual.

J
1. COMMENTS ARE MANDATORY TO JUSTIFY RATINGS IN PART II AS FOLLOWS:
   a. BLOCK E SCORE BELOW 10 OR OVER 40, BLOCK F SCORE BELOW 6 OR OVER 42, BLOCK G SCORE BELOW 10 OR OVER 20, OR BLOCK D IF SOLDIER DOES NOT SUPPORT ARMY'S EQUAL OPPORTUNITY PROGRAM.
   b. INDORSER WHO CHECKS BLOCK II B.
2. REMARKS OTHERWISE OPTIONAL.

RATER

INDORSER

PART III RATER AUTHENTICATION

A ORGANIZATION AND DUTY ASSIGNMENT
Co C, 1st Bn, 26th Inf
APO NY 09039
Sqd Ldr

B NAME AND GRADE
TIMOTHY E. KREBS, E6

C DATE
5 Jan 76

D SIGNATURE Timothy E. Krebs

PART IV INDORSER AUTHENTICATION

A ORGANIZATION AND DUTY ASSIGNMENT
Co C, 1st Bn, 26th Inf
APO NY 09039
Plt Ldr

B NAME AND GRADE
LARRY A. WILDMAN, 01

C DATE
5 Jan 76

D SIGNATURE Larry A. Wildman

PART V SOLDIER AUTHENTICATION

A I HAVE SEEN A COPY OF THIS REPORT COMPLETE THROUGH ACTION BY THE INDORSER. I HAVE BEEN COUNSELED CONCERNING THE REPORT.

B NAME AND GRADE
ROGER W. CASALENGO, E4

C DATE
6 Jan 76

D SIGNATURE Roger W. Casalengo

PART VI REVIEWER AUTHENTICATION

A SOLDIER WAS RATED BY CORRECT RATER AND INDORSER. NO FURTHER ACTION REQUIRED MY REVIEW RESULTS IN ACTION INDICATED BY INCLOSURES.

B ORGANIZATION AND DUTY ASSIGNMENT
Co C, 1st Bn, 26th Inf
APO NY 09039
Cdr

C NAME AND GRADE
WILLIAM C. THOMAS, 03

D DATE
7 Jan 76

E SIGNATURE William C. Thomas

PART VII MILPO CERTIFICATION

A DATE REPORT ENTERED ON DA FM 2-1:

B SOLDIER'S COPY: GIVE TO SOLDIER [ ] FORWARDED TO SOLDIER [ ]
MAILED TO SOLDIER [ ] CERTIFIED MAIL NO. _____

C _____ MILPO SIGNATURE

D _____ UIC

Figure 1b.

TASK NUMBER: 874-896-3001

PREPARE AND CONDUCT A PERFORMANCE-ORIENTED TRAINING SESSION (INDIVIDUAL AND COLLECTIVE)

CONDITIONS:

Given complete commander's guidance for preparation and conduct of a specific training session (individual or collective); an ARTEP applicable to your unit; Soldier's Manuals for the MOSs of your subordinates; FM 21-6; and access to your unit's training aids and devices, TEC equipment, and training facilities/areas.

STANDARDS:

Within the time and resource limits given in the commander's guidance, conduct the training session so that each individual or element(s) can perform to the standards specified and under the conditions listed in the commander's training objective.

PERFORMANCE MEASURES:

1. **Overview.** The preparation and conduct of performance-oriented training (be it individual or collective, equipment or tactically oriented) consists of the three-step backward planning process:

a. Describe the desired results of training.

b. Prepare to conduct training.

(1) Establish intermediate training objectives.

(2) Determine and organize training required.

c. Conduct training to standards.

A more detailed discussion of these three steps is outlined below.

2. **Describe the desired results of training.** If you are given complete guidance by your commander, this step is done for you; if not, you will have to complete it so that it is satisfactory to your commander. To be complete, it must include the following:

a. WHAT SPECIFIC TRAINING OBJECTIVE DO YOU WANT ACCOMPLISHED? The training objective should include the task that the soldiers must be able to perform, the conditions under which the soldiers must perform the task, and the training standard which specifies the proficiency the soldiers must attain.

b. TO WHOM WILL THE TRAINING BE GIVEN? (e.g., 2 squads.)

c. WHEN WILL THE TRAINING TAKE PLACE? (e.g., 1300-1700 hours, 25 September, 3 weeks from now.)

d. WHERE WILL THE TRAINING TAKE PLACE? (e.g., Training Area K.)

e. WHY THE COMMANDER DECIDED TO CONDUCT THE TRAINING. What were his reasons for his decision?

3. **Prepare to conduct training.** This step is usually the most time consuming and difficult of the three steps. Do not take it lightly; however, if done properly it will insure the success of your training effort. It consists of the following:

PREPARE TO CONDUCT TRAINING

Establish Intermediate Training Objectives by:

Developing tasks required to accomplish the commander's training objective.

Establishing the conditions under which each task must be accomplished.

Establishing a training standard of performance for each task.

Determine and Organize Training Required by:

Determining which intermediate training objectives the soldiers cannot successfully perform without further training.

Organizing the intermediate training objectives into a progressive sequence (simple to complex) consistent with the available resources.

Estimating the training resources, trainer techniques, aids and devices needed to accomplish each objective.

Completing administrative requirements (e.g., obtaining equipment, writing the lesson plan, rehearsing training, etc.).

There are several references and aids which can assist you in accomplishing this step.

a. **FM 21-6, How to Prepare and Conduct Military Training,** provides detailed discussion on the preparation and conduct of training.

b. **The ARTEP** for your unit lists training objectives for most of the collective tasks you will be concerned with.

c. **Soldier's Manuals** list training objectives and intermediate training objectives for individuals for most of the training (both individual and collective) you will encounter. In addition they provide training tips which can assist you in your preparation.

d. **Training Extension Courses (TEC lessons)** develop (or will in the future) most of your intermediate training objectives into pre-packaged lessons. In some cases they are hands-on. In others, you must complete the training by providing the performance practice and evaluation. In addition, the pre-test for each lesson can help you identify which intermediate training objectives require (or do not require) training.

4. **Conduct training to standards.** The basics of the conduct of training are presented in the **TASK: Conduct a performance-oriented training session.** In some cases, when collective training is involved, you will find the use of multi-echelon training to be an efficient method of training. Despite the different name, the basics still apply. You might require assistant trainers (other squad leaders, for example) but the process of conducting training remains the same:

a. Explain and demonstrate.

b. Soldiers/teams/squad practice.

c. Test.

Remember: the key to success is a good training objective.

REFERENCES:

FM 21-6, How to Prepare and Conduct Military Training, Nov 75 (chap 6, pages 51-70, 76)
TEC Lessons 901-071-0091-F through 0097-F

INTRODUCTION TO TACTICS
YOUR ROLE AS A SQUAD LEADER

1

Your job is to train the members of your unit to think and act as an effective team in combat. The job of rifle squad leader is often called the most challenging job on the battlefield because, unlike all other leaders, he leads men instead of units. The heavy antitank weapons (HAW) section sergeant must train his squads/crews to operate effectively on a battlefield that is heavily oriented toward armor/antiarmor weapons systems which have tremendous range and lethality. Because your unit is at the cutting edge of our nation's Army, you have a most demanding role. You must prepare your squad/section to fight and **WIN** in all types of terrain, from the desert to the artic, in all kinds of visibility and weather.

2

The individual soldier's ability and effectiveness is determined by how well he is trained and led. Even if all your men are good at their own tasks, in great physical shape, expert riflemen, and want to do a good job, they will not be an effective fighting force unless you can focus their efforts toward a single goal or mission. This requires **TEAMWORK.** Building **TEAMWORK** in a rifle squad or HAW section is a great opportunity, challenge, and responsibility.

3

To achieve teamwork among your men, you must make sure they can perform the individual tasks listed in their Skill Levels 1 and 2 Soldier's Manuals, just as you must be able to perform the tasks listed in this manual. Individual skills are the foundation for the collective skills listed in the Army Training and Evaluation Program (ARTEP) for your unit. The ARTEP sets forth the missions which your squad/section will have to perform frequently in combat; the ARTEP indentifies the collective skills associated with these missions; finally, and most important, the ARTEP establishes the **MINIMUM STANDARDS** your squad/section must achieve in training if it is to fight and **WIN** on the **BATTLEFIELD.**

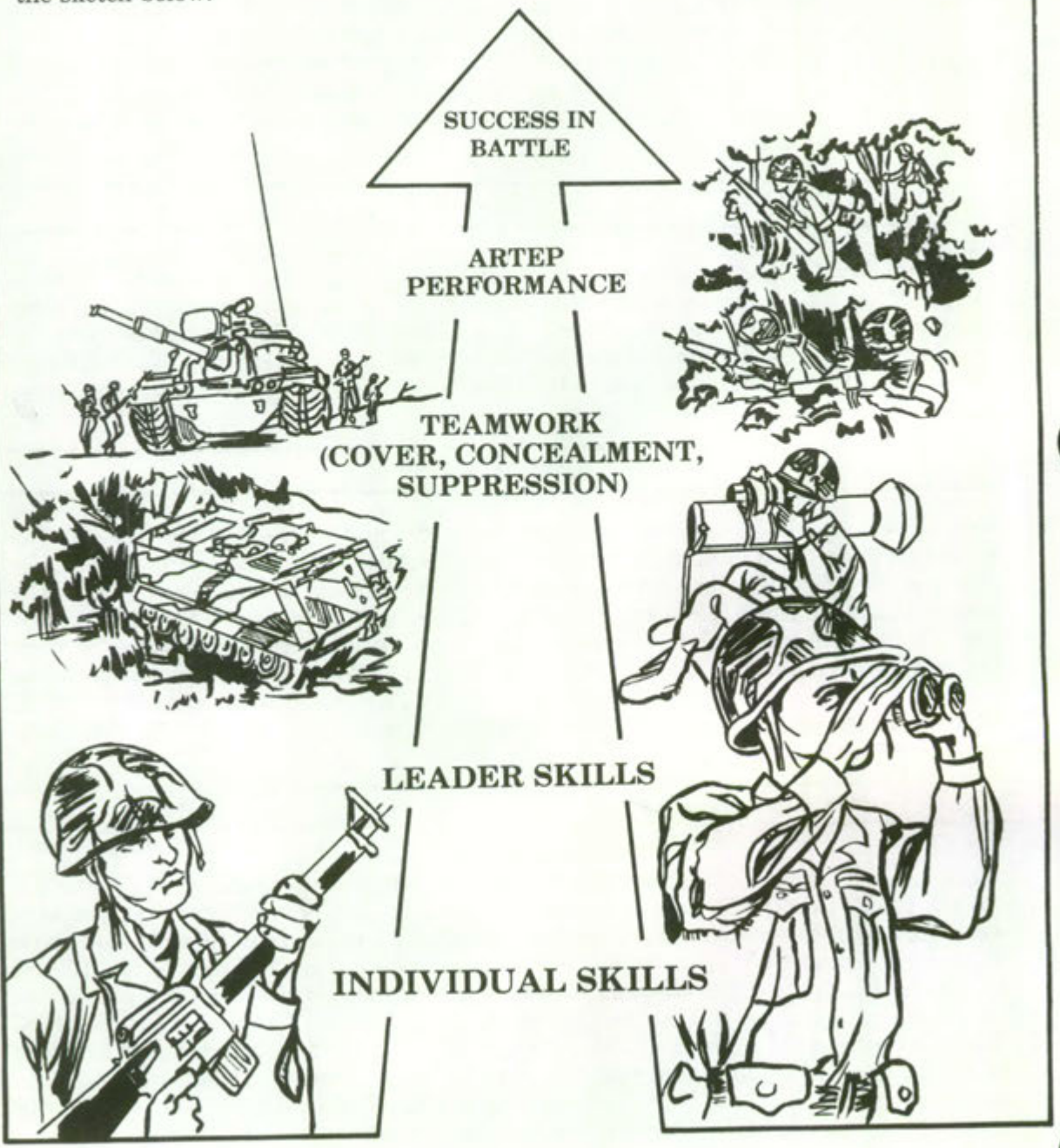
4

The importance of these individual and collective skills must be emphasized constantly. On the **BATTLEFIELD**, you can expect to meet an enemy who is well armed with weapons that have greater range, accuracy, and killing power than those of past wars. These highly efficient weapons allow the enemy to **HIT** what he can **SEE** and **KILL** what he **HITS.** But you can survive and accomplish your mission if you reduce your unit's vulnerability by making full use of **COVER, CONCEALMENT,** and **SUPPRESSION.** You must learn to use **cover** to hide or disguise your positions or movement from the enemy's observation, and **suppression** to force enemy gunners to be ineffective and inaccurate with their fires. If you can use these three techniques and combine them with the all-important element of **teamwork**, success in training and in battle will follow.

REMEMBER

5

Your role as a rifle squad leader or HAW section sergeant is to train your men to survive and **WIN** on the **BATTLEFIELD.** The steps that will lead you to this goal are shown in the sketch below.



TASK NUMBER: 071-326-5505

PREPARE AND ISSUE AN ORAL SQUAD OPERATION ORDER

CONDITIONS:

In a field environment, given an infantry squad, a platoon offensive or defensive operation order, and any available pocket-size reference (such as The Infantry Leader's Reference Card, GTA 7-1-27).

STANDARDS:

1. Within the time allotted, develop a clear and concise oral squad order for the offense, or defense, and issue it to your squad. The order must be issued so that each soldier understands his mission and any specific coordinating instructions.

2. **As a minimum, a defensive order must contain the following items:**

a. The mission of the platoon.

b. The mission of the squad.

c. Location of the defensive position.

d. Scheme of maneuver.

e. Type of emplacements and work priority.

f. Plan for maintaining local security.

g. Critical signal instructions.

h. Location of squad leader's position and platoon command posts.

3. **As a minimum, an offensive order must contain the following items:**

a. The mission of the platoon.

b. The mission of the squad.

c. The concept of how the battle will be fought, to include:

(1) Location of the objective.

(2) Time of attack.

(3) Location of the LD or LD/LC.

(4) Location of the assault position.

(5) The order and the route of march.

(6) Consolidation instructions.

d. Critical signal instructions.

e. Location of the platoon leader and squad leader during the attack.

PERFORMANCE MEASURES:

1. RECEIVING AN OPERATION ORDER.

The most important part of receiving an order is a clear understanding of what your unit has to accomplish in relation to the ground and to the other platoons or squads. Unless you known exactly what you are supposed to do, what the other units are doing, and where and when these actions are to be done, your chances of success are greatly reduced. After hearing the entire order, don't leave until all of your questions have been answered.

THINK-THROUGH THE ORDER

As soon as you receive the order and understand the leader's plan, take a few minutes to go over the notes you took. As you think about the order, answer these questions:

- **What MISSION(S) did I receive?**
- **How much do I know about the ENEMY?**
- **How does the TERRAIN and WEATHER influence the operation?**
- **What SUPPLIES or EQUIPMENT do I need? Do I need to assign SPECIAL TASKS to anyone?**

a. **Mission.**

In analyzing your mission, identify exactly what your unit is to accomplish. Be sure you know how much time you have to prepare. Make sure you are aware of any restrictions or special tasks that apply to your platoon or squad.

A thorough understanding of the mission will allow you to establish a time schedule for your preparation. You will be told what time the operation is to begin and what time your unit must be ready to go. This allows you to allocate time to prepare for the mission. Identify the things that must be done to get ready and, working backwards from the "ready" time, allow your men time to accomplish each task. This technique is called the **reverse planning sequence.** Here is how it might work for a squad leader:

1420:	Platoon leader said to be ready.
1415:	Inspect assembly area.
1400:	Inspect squad.
1315:	Issue order to squad.
1300:	Finalize squad order.
1200:	Reconnoiter with platoon leader/receive order.
1100:	Issue warning order to squad.
1040:	Receive platoon warning order.

b. **Enemy.**

Develop the best picture of exactly where the enemy is located, what his strength is, and what kind of weapons and equipment he has. Tell your men as much as you know about how to destroy or suppress the kind of enemy you are likely to meet.

Sometimes the enemy in a certain area will use the same pattern over and over. For example, if you know that the enemy habitually ambushes in the vicinity of trail junctions, make sure that all of your men know about it.

c. **Terrain and Weather.**

Most decisions pertaining to route, objective, sectors of fire, positioning of key weapons, movement techniques, etc., are made by the platoon leader. However, both platoon and squad leaders must study every bit of ground if they are to properly employ their men and equipment and gain an advantage over the enemy. Proper use of terrain will:

- **Provide cover and concealment before, during, and after the battle.**
- **Increase the effectiveness of your fire.**
- **Decrease the effectiveness of the enemy's weapons.**

You must also understand how weather can influence your men. Cold, heat, rain, or snow can create problems if you don't prepare your squad properly.

d. **Supplies, Equipment, and Special Tasks.**

Look at your unit in light of the mission you are to accomplish. If you have been given a task that requires a special skill, such as setting demolitions to blow a building, do you know how to do it? Do you have the right kind of weapons, equipment, and supplies? If you feel you need help, or if you need something you don't have, tell your leader/commander.

2. ISSUING AN OPERATION ORDER.

After you have received an operation order, thought it through, and prepared your own order, you must issue that order. Whenever possible, platoon leaders should issue their orders from a position that allows the squad leaders to see the ground on which they are going to operate.

Squad leaders should also try to issue their orders from vantage points that overlook the terrain. However, many times this will not be possible, and they will have to sketch the terrain on the ground. Terrain models are easy to construct and allow the leader to associate his order with terrain features so that each man will have an idea of what to expect once he gets on the actual terrain.

THE OPERATION ORDER

An operation order is nothing more than the presentation of the information and instructions needed to accomplish a specific mission. The amount of detailed information included in your operation order depends on the information you received and the time you have to prepare.

Below is an example of how you can organize your order to insure that you tell your platoon or squad everything they need to know to perform the mission you were given. The purpose of this format is to help you prepare your order. Use it as a checklist and remember that it is a guide. Give your order in language that your men can understand. For example, you may prefer to say, "Here's how we are going to get the job done," rather than "Execution."

SITUATION

Information on enemy and friendly forces to include the mission and intended actions of at least the next higher headquarters and unit on your left and right.

MISSION

What your unit (platoon or squad) is to accomplish.

EXECUTION

Your tactical plan for accomplishing the mission.

Tasks (missions) of each squad (the platoon order) or of teams and individuals (the squad order).

SERVICE SUPPORT

Administrative information to include the plans for ammunition, resupply, casualty evacuation, and rations.

COMMAND AND SIGNAL

Signals and other control measures to be used during the operation.

Where you will be during the operation and where the next higher leader will be.

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon and Squad, Sep 77 (chap 2, sec III, pages 2-11 thru 2-18)

TASK NUMBER: 071-326-5510

CONSOLIDATE AND REORGANIZE SQUAD FOLLOWING ENEMY CONTACT

CONDITIONS:

You are the squad leader of a squad which is attacking or defending as part of a larger unit. Your squad has just repelled an enemy assault (defense) or has just seized an objective (offense).

STANDARDS:

1. Consolidate and reorganize your squad in the **defense** IAW Performance Measure 1.

2. Consolidate and reorganize your squad in the **offense** IAW Performance Measure 2.

PERFORMANCE MEASURES:

1. **Consolidation and Reorganization - Defense.** When an enemy assault is repelled, small-unit leaders must prepare their men at once to meet a renewed assault. To prepare for the next enemy attack, squad leaders must:

a. Reestablish Chain of Command. Insure that all key positions are filled by remaining squad members and that every member is aware of the new chain of command.

b. Reestablish Security. If the OP withdrew to the defensive position, send it back out. If it did not get back, check its status and take action to get another OP established as soon as possible. Implement a sleep/alert plan.

c. Redistribute/Resupply Weapons and Ammunition. Squad leaders pass out remaining ammunition and equalize that which is left between men. Take a quick inventory and request a resupply of ammunition if needed. If crew-served weapons are left unattended after taking casualties, reassign them to other squad members.

d. Evacuate the Dead and Seriously Wounded. Be sure that all sectors of fire are still covered and that the evacuation of casualties will not leave gaps in your defense. All positions must still be mutually supporting.

f. Replace Obstacles. If enemy troops withdraw far enough away and if time permits, replace obstacles, mines, and early warning devices. This is a risky task, especially if the enemy has snipers. Your troops must be careful.

Request smoke to cover their movement. Even then you may still have to do this during periods of limited visibility.

e. Replace Camouflage. When the enemy situation permits, replace wilted material with fresh camouflage. Do not overcamouflage a position. If it was not found during the first assault, chances are it will not be found in the next try.

2. **Consolidation and Reorganization - Offense.** Reorganization and consolidation commence immediately upon seizure of the objective. Your unit will normally establish an SOP to facilitate reorganization on the objective.

a. Consolidation refers to those actions taken to clear the objective of the enemy and defend it against a possible counterattack. During consolidation, the squad leader will:

(1) Eliminate isolated enemy on the objective.

(2) Assign individual positions and sectors of fire.

(3) Establish local security.

(4) Prepare to continue the attack.

b. Reorganization includes all measures taken to maintain the combat effectiveness of the squad. The squad leader during reorganization will:

(1) Reorganize squad to cover losses, to include filling all key positions with the remaining squad members.

(2) Give platoon leader a situation report (SITREP).

(3) Redistribute ammunition and weapons, and request ammunition or weapons, if required.

(4) Distribute supplies and equipment.

(5) Evacuate the dead and seriously wounded.

(6) PWs, enemy materiel, and information are collected and reported.

NOTE: In the offense or defense:

1. Do not allow everyone to clean weapons or eat at the same time; everyone should stay in his fighting position and be prepared to repel a counterattack.

2. PWs are evacuated to the rear as soon as possible.

REFERENCE:

FM 7-8, The Infantry Platoon and Squad (TBP)

TASK NUMBER: 071-326-5801

ORGANIZE AN ANTIARMOR AMBUSH

CONDITIONS:

Given a mission and sufficient men to organize an antiarmor ambush, and minimum equipment as follows: one AN/PRC-77, one Dragon, LAW for each man, one M60 machinegun, and individual weapons (M16 or M203).

NOTE: The rifle squad is the normal size unit given the mission to conduct an antiarmor ambush; however, more or fewer men may be used.

STANDARDS:

Organize the antiarmor ambush and brief each element on its duties IAW the performance measures below.

PERFORMANCE MEASURES:

1. The mission of the antiarmor ambush is to destroy enemy armored vehicles.

2. There are three basic tasks the ambush leader must plan for when organizing his antiarmor ambush.

a. To destroy enemy armor.

b. To provide fire support during the ambush and withdrawal.

c. To provide security for the ambush.

3. In light of these considerations, the ambush leader organizes the minimum number of elements necessary to accomplish his mission and assigns men to those elements based on his evaluation of the terrain, enemy, and men available.

4. There are normally three elements into which the antiarmor ambush is organized. These are:

a. The **armor-killer element** has the mission to destroy the enemy armor. It is equipped with armor-defeating weapons such as the Dragon and LAW. This element will normally have the M60 machinegun to provide long range suppressive fire. The ambush leader, whenever possible, positions himself with this element to control the AT fires.

b. The **support element** has the mission to provide the fire support to the armor-killer element and cover its withdrawal from the ambush site. The support element is equipped with M16's, M203's, and LAWs. Machineguns may be attached to this element to prevent dismounted infantry from assaulting the ambush site, particularly when the ambush is close in.

c. The **security element** has the mission of providing early warning and protection from flank or rear attack. It is equipped with M16's, M203's, and LAWs.

NOTE: Due to the small size of the unit usually given the mission to conduct an antiarmor ambush (squad size or smaller), the ambush leader will normally assign both support and security missions to one element.

5. The size of the antiarmor ambush varies according to the mission. The organization of the rifle squad lends itself to the mission of the antiarmor ambush because it is normally composed of two fire teams (figure 1). If the antiarmor ambush requires less personnel, one fire team may be given the mission to conduct the ambush (figure 2).

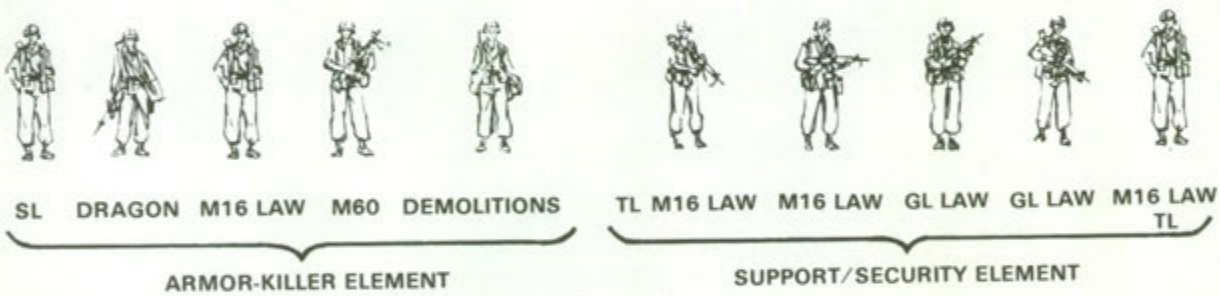


Figure 1.

Figure 2.

6. It may become possible for the antiarmor ambush, particularly if it is squad-size, to be carrier-supported (figure 3). This offers the leader added firepower, added communications capability, and mobility. He must plan carefully how he will employ the track-mounted .50 caliber machinegun in the ambush, and he must carefully select routes of approach and withdrawal to and from the ambush. He will also need to alter the number of personnel in one or both teams.

Figure 3.

7. To organize an antiarmor ambush, the mission leader must --

   a. Understand the mission and situation.

   b. Determine the personnel available for the mission.

   c. Assign the personnel to the required elements.

   d. Brief each element on its duties.

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon and Squad, Sep 77 (chap 6, sec II, pages 6-13 thru 6-19)
FM 7-8, The Infantry Platoon and Squad, (TBP)

TASK NUMBER: 071-326-5802

CONDUCT AN ANTIARMOR AMBUSH

CONDITIONS:

Given sufficient personnel, suitable terrain, and a mission to conduct an antiarmor ambush. Organization and preliminary coordination for the mission have been accomplished.

STANDARDS:

Conduct an antiarmor ambush IAW the performance measures below.

PERFORMANCE MEASURES:

As with organization of the antiarmor ambush, conduct must be well planned and thought out. The situation and mission may not always allow the leader to observe all of the following steps and guidelines, but he must try.

1. The platoon leader will normally give the location of the ambush site to the ambush leader in a frag order. When possible, the ambush leader must try to recon the site, on the ground or by air. As a minimum, he must conduct a thorough map reconnaissance. He should also plan for his indirect fire support.

2. Time permitting, the unit should rehearse the actions it will take to and from the site, and the actions at the site. These can include what to do if engaged by the enemy before arrival at the site, what to do if the site is attacked by enemy infantry, how to approach the site, and how to leave the site.

3. The successful ambush will depend upon, among other things, how quickly the unit arrives at the site, executes the ambush, and departs. Based upon the terrain and situation, the leader must plan for a suitable means of transportation for his ambush whether it be by foot, track, or helicopter. He must also realize that, at any time, his transportation means may fail him, and he must be prepared to use another means.

4. Arriving at the site, the leader must post his security and recon the exact location of the ambush. As much as possible, a good ambush site should --

a. Be located where enemy vehicles are likely to pass.

b. Make it difficult for enemy vehicles to bypass the ambush site (figure 1).

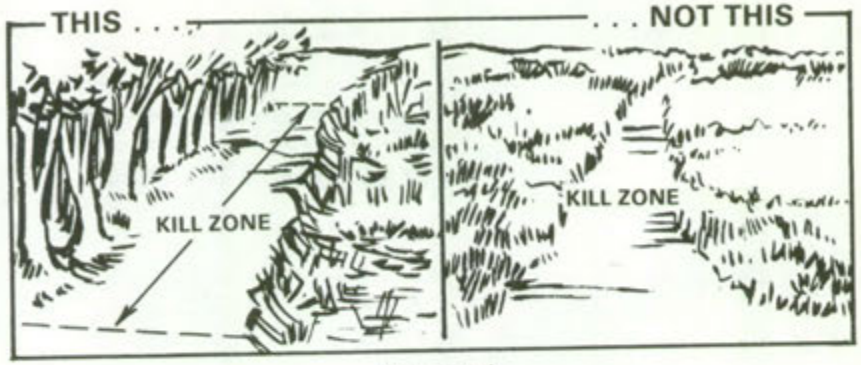


Figure 1.

c. Have a natural obstacle, such as a ditch or swamp or fallen trees, between the kill zone and the armor-killer element. Manmade obstacles such as hasty minefields can be used, too (figure 2).

Figure 2.

d. Have a kill zone large enough, and free enough of obstruction, to allow a Dragon to track the vehicles when Dragons are employed (figure 3).

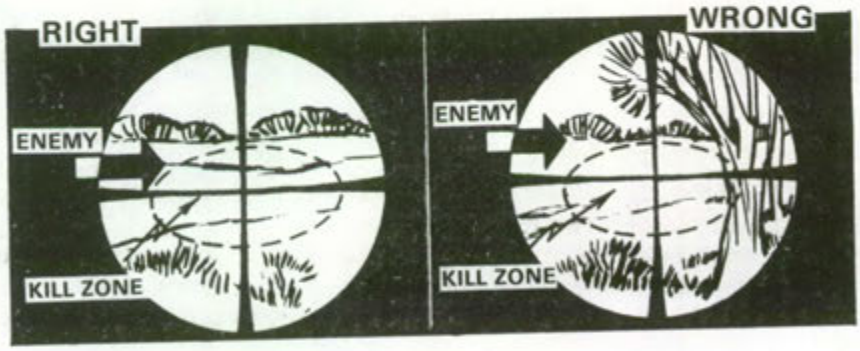


Figure 3.

e. Allow for flank or rear shots from the AT weapons (figure 4).

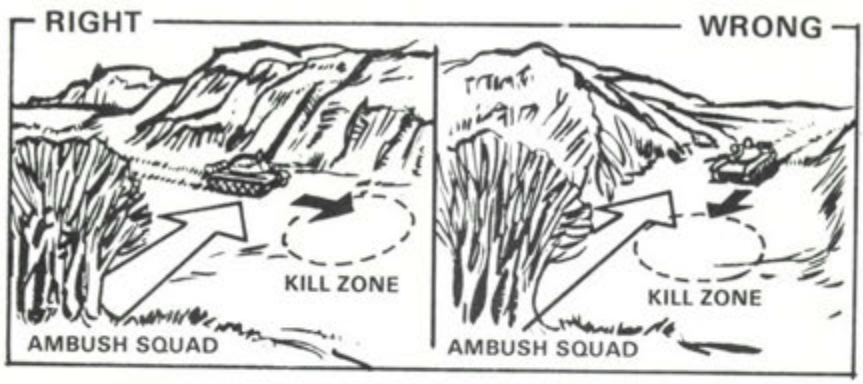


Figure 4.

f. Keep the target vehicles out of sight of any overwatching vehicles (figure 5).

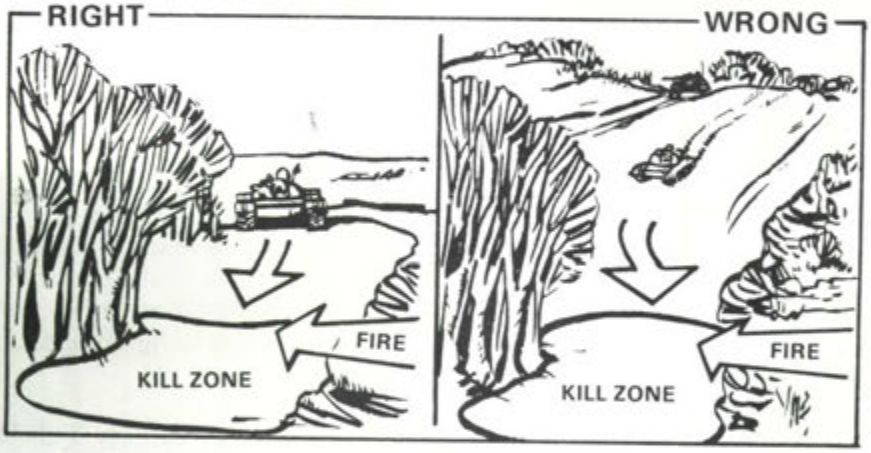


Figure 5.

g. Afford good cover and concealment to the armor-killer element.

h. Have covered and concealed withdrawal routes.

5. Having selected the site, the ambush leader positions his AT weapons and then his machinegun so it can cover the kill zone. Since the primary AT weapon available to the antiarmor ambush is the Dragon, the ambush leader should always try to locate the kill zone at the maximum effective range (1000 meters) from the ambush site. However, if he elects to conduct the ambush close in, he must also plan for the use of all available LAWs.

6. If time allows, the leader should improve individual positions; emplace mines, shaped charges, and demolitions; construct fake firing positions; and emplace smoke pots to deceive the enemy. If he feels the enemy cannot observe the impact, he may call for a registration round to fire upon the kill zone.

7. The ambush is executed on a prearranged signal by the ambush leader. Normally, this will be the firing of the first AT weapon. This is why the ambush leader must try to position himself with his armor-killer team. He should, however, have a backup signal. Before initiating the ambush, the leader must consider the following:

a. Whether he can handle the number of vehicles entering the kill zone. Normally, one or two vehicles will be all he can handle.

b. Whether enemy infantry is accompanying the enemy armor, on foot or mounted; and if so, whether he can execute the ambush and withdraw before becoming decisively engaged by them. In the case of a close-in ambush, should the enemy dismount infantry in the kill zone, the ambush leader may find it necessary to conduct a personnel ambush, break contact, and rapidly leave the area.

8. If the leader executes the ambush, he should call for indirect fire so that the first round arrives on target as he executes. If he decides not to execute the ambush, he should have a prearranged signal to indicate this to all members of the ambush. This can also be the signal he uses to indicate withdrawal.

9. Because of the speed with which the remaining enemy armored vehicles may react to the ambush and the responsiveness of enemy artillery, the squad must be able to spring the ambush, break contact, and get out of the area as rapidly as possible. The men providing fire support shoot their weapons to cover the withdrawal of the armor-killer element. Men providing security shoot if they see enemy personnel within their sector. As soon as the armor-killer element has moved to where it cannot be fired at by the enemy, the entire unit withdraws to a designated rally point and continues to move out of the area.

10. If possible, the ambush leader should maintain communication with his higher headquarters at all times.

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon and Squad, Sep 77 (chap 6, sec II, pages 6-13 thru 6-19)
FM 7-8, The Infantry Platoon and Squad (TBP)

TASK NUMBER: 071-326-5610

IMPLEMENT INFANTRY SQUAD MOVEMENT TECHNIQUES WHEN NOT IN CONTACT WITH THE ENEMY

CONDITIONS:

As the squad leader of an infantry squad, given an operation order to conduct movement (movement to contact, reconnaissance patrols, etc.). During the movement, enemy contact is "not likely," "possible," or "expected," at any given time.

STANDARDS:

1. Employ the correct movement technique, based upon the likelihood of contact and your mission.

2. Insure proper distances are maintained between fire teams and individuals so that contact is made with the smallest force possible, and one fire team is available to support the other at all times.

3. Maintain a position that allows you to best control squad.

PERFORMANCE MEASURES:

1. Your squad will spend far more time moving than actually fighting. This fact alone makes it important to use the best movement techniques, but an even more important reason for proper movement is that a carelessly moving unit usually makes contact with the enemy at a time and place of the enemy's choosing. You must use movement techniques which will cause contact to be made by the least number of men, with the rest of the squad in the best position to provide suppressive/supportive fires and to maneuver and close in on the enemy.

2. The choice of movement technique is based on the likelihood of contact.

	LIKELIHOOD OF CONTACT	MOVEMENT TECHNIQUE
1	*Not likely*	*Traveling*
2	*Possible*	*Traveling Overwatch*
3	*Expected*	*Bounding Overwatch*

NOTE: When conservation of time is vital to mission accomplishment, movement techniques may be selected based on speed rather than likelihood of contact. Movement techniques are not fixed formations. Distances between squads vary based on the terrain and visibility. As the terrain becomes more rugged, as the vegetation becomes dense, or if visibility is reduced, the distances between squads are reduced. Squad leaders maintain visual contact with the squad to their front. One man in each squad maintains visual contact with the squad to the rear. The platoon should be able to move most of the time using arm-and-hand signals for control.

3. When your squad is moving, you should:

a. Use the **TRAVELING** technique when speed is necessary and contact with the enemy is **not likely. ONE FIRE TEAM FOLLOWS THE OTHER,** keeping about 20 meters apart, depending on the terrain. When traveling, the best location for the squad leader normally is with the lead team to aid navigation, movement, and control (figure 1).

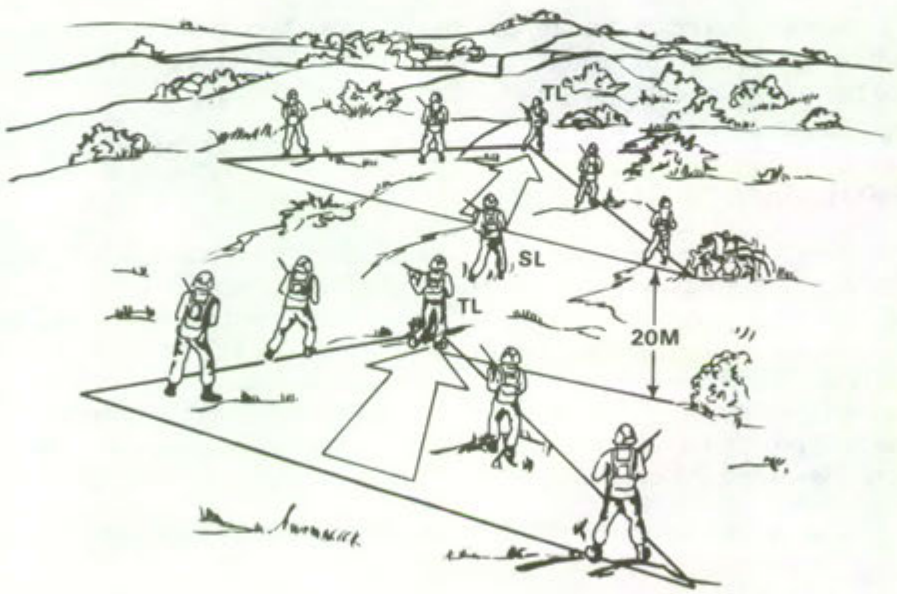


Figure 1. Traveling technique.

b. Use the **TRAVELING OVERWATCH** technique when chance of enemy contact is **possible,** but not expected. Caution is justified but speed is desirable. The trailing team drops behind the lead team about 50 meters and is prepared to support the lead fire team. If the lead fire team receives fire, the trailing team is far enough to the rear so it will probably not be suppressed by the same enemy fire, yet close enough to fire and/or maneuver in support of the lead team (figure 2).

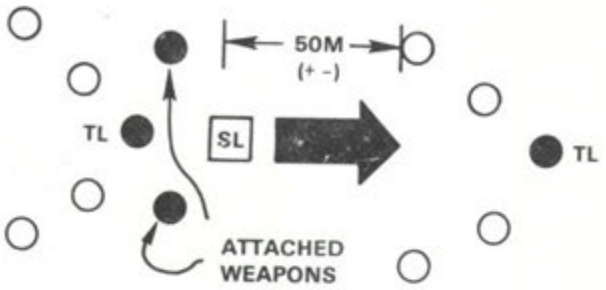


Figure 2. Traveling overwatch technique.

When using traveling overwatch, the leader goes where he can best control his squad in the event of contact. Normally, this is with the trailing team, keeping any attached weapons near himself and under his direct control. This follows the rule of using the least number of men to find the enemy and enhances his ability to support the lead team by fire and to influence the situation. As an exception to his normal location with the trail team, the squad leader may temporarily accompany the lead team when conditions so dictate, such as when limited visibility precludes good control of the squad from the trail team's position.

c. Use the **BOUNDING OVERWATCH** technique when contact is **expected.** One fire team advances while the other team is in a good position ready to suppress enemy fires. The key to this movement is the proper use of terrain. **ALL MEN IN THE SQUAD MUST MAKE USE OF ALL COVER AND CONCEALMENT.** The chance of exposure to the enemy must be avoided. A bound is normally not more than 100 to 150 meters forward of the overwatch team (figure 3).

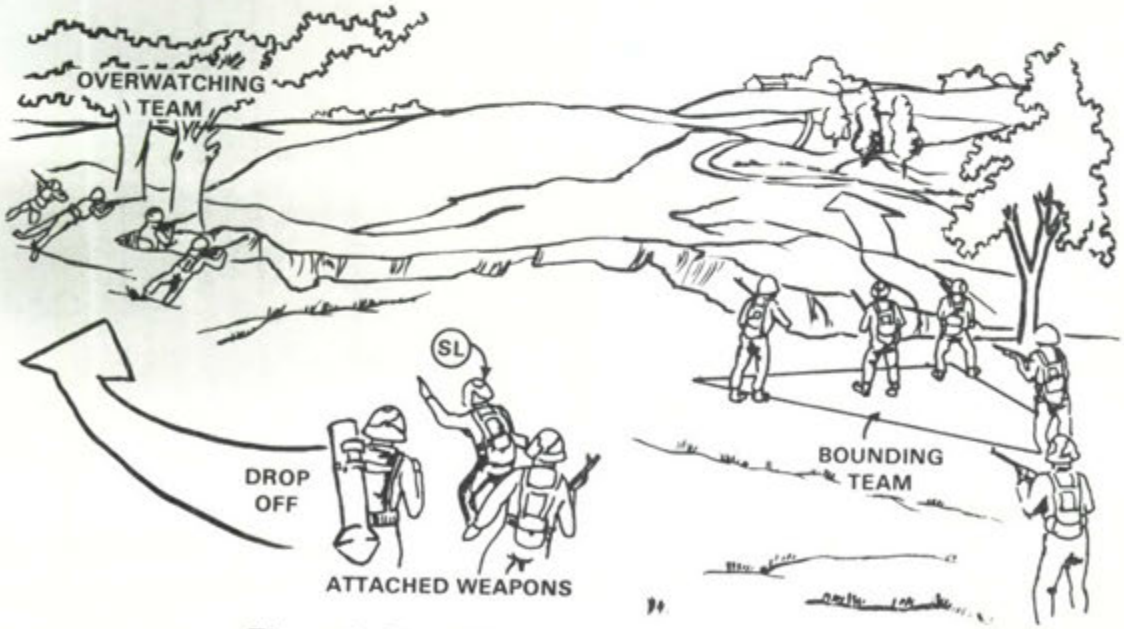


Figure 3. Bounding overwatch technique.

THE SQUAD LEADER MUST ISSUE CLEAR, CONCISE ORDERS. He must insure that the **bounding team leader** knows (at least) where his team is to move and by which route, what to do when he gets there, the location of squad leader and the overwatch team, and how he will get his next instructions. The squad leader must insure that the **overwatch team leader** knows (at least) the route and destination of the bounding team. During movement by bounding overwatch, the squad leader must go where he can best control the squad. He may move from one fire team to another. Normally, he will join the overwatching team as the bounding team passes it. In so doing, he normally takes any attached weapon(s) with him. When with a bounding team, the squad leader must not mask the fire of, or interfere with, the movement of the team he joins or leaves. He normally locates himself to the rear and on a flank which facilitates his drop-off to the fire team being passed.

4. When using any of these techniques, the squad leader's knowledge of the proper use of available cover and concealment for the entire squad is essential. Even the best technique applied to the least favorable route can lead to disaster. In addition, intervals between fire teams are important for more than just control. A fire team caught and pinned down by enemy fire will probably never walk away from that spot if the other team cannot **immediately** suppress that enemy fire. To facilitate control, it is essential that the squad function as a team. Every member must have confidence in the squad leader and in their ability to do the job. Practicing these techniques correctly in training will provide the teamwork needed to fight and survive on the battlefield.

REFERENCES:

FM 7-8, The Infantry Platoon and Squad (TBP)

TASK NUMBER: 071-326-5611

DIRECT THE FIRE AND MANEUVER OF AN INFANTRY SQUAD AGAINST AN ENEMY POSITION

CONDITIONS:

You are the squad leader of a squad that has just encountered an enemy position.

STANDARDS:

1. Fix the enemy with all available **suppressive fire** to keep him from firing his weapons accurately and redeploying his force to meet your assault.

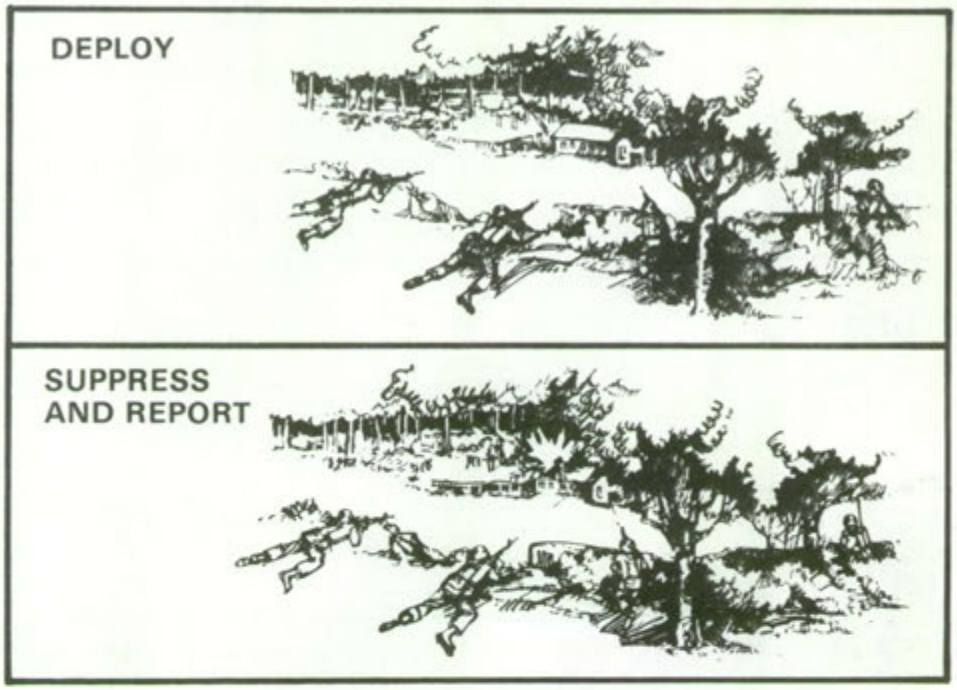
2. Fight the enemy by locating and **assaulting** his flank, rear, or other weak point.

PERFORMANCE MEASURES:

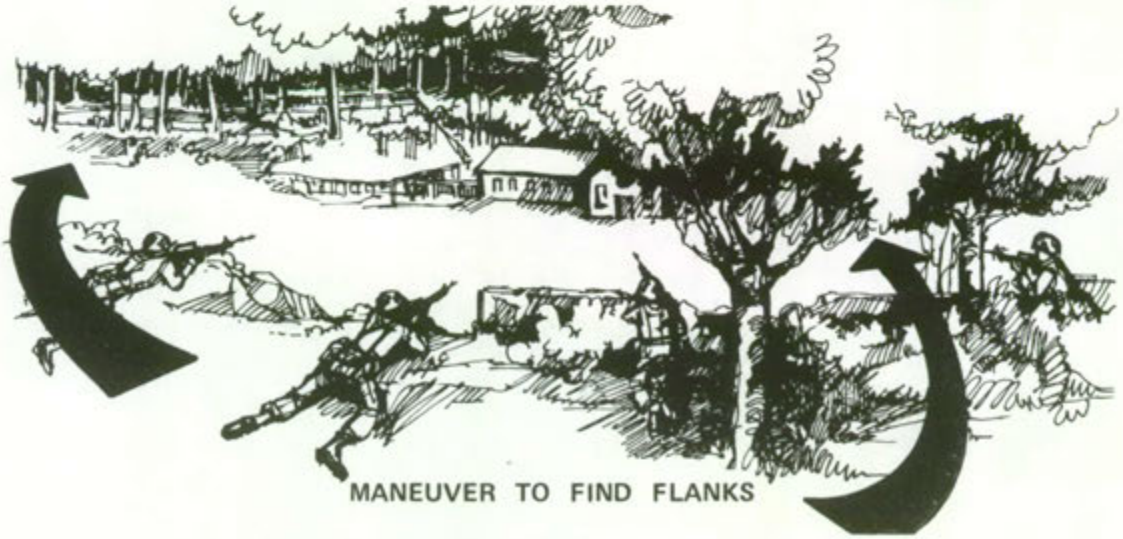
1. **ACTIONS ON CONTACT.** When contact is made with an unexpected enemy, locate and exploit enemy weaknesses without needlessly exposing the squad to enemy fire. When contact is made, take the following actions.

DEPLOY, SUPPRESS, AND REPORT

Lead elements DEPLOY in positions from which they can fire, observe, or maneuver against the enemy. If elements in contact receive direct fire, they immediately SUPPRESS enemy weapons. If you have located the enemy, but do not receive fire, then hold your fire until friendly elements are in the best position to engage the enemy. You immediately REPORT the enemy contact to the platoon leader in as much detail as is available, and continually update reports.

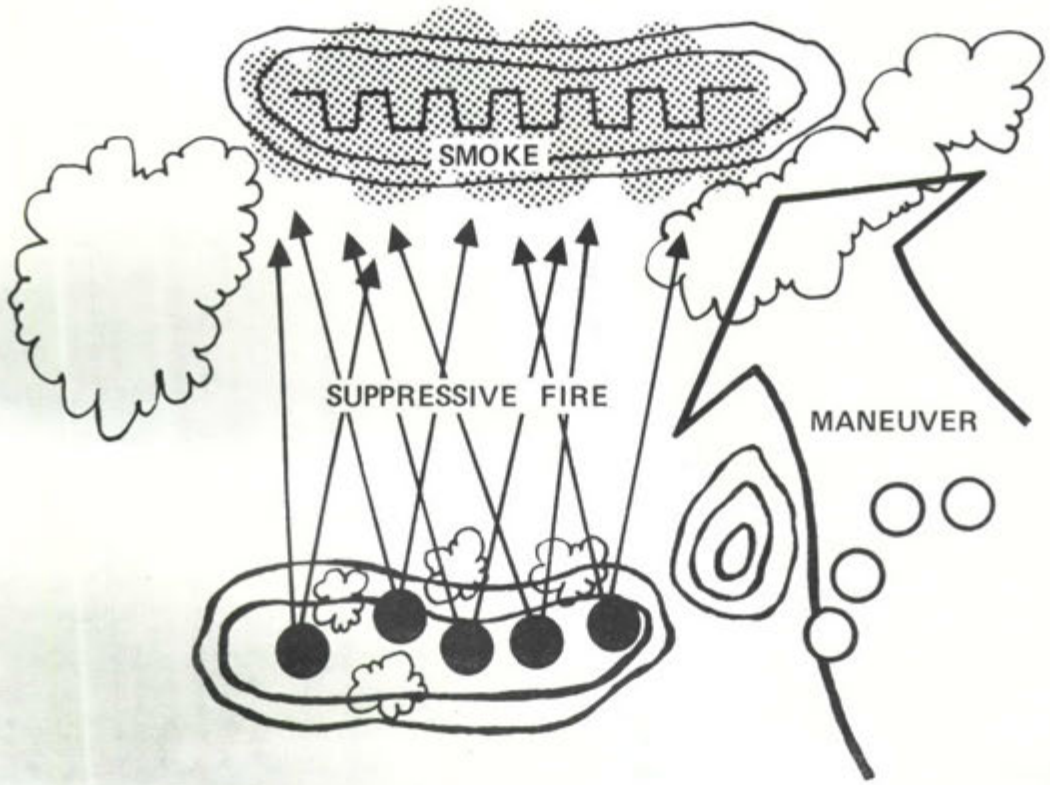


2. **DETERMINE ENEMY LOCATION, DISPOSITION, AND STRENGTH.** Squads gain additional information not revealed by the initial contact by careful maneuver against the enemy to determine his flanks or weak points. This process of fighting through enables the unit to continue to advance against the enemy without undue risks. If the initial contact reveals an enemy who is clearly superior, don't risk maneuvering against him, but hold in place, return fire, and serve as a base of fire for the platoon.



MANEUVER TO FIND FLANKS

3. **CHOOSE A COURSE OF ACTION.** The squad leader must decide whether to assault the enemy, or hold in place and return fire. Of course, you may be given another course of action by your platoon leader.



4. **FIXING THE ENEMY.** To close with the enemy, the assaulting force must reduce the effects of his fire. This is accomplished either by blocking the enemy's vision by smoke or by shooting at him with sufficient accuracy and volume to drive him from his firing position. In either case, the enemy will probably continue to fire, but the fires will be **inaccruate and cannot be redirected effectively** against the maneuver force. When the enemy is suppressed, you can maneuver toward his positions without taking excessive casualties. The assaulting force always attempts to concentrate against the **enemy flank, rear,** or **other weak points.** The enemy is normally aware of any weak points and will reinforce them when he realizes that you intend to assault them. Use fire to fix the enemy so he cannot reinforce these weak points. This may be accomplished by suppressive fire. However, while smoke and direct fire may effectively suppress an enemy, they will not keep him from redeploying along an interconnecting trench system. To stop this movement, airburst indirect fires are required. Each situation will be different. Remember, the enemy must be FIXED BY SUPPRESSIVE FIRE.

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5. **FIGHTING THE ENEMY.** The squad may have to fight the enemy either on open or restrictive terrain.

a. **OPEN TERRAIN.** In open terrain, there are no significant natural or manmade features which severely restrict the fire or maneuver of the squad. An example is a sparsely vegetated area where a squad or platoon may assault using FIRE and MANEUVER. Elements of the squad and platoon alternate as fire support and maneuver elements as they close with the enemy.

b. **RESTRICTIVE TERRAIN.** Restrictive terrain is significant natural or manmade features which will severely restrict the fires or maneuver of the squad. These areas include fortified areas, barbed wire or mined areas, built-up areas, and extremely rugged terrain. In restrictive terrain, platoons and squads normally task organize into:

(1) ASSAULT ELEMENT. To close with and destroy the enemy.

(2) SUPPORT ELEMENT. To suppress and fix the enemy by fire.

(3) BREACHING ELEMENT. To clear or mark a path through enemy obstacles or blow holes in walls for the assault element (if required).

6. **ASSAULT TECHNIQUES.** The squad moves forward as rapidly as possible by crawling, by short rushes, or by employing rushing fire. The fire team leader moves by the best method for the situation facing him and the fire team members follow his example using every advantage offered by the terrain.

a. Crawling may be required when the fire team faces intense enemy fire and has little cover. Individuals use either the low or high crawl, depending upon their individual situation, the requirement for speed, and the example of their fire team leader. This method is slow, but reduces exposure to enemy observation and fire. Individuals must place fire on the enemy to suppress him when not moving forward. If necessary, the members of the squad may advance all the way into and through enemy positions using the crawl method.

b. Short rushes may be used when available cover permits. Fire and maneuver can be conducted using this method by individuals or fire teams. Assaulting fire teams or individuals may advance by short (2 to 3 second) rushes to avoid accurate enemy fire.

c. Rushing fire is rarely used. It should be used only under the following conditions:

(1) When the squad is receiving a heavy concentration of indirect fire and immediate and decisive movement is necessary to prevent its annihilation.

(2) When the complete lack of cover and concealment prohibits another course of action.

(3) When the squad is not receiving fire.

The squad uses rushing fire by standing up and moving directly to the enemy position as quickly as possible. This does not mean a parade field "dress right dress" configuration, but rather a staggered line allowing enough lateral clearance between men to allow them to deliver effective fire to their front. Movement must be rapid and accompanied by a heavy volume of fire. The assault should be conducted over a short distance that can be covered quickly and concentrated where the enemy's defense may be quickly overrun.

7. **CONTROL OF FIRE.** It is vital that fires be heavy enough to suppress the enemy. It would be fatal, however, to allow this suppressive fire to consume all of a squad's ammunition before an assault is made or a possible counterattack is dealt with. Rigid control of fires must be exercised to insure that a steady rate of fire is maintained throughout the assault. Maximum use should be made of supporting fires such as artillery, mortars, and gunships. Rapid redistribution of ammunition upon the immediate objective will enable a squad to fight off a counterattack or continue the attack on order.

8. **TEAMWORK AND CONTROL.** A squad without teamwork and control is nothing more than a small mob with weapons. Success depends on the level of these two virtues within the squad. Methods of control are normally established by SOP. These may include arm-and-hand signals, oral commands, whistles and other sound devices, pyrotechnics, and "do as I do" techniques. Once methods are established, training and practice develops the necessary teamwork. This training should cover reaction to as many different battlefield situations and conditions as possible. Even in the event that a member of the squad loses contact with his squad leader and team leader, it is better that his intense training exert control over him by reminding him what he was taught to do in the past, than it would be for him to improvise his actions alone. It is the squad leader's responsibility to obtain and maintain the control and teamwork of his squad in all situations.

REFERENCES:

FM 7-8, The Infantry Platoon and Squad (TBP)

TASK NUMBER: 071-326-5701

SUPERVISE THE PREPARATION OF A SQUAD DEFENSIVE POSITION

CONDITIONS:

You are the squad leader of an infantry squad. Given: a rifle squad with all TOE equipment and weapons; a requirement to prepare an assigned sector of the platoon area for the defense; a priority of work and locations for crew-served weapons designated by the platoon leader (in his operation order). Remaining squad members positions have been designated by you.

STANDARDS:

Within the time specified in the platoon leader's order, complete preparation for the defense by observing and correcting (where necessary) the work of your squad so that:

1. Assigned priority of work is followed by all squad members.

2. Security is maintained.

3. Work progresses as rapidly as possible.

4. Camouflage and concealment (to include noise, light, and litter discipline) are maintained.

5. Positions are constructed properly. (See tasks pertaining to construction of individual and crew-served positions.)

PERFORMANCE MEASURES:

1. **The priority of work or priority of tasks is normally specified by the company commander to insure that everyone directs his full attention toward common goals to fully prepare the company's overall defense.** Normally, your unit SOP will establish the priority of work which should be followed unless changed by the company commander.

2. **Since each unit is responsible for its own security, this is normally the first priority task.** Security must never be sacrificed for speed or convenience. A small lapse in security could result in the total destruction of your squad or platoon. You owe it to your men to insure that security is always maintained regardless of the activity that your squad is involved in. The following techniques will assist you in maintaining security.

a. OPs. The OP looks and listens for the enemy in order to provide early warning of the enemy's presence. Establish these positions where they can be supported by fire and where they have concealed routes of withdrawal.

b. Patrols. This technique should be used whenever enough personnel are available. Patrols may take many forms; all are extremely effective in providing security.

c. STANO Devices. These devices will extend the range of your security system without the use of additional manpower. Starlight scopes are readily available and should be incorporated into your security effort.

3. **For a squad to survive on the battlefield, it must fully exploit the terrain.** At squad level, this means using all available cover and concealment. To supplement the available cover and concealment, your men must be proficient in camouflage techniques, and in noise, light, and litter discipline.

4. **Proper construction of fighting positions will depend on the initiative of the individual soldier and on the close supervision of the squad and fire team leaders.** Prior to telling your men to dig in, move to the front of the position to insure that all emplacements have frontal cover and are mutually supporting. Then carefully mark each position so that your men will know where and how they must dig and prepare their fighting positions.

REFERENCE:

FM 7-8, The Infantry Platoon and Squad (TBP)

TASK NUMBER 071-326-5705

ESTABLISH AN OBSERVATION POST (OP)

CONDITIONS:

You are a squad leader or platoon sergeant in a defensive position, given a squad or platoon, all assigned TOE equipment, a TA-312/PT (or TA-1/PT) and/or a radio, and a requirement to establish an OP to observe a designated area or probable avenue of approach forward of or on the flanks of your squad or platoon.

STANDARDS:

Upon moving into the assigned defensive position, you will select and emplace a two-man position which:

1. Is within effective small arms range of the squad/platoon.

2. Allows detection of enemy activity within the designated area or avenue of approach before it would be detectable from the defensive positions, and before the enemy could detect the defensive area.

3. Has a means of communication (wire or radio) with the platoon leader (may be through the squad leader).

PERFORMANCE MEASURES:

1. **General.** OPs are generally established along probable avenues of approach to listen and observe and provide early warning of enemy approach.

2. **SELECTION OF AN OBSERVATION POST (OP).**

a. The site selected for an observation post should provide:

(1) Maximum observation of the desired area (specified by the platoon leader).

(2) Cover and concealment for the occupants of the OP.

(3) Concealed routes to and from the OP.

b. Observation is the primary means of determining whether or not the above conditions exist at a site.

c. Usually, the best location for an OP is on or near the military crest of a hill. Topographical crests should be avoided because of the possibility of being skylined. It may be appropriate to establish the OP well down the forward slope when observation is restricted by the terrain (figure 1).

d. Observation posts and listening posts should be within effective small arms range of unit establishing OP and supported by other supporting fires when possible.

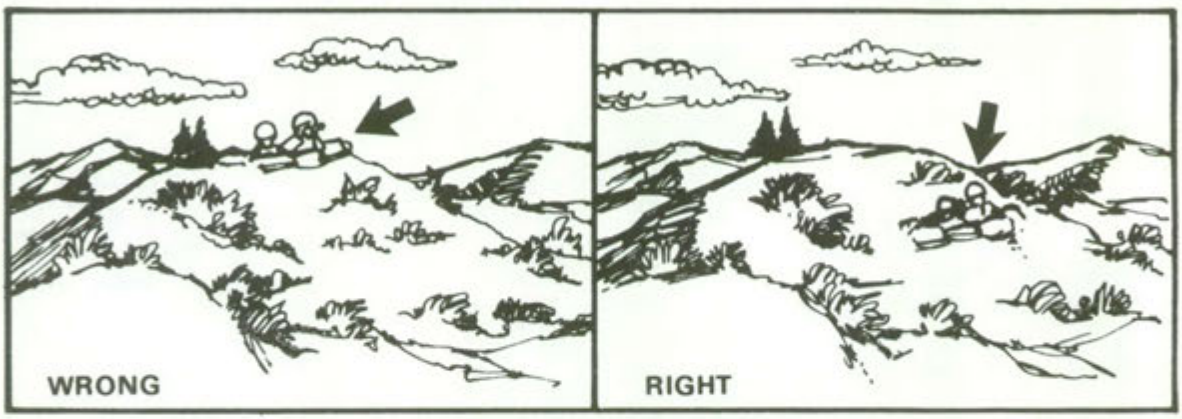


Figure 1.

3. **ESTABLISHING AND OPERATING AN OBSERVATION POST.**

a. Wire is the primary means of communiction with an OP and is supplemented by radio. Wire and radio antennas should be carefully positioned and camouflaged to avoid detection by the enemy (figure 2).

Figure 2.

b. Personnel going to and from the OP must move carefully so that movement does not reveal the location to the enemy. Separate routes to and from the OP are established. Camouflage is most important on an OP. The OP should be camouflaged even when natural concealment is adequate.

c. OPs are operated in reliefs. A minimum of two men is necessary for each relief. One observes while the other records and reports observed information. The observer and recorder should switch duties every 30 minutes because the visual efficiency of an observer decreases rapidly after that length of time.

4. **ESTABLISHING AND OPERATING AN OBSERVATION POST (OP) DURING LIMITED VISIBILITY.**

a. This OP is a position from which you listen and observe during periods of limited visibility (darkness, smoke, or bad weather). The enemy may use different, more open avenues of approach during limited visibility conditions; therefore, an OP may have to be moved to another position to serve as an OP at night.

b. These types of OPs are usually closer to defensive positions. You may be given a night-vision device for use on your OP. The enemy employs infiltrators against your defense at night, so a series of competent OPs is your best security. OPs backed up by alert troops equipped with night-vision devices, and by snipers can counter this infiltration.

c. OPs are operated in reliefs except when movement to and from positions would reveal their locations or endanger the personnel.

REFERENCE:

FM 21-75, Combat Skills of the Soldier (Revised Edition, TBP)

TASK NUMBER: 071-326-5710

DESIGNATE FIGHTING POSITIONS FOR SQUAD MEMBERS (LESS CREW-SERVED WEAPONS)

CONDITIONS:

As a rifle squad leader, given a requirement to occupy a specified area within the platoon defensive position and cover a specified sector with fire.

STANDARDS:

The squad occupies the specified area and can fire into the assigned sector of fire so that:

1. Each position's fires interlock at a point beyond hand grenade range (35 meters).

2. Flank weapon fires tie in with adjacent squads.

3. Each position has cover, concealment, and good fields of fire (natural cover and concealment, if available).

4. All positions are sited so that they are mutually supporting.

5. Automatic rifle fires cover areas not covered by the M60 machinegun.

6. Grenadier's fires cover deadspace in the squad sector.

7. Claymores are used to supplement all other fires.

8. The squad leader's position is located where he can observe and control the fires of his squad.

PERFORMANCE MEASURES:

1. Each position must have cover, concealment, and good fields of fire. Strive to put positions where fires from them can be integrated, overlapping, and mutually supporting so that the fires will be heavier where you want to engage the enemy with surprise fire. Look for routes that will provide the attacker cover and positions from which he can mass his fire on your position. Be sure your entire squad sector is covered so that you can repel any assault.

2. When the platoon's key weapons have been positioned, the men in the squad are positioned to protect these weapons from a dismounted assault. Consider the number of men available, then position each one so that he can support the men on his right and left. Each sector of fire must cross in front of another position at a point beyond hand grenade range. Site each fighting position using natural cover and concealment, then:

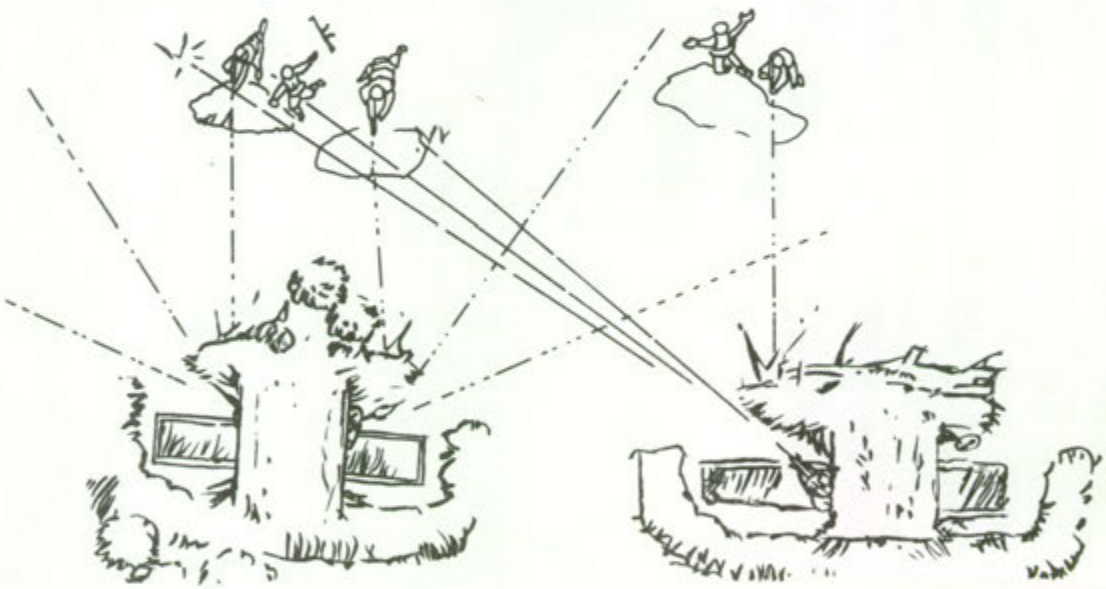
a. Clear fields of fire to allow each man to do the job for which he is positioned. DO NOT OVER CLEAR.

b. Build artificial cover such as a parapet, if required.

c. Hide everything.

3. Insure that all enemy approaches into your squad sector are adequately covered by automatic weapons fire.

4. Prior to digging in, you must move to the front of the position to insure that each fighting position is sited so that it has frontal cover from enemy fire and all positions are mutually supporting.



This position is under fire from the front. The man on the right in this position shoots to the oblique at the targets in his primary sector, supporting the position on his right.

This position is under fire and has targets both to the front and to the oblique. The man on the left in this position shoots to the oblique at the targets in his primary sector, supporting the position on his left.

5. Positioning each weapon of a rifle squad:

a. **Automatic riflemen.** Identify dismounted avenues of approach such as ravines, draws, heavily wooded or brushy areas that are not covered with the machinegun. In areas that are covered by the machinegun, find out what deadspace the machinegun has and cover with AR fire, if possible. If there is no deadspace, then assign a sector that will interlock and overlap the machinegun's sector and final protective fire.

b. **Grenadiers.** Position grenade launchers to cover the deadspaces of the automatic weapon's final protective fire. They must also be positioned to cover the entire squad's sector.

c. **Riflemen.** Position riflemen between the remaining positions to give continuous observation and fire throughout the squad sector. They provide mutual support between positions and identify targets for the squad's and platoon's key weapons (grenade launchers, ARs, machine-guns, and Dragons).

d. **Claymore mines.** Use these to cover any deadspaces that cannot be covered with 40-mm grenade launchers and to supplement the fire of your riflemen.

6. In preparing your position, you must select a position from which you can control the fires of your squad. Your weapon should be used only when it is necessary to protect yourself, to direct fire, or to influence the action at a critical point. If you have enough men, position yourself slightly behind the squad so that you can observe and contact your squad, or at least your team leaders. If your squad's strength is reduced, or the terrain does not permit you to establish a position to the rear, you must man a forward position. In this case, you may have to construct a single position to be able to observe your squad sector. You must be able to maintain contact with your platoon and fire team leaders from whatever position you select. Look for covered routes that you can use to move to the positions of your team leaders and platoon leaders.

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon and Squad, Sep 77 (chap 5, sec IV, pages 5-33 thru 5-36)
FM 7-8, The Infantry Platoon and Squad (TBP)

TASK NUMBER: 071-326-5711

DESIGNATE ALTERNATE AND SUPPLEMENTARY POSITIONS FOR SQUAD MEMBERS

CONDITIONS:

You are the squad leader and your squad is preparing for the defense. Primary positions have already been designated. You are required to select alternate positions and to select supplementary positions in an area specified by the platoon leader.

STANDARDS:

1. Select alternate positions from which the squad can cover the same sector of fire as could be covered from the primary positions and allow the squad to continue the mission when the primary positions become untenable (suppressed by enemy fire).

2. Select supplementary positions within the assigned area which allow the squad to cover the assigned sector of fire/avenues of approach which cannot be covered from the primary/alternate positions.

PERFORMANCE MEASURES:

1. Alternate positions are prepared so that they are ready for occupation by the squad when the primary positions are no longer defendable. The location of these positions is highly dependent upon the terrain, cover and concealment, and existing enemy situation. The distance of alternate positions from the primary positions may vary in a given situation, but they should be located at a distance that would allow the squad to cover the same sector as from the primary positions, without sustaining unnecessary losses. A soldier's alternate position may be to the flank or slightly to the rear of his primary position.

2. When selecting alternate positions, consider the following points:

a. Does the selected location for the positions allow the weapon(s) or element(s) to accomplish the same mission?

b. Do the positions provide for --

(1) observation of the primary sector of fire?

(2) cover and concealment?

(3) maximum use of natural and artificial obstacles?

(4) control of the key terrain in the squad sector?

(5) coverage of the avenues of approach into the sector?

c. Squad alternate positions are picked based upon the alternate position of the key weapons (M60 and Dragon).

3. Alternate positions are normally prepared immediately after the completion of the primary positions depending upon the priority given to them. Communication trenches should be constructed between primary and alternate positions as time and terrain permits. When you are supervising the preparation of the alternate fighting positions, insure that they are sited and constructed to take maximum advantage of the natural defensive characteristics of terrain and the capabilities of organic weapons.

4. Supplementary positions, unlike alternate positions, are oriented in a different direction. Normally, they are located within 200 meters of the primary positions. As time and terrain permit, communication trenches are prepared to provide covered routes between primary positions and supplementary positions.

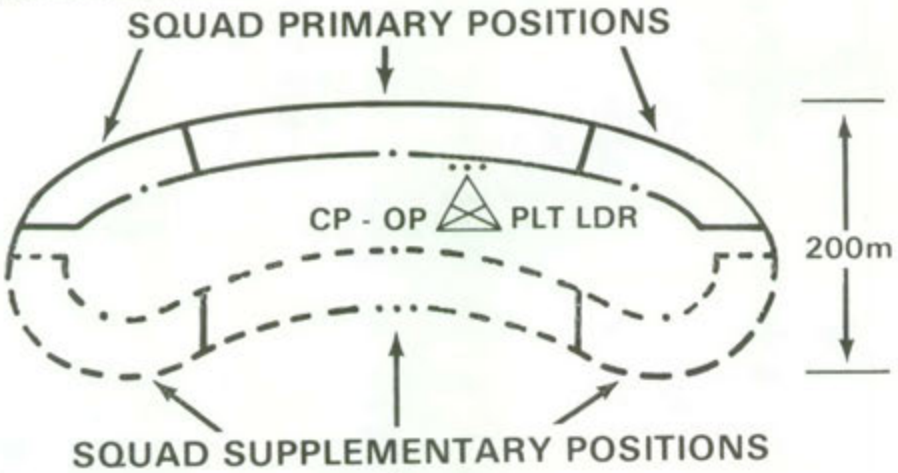


Figure 1.

5. The platoon leader may assign the squad with the LEAST CRITICAL PRIMARY POSITION (often the center squad) the mission of organizing and preparing the MOST CRITICAL SUPPLEMENTARY POSITION (covering the most dangerous rearward or flank approach).

6. When selecting supplementary positions, consider the following:

a. A location which allows the squad to defend as part of the platoon against enemy attack from the flank(s) and rear.

b. A location which covers the most dangerous avenues of approach other than those into the primary positions.

c. The same guidelines which apply to placement and construction of primary and alternate positions also apply to supplementary positions.

REFERENCE:

FM 7-8, The Infantry Platoon and Squad (TBP)

TASK NUMBER: 071-326-5720

PREPARE A SQUAD DEFENSIVE SECTOR SKETCH

CONDITIONS:

In a field environment, given a squad defensive position, paper, and pencil. Individual positions have been designated and are being prepared.

STANDARDS:

Prepare a squad defensive sector sketch well enough to determine which position(s) covers any given point within the squad sector. It must include:

1. The location of each fighting position in the squad area.

2. The sector of fire for each assigned or attached weapon.

3. Any known deadspace that cannot be covered with direct fire.

4. Prominent terrain features within the squad area and the ranges to each.

5. Final protective line for crew-served weapons.

PERFORMANCE MEASURES:

1. The squad sector sketch is prepared to:

   a. Assist the platoon leader in preparing his platoon fire plan.

   b. Assist you in determining adequacy of sector coverage.

   c. Assit you in shifting fires without having to move around to determine which weapons can fire into a certain area. If a portion of the squad sector is threatened, you can consult your sector sketch and quickly determine which weapons can cover the threatened area. You then can direct (by voice or SOP signals) their fires be shifted to the threatened area, including instructions to move to alternate or supplementary positions.

NOTE: The parts of the squad sector sketch described below are the minimum items necessary to make the sketch meaningful. Your unit SOP or commander may require more detail.

2. A squad sector consists of a sketch drawn as close to scale as possible, showing the location and sector of fire of each squad weapon, all known deadspace, and the location and estimated ranges to prominent terrain features within the squad area. If you have any weapons attached to your squad, you must include these in your sketch also.

315-389 O - 80 - 11

3. Use the proper symbols to keep the sketch simple and uncluttered:

a.  M60 machinegun.

b.  Cal .50 machinegun.

c.  Medium Antitank Weapon (MAW).

d.  Armored Personnel Carrier (APC).

e.  Primary Sector of Fire.

f.  Secondary Sector of Fire.

g.  Final Protective Line for M60 Machinegun.

h.  OP

-- shaded areas represent grazing fire.

-- unshaded areas represent deadspace.

i. The following weapons have no specific graphic symbols and are represented as indicated:

(1) rifle--R

(2) automatic rifle--AR

(3) grenade launcher--G

4. You should make two copies of your sector sketch. One copy goes to the platoon leader and one copy stays on the squad's position to be given to an incoming squad leader during a relief in place.

5. The following examples can be used as guides in preparing your sector sketch:

a. Sector sketch for an infantry squad (figure 1).

b. Sector sketch for a mechanized infantry squad (figure 2).

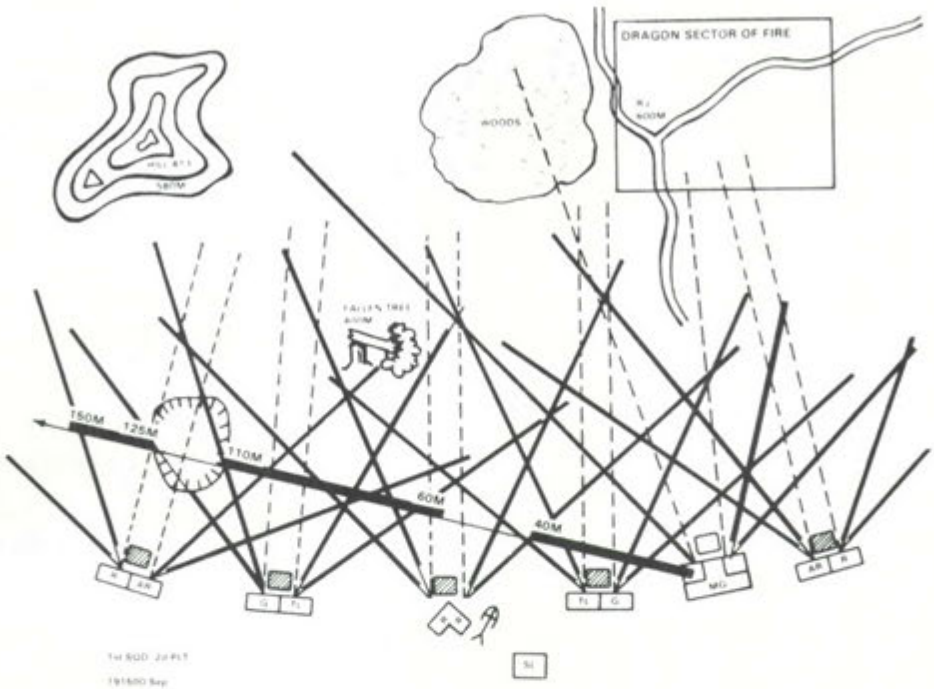


Figure 1. Infantry squad sector sketch.

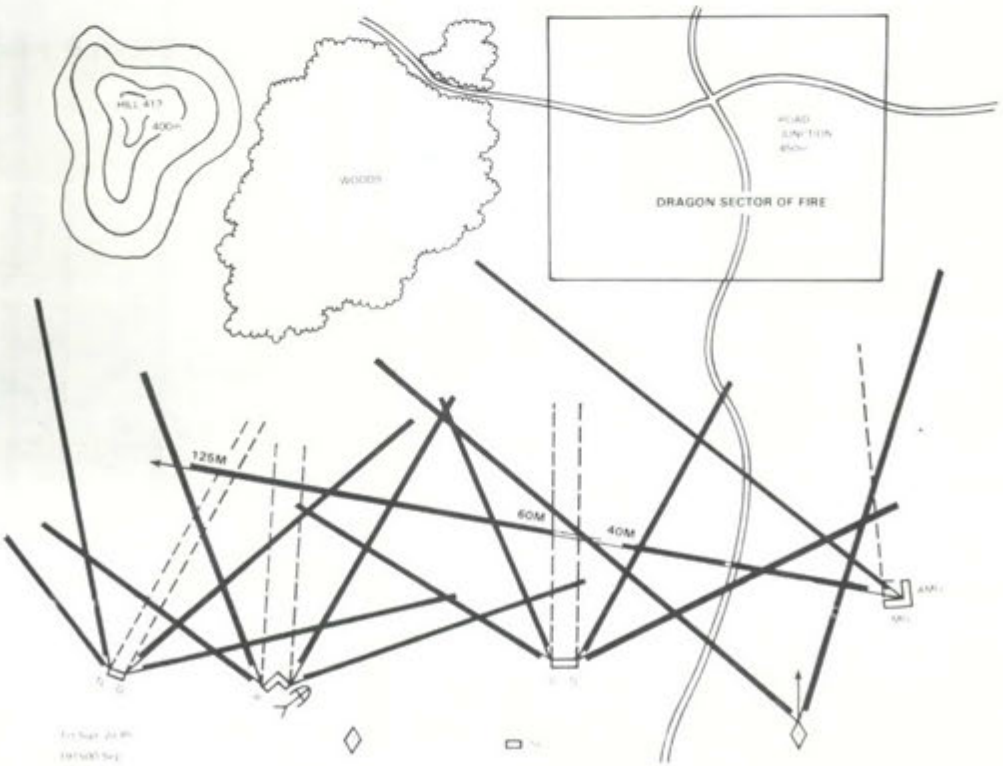


Figure 2. Mechanized infantry squad sector sketch.

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon and Squad, Sep 77 (chap 5, pages 5-23 thru 5-32)
FM 7-8, The Infantry Platoon and Squad, (TBP)

TASK NUMBER: 071-326-5725

DIRECT SQUAD FIRES IN THE DEFENSE

CONDITIONS:

You are the squad leader of a squad that is defending, as a part of a larger unit, against an attacking enemy force.

STANDARDS:

Direct your squad fires so that you will be able to:

1. control the opening of initial fire,
2. control the rate and distribution of fire,
3. shift fires to the most dangerous targets as required,
4. halt squad fires as required.

PERFORMANCE MEASURES:

1. When the enemy attacks, your squad will hold its position and will not withdraw except on order of the platoon leader. A successful defense depends on each element accomplishing its mission. During the enemy attack, you must:

a. Control the squad's fire. This includes the opening of initial fire, shifting of fire to the most dangerous target, as required, and fire discipline.

b. Identify targets and request indirect fire to suppress or destroy targets.

c. Shift men and weapons within the squad position, as required.

d. Keep the platoon leader informed.

2. When an enemy force attacks, hold your squad's small-arms fire until he comes within effective rifle range (300 meters), or when he reaches a spot on the ground, such as a road, a stream, or an open area, designated by the platoon leader as a fire-at-will line. Tell your fire team leaders to open fire when the enemy reaches that line. If the platoon leader does not designate a fire-at-will line, you may establish one for your squad or one for each fire team, depending on the terrain. This line will help you place effective surprise fire on the attacker.

3. Instruct and direct your fire team leaders to engage enemy crew-served and automatic weapons first.

4. If the enemy assault hits only part of the squad front, the unengaged squad members should shift their fires to that area.

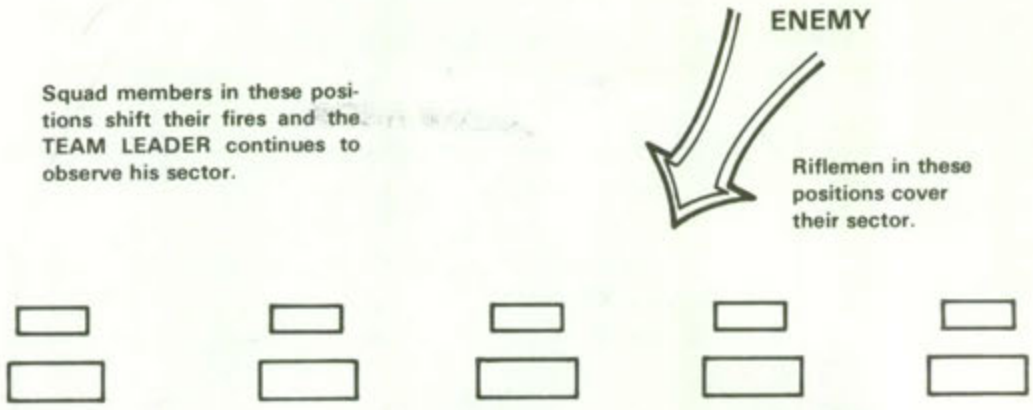


Figure 1.

Squad members in a two-man fighting position may be required to shift positions to allow proper distribution of fires.

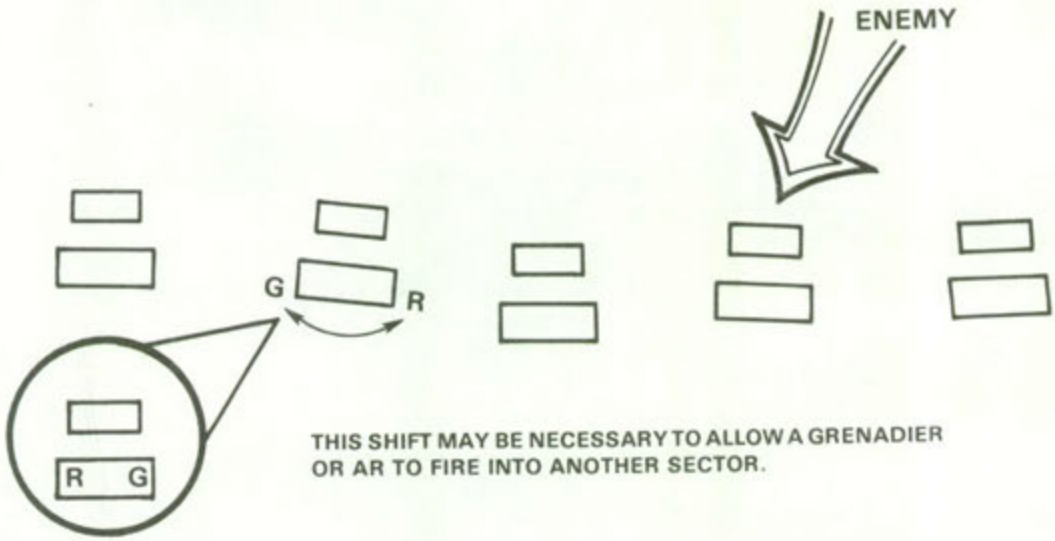


Figure 2.

The team leader who is unengaged must cover his own sector to guard against enemy movement in that area when fires are shifted. As the enemy continues to move closer, the volume and rate of fire are increased to stop the attack before it reaches your position.

5. Emphasize to your men that their direct suppressive fires against armored vehicles, which force crews to button up the hatches, will greatly reduce their effectiveness.

6. Riflemen must be disciplined in the use of fire because experience confirms that semiautomatic fire is more effective than automatic fire. You must strive to insure your men understand that the most effective way to cover a target is by using systematic, semiautomatic fire.

7. The commander may call for final protective fires, if he feels it is necessary to stop the enemy advance. When the signal for these fires is given, have your riflemen, grenadiers, and automatic riflemen fire at the maximum rate.

8. You must have simple and effective means of controlling the fires of your squad to insure that your frontage is properly covered. Some examples are:

a. Oral. This is an effective method of control unless the fire team leaders are too far away or the noise of battle makes it impossible to hear.

b. Arm-and-hand signals. This is an effective method of control when the fire team leaders can see you.

c. Prearranged signals. These are either visual or sound signals such as pyrotechnics or blasts on a whistle. These signals should be included in the company or platoon SOP and must be clearly understood by all squad members.

d. Passing orders from man to man. This is an effective method when the order is simple and time is not critical.

e. Personal contact. In many situations, you will have to move from position to position to issue instructions.

f. Standing operating procedures (SOP). SOPs are actions that your squad members perform automatically without command. Their use eliminates many commands and simplifies your job of control, but they must be well understood by all members and thoroughly rehearsed during training.

REFERENCES:

FM 7-8, The Infantry Platoon and Squad (TBP)
FM 23-12, Technique of Fire on the Rifle Squad and Tactical Application (chap 4, sec II, III, IV, page 31-49, para 48-59)

TASK NUMBER: 071-326-3000

SUPERVISE COMBAT LOADING OF PERSONNEL AND EQUIPMENT IN APC

CONDITIONS:

Given an armored personnel carrier (APC), a squad-size element, a track loading plan (SOP), and equipment authorized to be loaded on the carrier (per unit SOP).

STANDARDS:

Organize and position personnel and authorized equipment on the APC in accordance with unit track loading plan (SOP).

PERFORMANCE MEASURES:

Guide for Combat Loading of an APC.

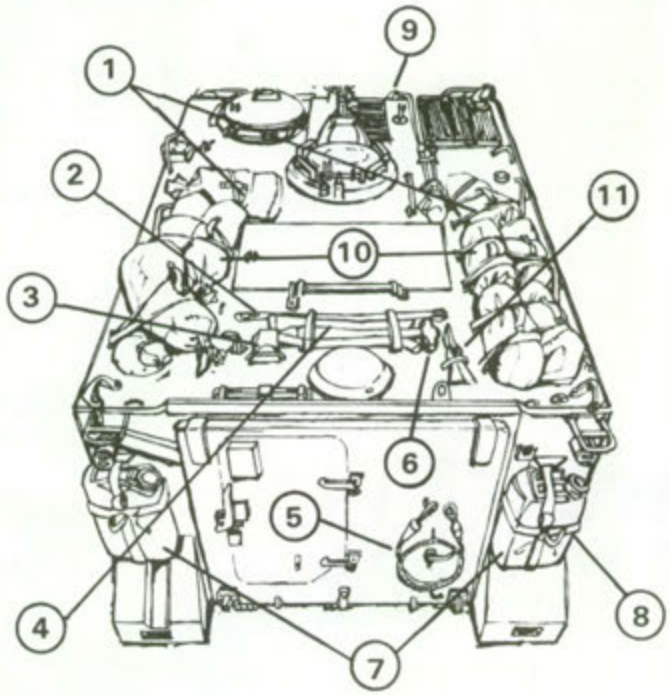
1. Combat loading is a logical sequence of placing your squad's ammunition and equipment on the outside and inside of the vehicle. Sleeping equipment and other low use items will be placed in the APC first, and high use items such as ammunition will be placed in last.

2. An SOP for combat loading is usually established at company or platoon. Refer to the existing unit SOP for placement of ammo and equipment inside the vehicle. All members of the squad should know where each item is placed.

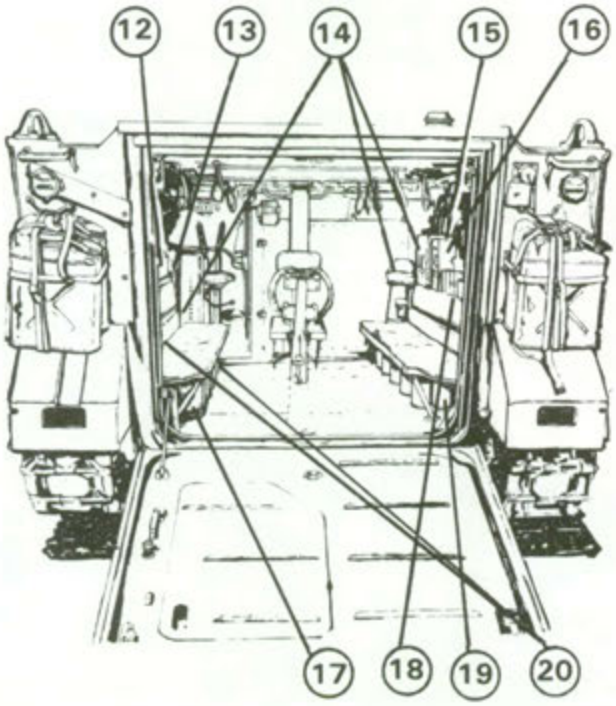
3. A listing and diagram for placement of basic issue items for the APC can be found in TM 9-2300-257-10, Operator's Manual.

M113 EXTERIOR VIEW

1 STRAPS
2 CROW BAR
3 AXE
4 MATTOCK HANDLE
5 TOW CABLE
6 SLEDGE
7 WATER CANS
8 STRAP
9 SHOVEL
10 DUFFEL BAGS
11 MATTOCK HEAD



M113 INTERIOR VIEW

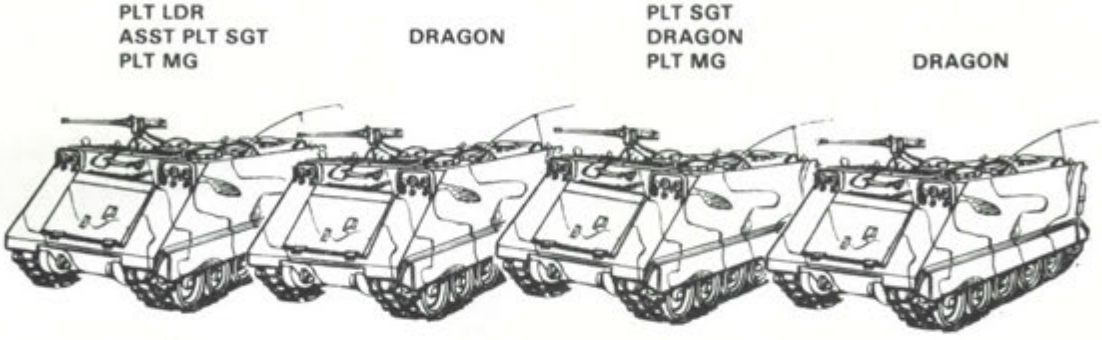


12 TOOL BAG
13 SPARE EQUIPMENT
14 DRAGON
15 DRAGON TRACKER
16 C-RATIONS
17 .50 CAL AMMO
18 5.56-MM
19 7.62-MM
20 MINES

4. Special considerations:

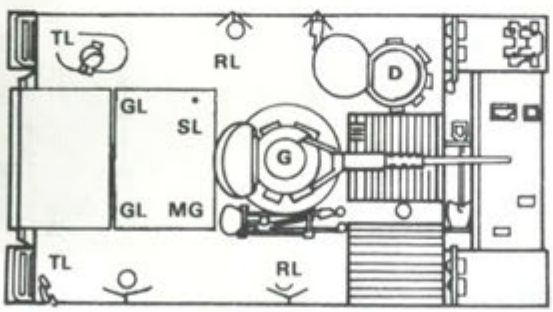
a. All critical weapons and equipment should not be loaded in the same APC.

b. The platoon leader and platoon sergeant should not ride on the same APC.



When vehicles are damaged, transfer equipment and personnel, but retain squad integrity.

5. Placement of troops inside the vehicle is also an important consideration. When the cargo hatch is open, the squad's maximum firepower should be providing all-round security for the vehicle. The vehicle commander should place himself where he can best control the vehicle. The team leaders should place themselves by the access door to control their teams in the event the squad must dismount. The figure below shows a typically mounted squad with the cargo hatch open.



*VEHICLE COMMANDER

When the hatches are closed, the squad leader moves to the gunner's hatch and observes through the vision blocks.

REFERENCE:

FM 7-7, The Mechanized Infantry Platoon and Squad, Sep 77 (app A, page A-1)

TASK NUMBER: 071-326-3001

SELECT EXACT TERRAIN ROUTE FOR AN APC, AND DIRECT THE DRIVER OVER THE ROUTE

CONDITIONS:

In a field environment, given an armored personnel carrier, driver, map, enemy situation, and a mission to move from one point to another.

STANDARDS:

Select the best route from one point to another and direct the movement of the APC over this route IAW the considerations described in the performance measures.

PERFORMANCE MEASURES:

1. The vehicle commander should give the driver clear, specific instructions as to the route which affords the best use of available cover and concealment (figure 1).

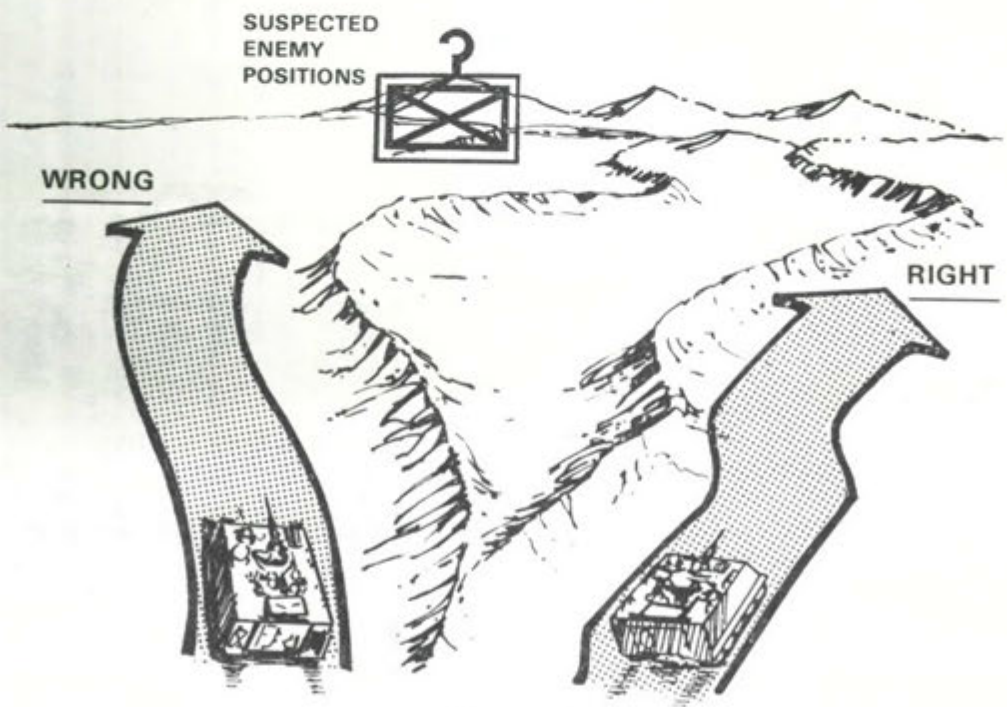


Figure 1.

2. Follow these terrain driving rules to reduce exposure to effective enemy fire and detection:

a. Never skyline or move directly forward from a defilade position (figure 2).

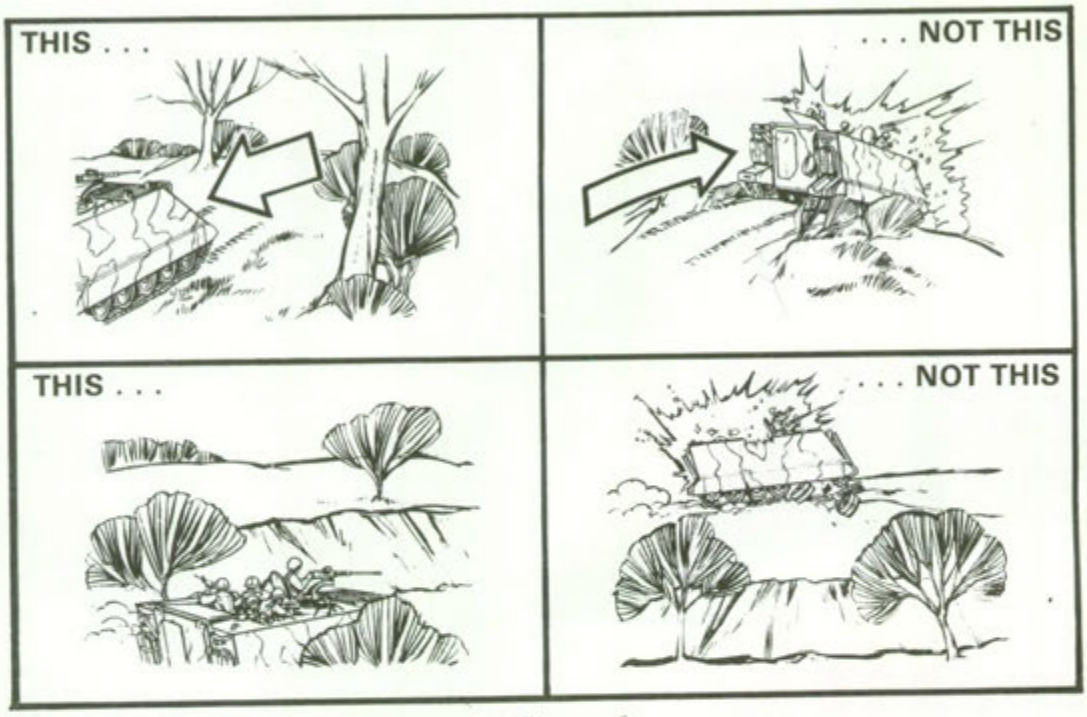


Figure 2.

b. Avoid dusty terrain when possible, since it betrays the movement of armored vehicles (figure 3).

Figure 3.

c. Use all available cover and concealment.

d. Try to leave the terrain looking as natural as possible to make tracking by the enemy harder.

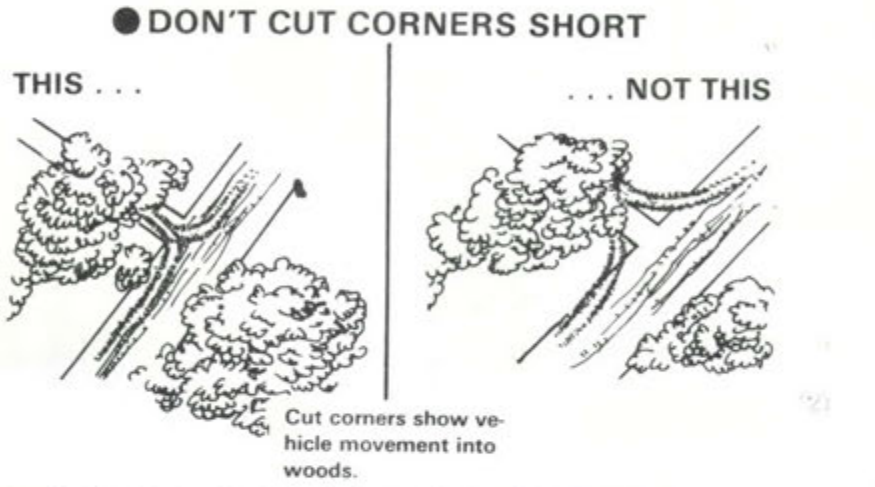


Figure 4.

e. If you must cross an open area, check it first then, CROSS IT QUICKLY. When you must cross an open area (emerge from a woodline, cross a ridge, etc.), carefully check out the area for possible enemy positions before you emerge from cover (figure 5). If enemy locations are identified or suspected, suppress or smoke them prior to crossing. CROSS THE OPEN AREA AS RAPIDLY AS POSSIBLE FROM COVERED POSITION TO COVERED POSITION. (If you are exposed for less than 30 seconds, it will be extremely difficult for an enemy ATGM gunner to acquire, fire, track, and hit you at a long range.)

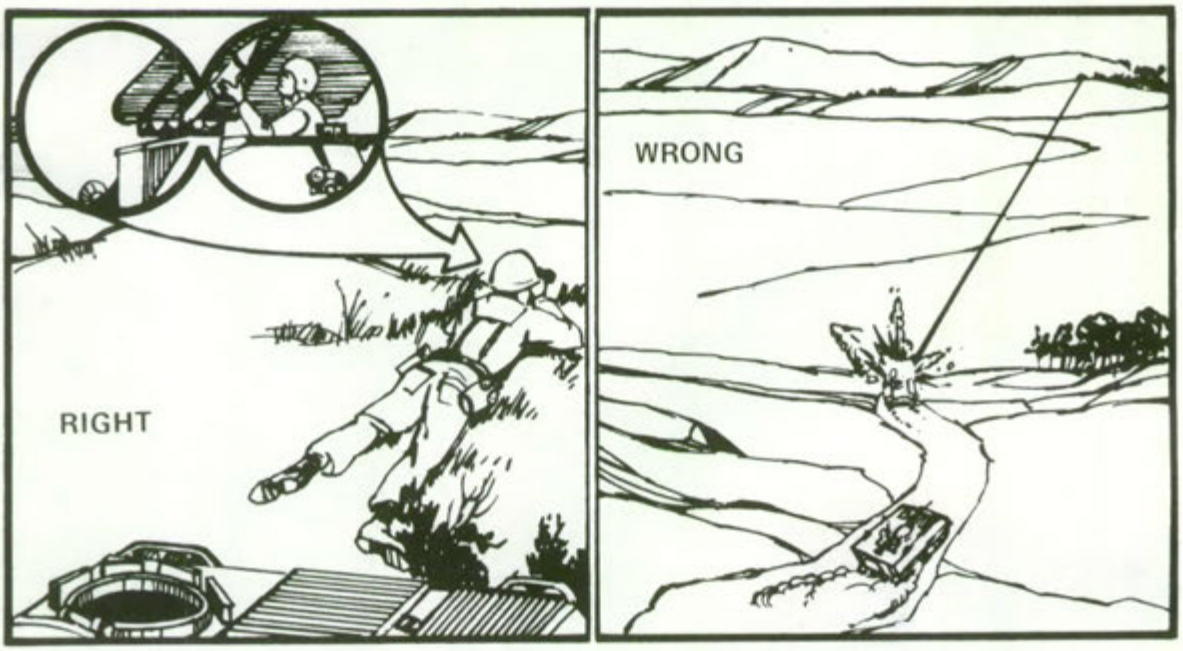


Figure 5.

f. Where covered or concealed routes are not available or when their use would be too time-consuming, plan routes that have "escape valves" available (figure 6).

EXAMPLE:

Here, a dense tree line provides protection from Saggers.

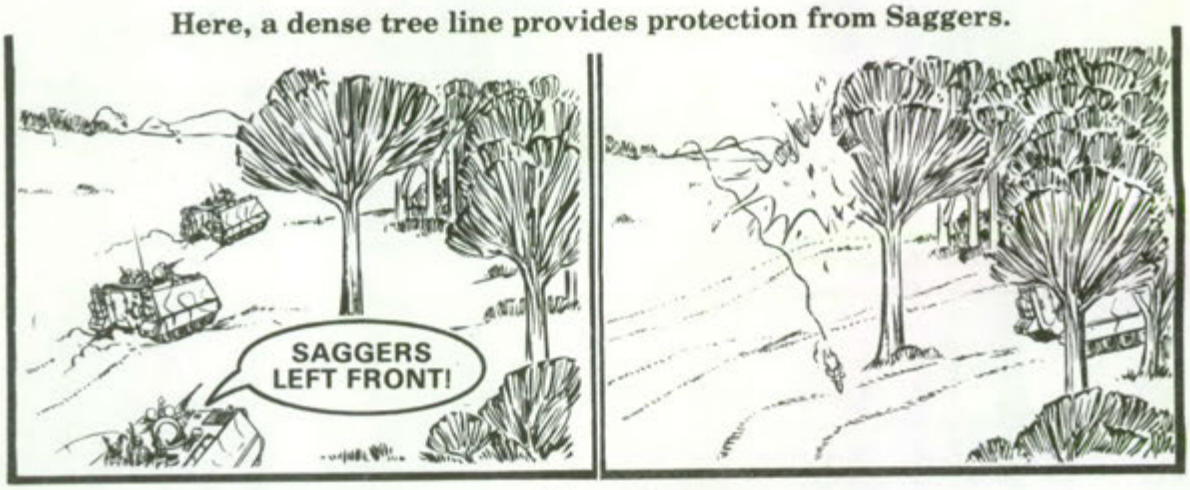


Figure 6.

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon and Squad, Sep 77 (chap 3, pages 3-11 thru 3-14)

TASK NUMBER: 071-326-3002

REACT TO INDIRECT FIRE WHILE MOUNTED

CONDITIONS:

In a field environment, day or night, when subjected to artillery or mortar fire while mounted in a tracked vehicle.

STANDARDS:

1. Immediately close all hatches.

2. Report the fire to the platoon leader.

3. Depending on the mission, move rapidly through or around the impact area.

PERFORMANCE MEASURES:

1. Use training aids such as grenade/artillery simulators and demolition pits to add realism to training.

2. When training a mounted unit to react to indirect fire, move the vehicle through an area and simulate indirect fire without warning.

3. As team leader/squad leader, always maintain control of your vehicle by moving into cupola and observing through vision blocks, be sure all track hatches are closed, and move rapidly through the impact area. (Establish an SOP, and then practice it while training.)

REFERENCES:

None

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TASK NUMBER: 071-326-3003

REACT TO DIRECT FIRE WHILE MOUNTED

CONDITIONS:

As squad leader of the lead squad of a mechanized infantry platoon conducting a mounted movement to contact, upon receiving direct fire from an enemy position(s).

STANDARDS:

Return fire immediately, direct the driver to move to the nearest covered position, report the contact to your platoon leader, and follow his instructions.

PERFORMANCE MEASURES:

1. The following actions are shown in order of priority, but they should be accomplished simultaneously upon contact. This response can be developed through the development of teamwork within your squad. With proper training, the squad will respond as a unit; individuals manning weapons will open fire and the driver will seek and occupy a covered position without your guidance. This teamwork will permit you to report immediately and initiate subsequent action quickly. In some instances, this teamwork will give you the flexibility to react independently of the platoon and avoid costly delays. (Such a case would be when your suppressive fire permits you to move mounted against the position (figure 1) and eliminate it without the employment of the remainder of the platoon.)

Figure 1.

2. The most critical action taken upon receiving direct fire is to return that fire with all available weapons. The caliber .50 plays the primary role in this effort to **suppress** the enemy's fire, but the added firepower of any weapons being employed from the cargo hatch must not be overlooked (figure 2). This massive response is crucial in order to allow subsequent actions.

Figure 2.

3. As suppressive fire is initiated, you must concern yourself with locating a covered position. If you have taken advantage of the terrain during the movement, the difficulty of this task will be minimized.

4. Upon receiving any fire, you should contact the platoon leader and advise him of the situation. Once this is accomplished, he can develop the situation or provide you with the support you will need if you are pinned down or in contact with a force you cannot handle alone.

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon and Squad, Sep 77 (chap 4, pages 4-21 and 4-22)

TASK NUMBER: 071-326-3004

CONTROL OCCUPATION OF A BOUNDING POSITION

CONDITIONS:

In a field environment, given a squad mounted in an APC and a directive from the platoon leader to have your squad occupy the next designated bounding position. (Designated position will be general — for example, a hill mass — and will be located to secure the movement of the platoon (-) forward to your location.)

STANDARDS:

IAW the performance measures, control occupation of a bounding position such that:

1. Covered and concealed route is used for movement.

2. APC position is covered and concealed, and offers good observation and fields of fire on the next terrain feature forward and on probable enemy firing positions.

3. The bounding position is properly secured by the squad prior to notifying the platoon leader.

4. Bounding position must be within range of platoon (-) weapons.

PERFORMANCE MEASURES:

1. The platoon uses the bounding overwatch technique of movement by bounding one squad forward while the platoon (-) overwatches from a stationary position (figure 1).

2. The bounding squad leader plans and executes his movement as follows:

NOTE: Task: *Select exact terrain route for an APC, and direct the driver over the route,* should be used as a guideline in accomplishing movement.

a. Upon arrival at the bounding position, enter from the rear and provide for a withdrawal route so the overwatching element can immediately support you by fire and/or maneuver if you make contact.

b. Select a position for the APC that offers cover and concealment (hull-down if possible). Camouflage the cupola. This position must offer good observation and fields of fire on the next terrain feature forward and on probable enemy firing positions (figure 2).

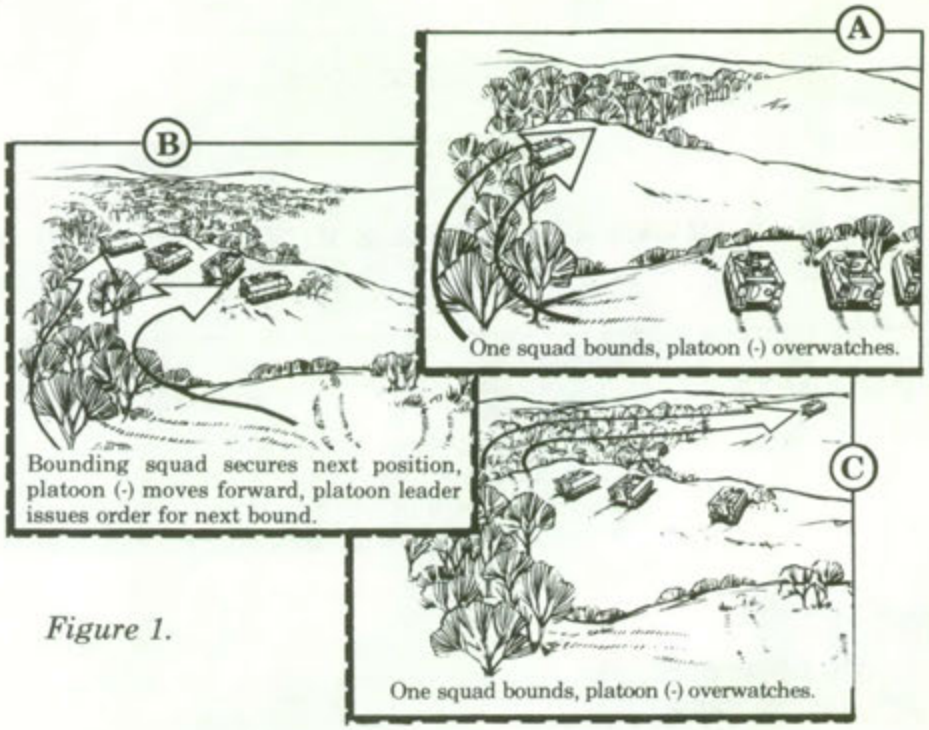


Figure 1.

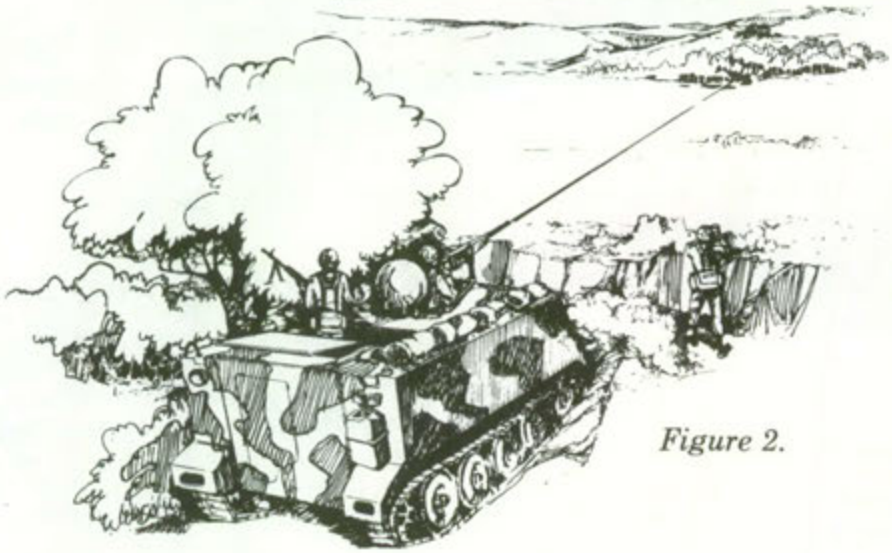


Figure 2.

c. Dismount only enough men and weapons to secure the area. If the position is relatively open, you may not have to dismount to secure the area.

d. As soon as you have secured the position, notify the platoon leader.

e. You are now prepared to cover the movement of the platoon (-) forward to your location. Personnel and weapons must always be ready to provide overwatching fires to elements of the platoon (-) during their subsequent movement.

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon/Squad, Sep 77 (chap 3, page 3-4)

TASK NUMBER: 071-326-0601

USE VISUAL SIGNALS TO CONTROL MOVEMENT (MOUNTED)

CONDITIONS:

Given a combat or field training situation with necessary flags or flashlights and you are moving mounted. Radio communications may or may not be available and radio silence may or may not be imposed.

STANDARDS:

1. Demonstrate the correct procedure for each signal in the performance measures below.

2. Train each member of your squad to recognize each signal and require them to take the appropriate actions.

PERFORMANCE MEASURES:

1. Visual communication is a means available to all units. Visual signals are transmitted by flags, lights, pyrotechnics, panels, arm-and-hand signals, and other prearranged methods. They are suitable for transmitting prearranged messages rapidly over short distances as well as for recognition and identification of friendly forces.

2. Visual signals also facilitate ease in controlling the action(s) or movement(s) of the follower and conversely visual signals can influence the action(s) or movement(s) of the leader.

3. It is important that you familiarize yourself with all the visual signals used on the battlefield. However, it is more important that you know those signals which can assist you in performing your specific job effectively in the event alternate means of communication are not available.

4. Signals for combat formations and battle drill:

a. These signals may be used, as appropriate, by either mounted or dismounted troops. They give the soldier a means of communication between himself and other persons or units. They must be practiced until their use becomes second nature. Signals must be given correctly and distinctly.

b. When a movement or action is to be executed by less than the total unit, the signaler will point, if necessary, toward the person(s) or element(s) of a unit as a warning that a signal will follow. However, when a movement or action is to be executed by the entire unit, the proper signal should be preceded by the signal ATTENTION. Most signals may be given from the ground or from a vehicle. Unless otherwise indicated in the illustrations, the

signaler will face the person(s) or element(s) for which the signal is intended.

5. Listed below are selected visual signals. You should know these standard arm-and-hand signals.

SIGNALS TO CONTROL VEHICLES

START ENGINES or PREPARE TO MOVE. Simulate cranking of engines by moving arm in a circular motion at waist level.

STOP ENGINES. Draw right hand, palm down, across the neck in a "throat cutting" motion from left to right.

MOUNT. With the hand extended downward at the side, with the palm 45° out, raise arm sideward and upward to an angle of 45° above the horizontal. Both arms may be used when giving this signal. Repeat until understood.

DISMOUNT or TAKE A PRONE POSITION. Extend arm sideward at an angle 45° above horizontal, palm down, and lower it to side. Both arms may be used in giving this signal. Repeat until understood.

MOVE (the vehicle(s)) FORWARD or COME FORWARD. Move hand(s) backwards and forwards with palm(s) toward the chest as if pulling the vehicle.

NEUTRAL STEER (tracked vehicles). Cross wrists at throat; point index finger in direction steer is to be made. Clench fist of other hand.

MOVE IN REVERSE (backup). Face the unit (vehicle) being signaled; raise hands to shoulder, level palms to front. Move hands forward and backwards as if pushing vehicle away.

CHANGE DIRECTION. Raise hands to shoulder level in front of the body. Form clenched fist on arm in direction turn is to be made. Make beckoning motion with other arm to bring vehicle forward. To reverse, make pushing motion.

BUTTON UP or UNBUTTON. To signal BUTTON UP, place both hands, one on top of the other, palms down on top of the helmet; with both arms back and in the same plane as the body. To signal UNBUTTON, give the BUTTON UP signal, then separate the hands, moving them slightly to each side in a slicing motion; repeat.

CLOSE UP DISTANCE BETWEEN VEHICLES AND STOP. Face the vehicle being signaled and extend forearms to the front, palms inward and separated by at least the width of the shoulders. Bring palms together as the distance shortens. The vehicle must stop when the palms come together.

STOP. (Alternate signal used to stop tracked vehicles.) Clasp the hands together, palms facing each other, at chin level.

RAISE RAMP. (For use with vehicles with ramps.) Make circular motion with either hand at head level and the other arm extended across body.

LIGHTS OFF. Index finger of right hand pointing towards eye and "thumbs down" signal with left hand.

LIGHTS ON. Index finger of both hands pointing towards eyes.

LOWER RAMP. (For use with vehicles with ramps.) Make circular motion with either hand pointing to the ground.

LEFT TURN or COLUMN LEFT. Extend left arm horizontally to the side, palm to the front.

RIGHT TURN or COLUMN RIGHT. Extend right arm horizontally to the side, palm to the front.

PASS AND KEEP GOING. Extend left arm horizontally to the side, palm to the front, and describe large circles to the front by rotating arm clockwise from the elbow.

ATTENTION. Extend the arm sideways, slightly above horizontal; palm to the front; wave arm to and away from the head several times.

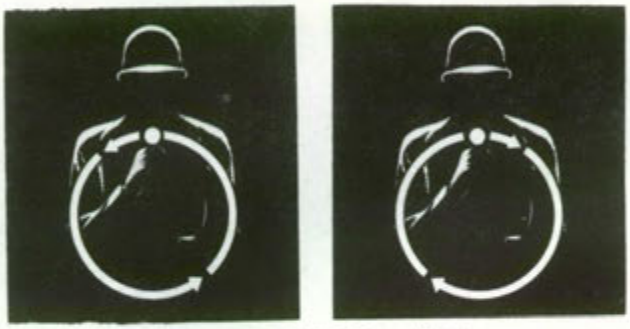
USING A FLASHLIGHT TO CONTROL VEHICLES

START ENGINES. Move the light to describe a horizontal figure 8 in a vertical plane in front of the body.

STOP or STOP ENGINES. Move the light horizontally back and forth several times across the path of approaching traffic to stop vehicles. Use the same signal to stop engines.

GO; FORWARD; MOVE OUT; INCREASE SPEED; or DOUBLE TIME. Move the light vertically several times in front of the body.

MOVE IN REVERSE (for vehicles which are not moving) or SLOW DOWN (for vehicles which are moving). Hold the light at shoulder level and blink several times toward the vehicles.



TURN LEFT (RIGHT). Rotate light to describe a circle 12 to 18 inches in diameter in the desired direction of the turn.

REFERENCES:

FM 21-60, Visual Signals, Dec 74 (chap 2, pages 2-15 thru 2-18)
FM 7-7, The Mechanized Infantry Platoon and Squad, Sep 77 (app D, page 3)

TASK NUMBER: 071-326-3006

DIRECT THE FIRE AND MANEUVER OF A MECHANIZED SQUAD AGAINST AN ENEMY POSITION

CONDITIONS:

As a mechanized infantry squad leader during a movement to contact, your squad encounters an enemy position. You have been directed to assault the position using either mounted or dismounted techniques as part of a larger force.

STANDARDS:

Direct the fire and maneuver of your squad to insure that you:

1. Fix the enemy with all available suppressive fire to keep him from firing his weapons accurately and redeploying his force to meet your assault.

2. Fight the enemy by locating and assaulting his flank, rear, or other weak point, using either mounted or dismounted techniques, as appropriate or directed.

PERFORMANCE MEASURES:

1. The mechanized squad normally moves and fights mounted until required to dismount by enemy action, terrain, or obstacles.

2. There are three basic methods of closing with the enemy:

a. **Close with the enemy mounted/remain mounted all the way across his position.** This method is preferred because of the speed, protection, and additional firepower that can be achieved with the carrier. It is normally used when the platoon is part of a tank-infantry team and resistance is light. During the assault, tanks normally lead and place a heavy volume of fire on enemy positions. The squad normally follows one or two tanks and fights mounted. The squad leader controls the movement of the APC and directs the fire of squad members. Tanks may make short halts to fire, so the APC must be far enough back to seek its own cover, or change its rate of speed until the tank resumes movement. If a tank is put out of action, the squad leader directs the APC driver to follow another tank. He does not fire suppression to the rear of tanks unless there is a target because of the danger to the tank crew which normally fights from open hatches. Sponson boxes, the external interphone, and other items could also be damaged by caliber .50 fire from an APC. Squad members not assigned specific duties can reload magazines and pass up ammunition, or replace casualties. Not only does the squad protect the flanks and rear of the tank,

but it must protect its own flanks and rear. Assign areas of responsibility to each soldier in the cargo hatch. The soldier on each side is normally responsible for the flank of the APC. He also places suppressive fire on targets to the rear of adjacent tanks and between APCs. One man should cover the rear of the APC (figure 1).

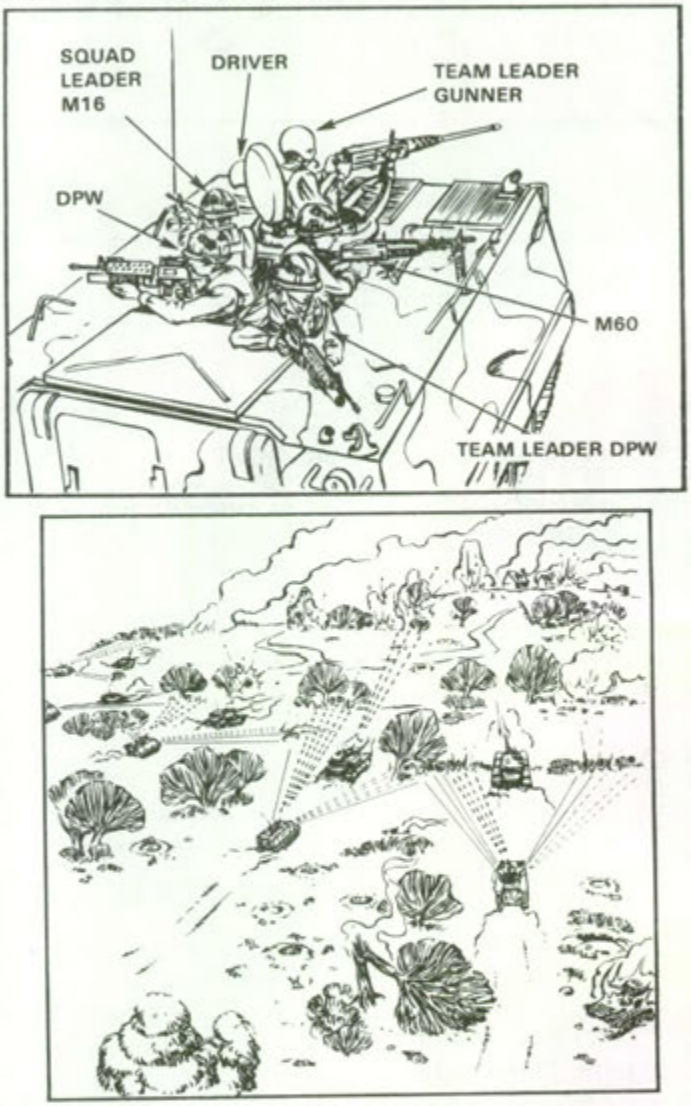


Figure 1.

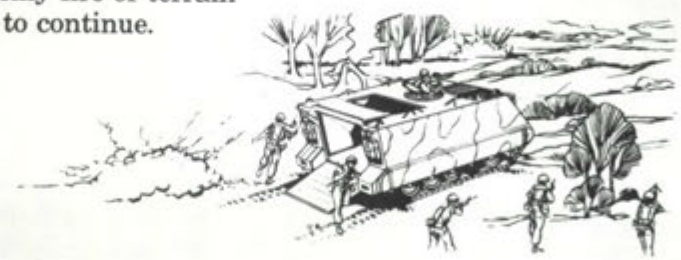
The most critical part of this type of assault is moving over an enemy position. Enemy soldiers normally will be down in their positions, protected from direct fire. As you move over a position, the APC should slow down so that hand grenades can be thrown and weapons can be fired into the positions. Throwing hand grenades must be coordinated so troops can get down in the hatches. The squad leader usually gives the order to throw grenades, and several grenades are thrown to each flank and the rear of the APC at the same time. The troops must be continually alert for enemy antitank gunners who wait for armored vehicles to pass over their positions and then pop up to engage the vehicles' flank or rear.

b. **Close with the enemy mounted/dismount on or near enemy position.**

(1) This method is used when enemy antitank fire can be suppressed or when the enemy's positions must be mopped up. Initially, the squad fights from its vehicle employing the mounted fighting techniques discussed above. The platoon leader will indicate where the platoon will dismount and the direction the dismounted assault will move. The squad leader must select the exact location and method of dismount. This action is critical. Enemy in the vicinity must be kept suppressed and fixed while the squad dismounts. The squad leader directs the driver to move to the best spot to dismount. This may be directly on top of an enemy bunker, trench, or fighting position. Men in the cargo hatch and the caliber .50 gunner keep up a high volume of fire and throw grenades around the APC while the squad is dismounting. Soldiers not in the cargo hatch dismount first and take up positions to fire on the enemy. They throw hand grenades as required to keep the enemy suppressed as the remainder of the squad dismounts. If there is danger of the enemy firing in the open ramp, the combat access door may be used. The squad leader must decide if the rapid dismounting offered by dropping the ramp offsets the temporary loss of armor protection. APCs from which the squads have dismounted normally operate under the control of the platoon sergeant and move to positions from which they can fire to break up a counterattack or suppress any enemy in supporting positions. When the APC fights as part of the squad, several soldiers remain with the APC and employ weapons from the cargo hatch. The APC provides direct fire on targets as directed by the team leader.

(2) Where to dismount:

(a) Before reaching the enemy positions when enemy fire or terrain will not allow you to continue.



(b) On an enemy fighting position to keep the enemy from shooting at your APC or at the rear of tanks.

(c) Behind an enemy fighting position, only when the enemy cannot hit the rear of your APC from that position.

c. **Conduct the entire assault dismounted.** This technique should be used when the enemy has a strong defensive position, antiarmor weapons cannot be suppressed, visibility is limited, or there is an obstacle to mounted movement. The platoon leader selects the assault position and directs when and where the platoon will dismount. The squad leader selects the exact point to dismount. The squad leader should maintain dispersion between APCs and get as far forward as possible so that the dismounted squad can quickly join the platoon and move toward the enemy. The APC should be completely covered and concealed during dismounting. If APCs are to support from the assault position, they must not reveal their position until the dismounted elements are out of the beaten zone of enemy return fire. APCs normally operate under the control of the platoon sergeant and provide direct fire to support the assault. The platoon leader will normally direct which personnel and weapons will remain in each APC as part of the platoon support organization of the assault and support elements. The assault element (dismounted) normally takes a machinegun (LMG), several LAWs, grenade launchers, and hand grenades. The support element (mounted) normally consists of the APC and crew with the gunner employing either the cal .50 or Dragon as appropriate. Additional troops may remain with the APC to fire the Dragon and LMG. The dismounted element of the squad moves as part of the platoon and deploys for the assault under the platoon leader's direction. The squad closes with the enemy using normal dismounted assault techniques. The squad employs the LMG to provide sustained direct fire on those parts of the enemy position which are not adequately suppressed by firing from the APCs (figure 2 and 3).

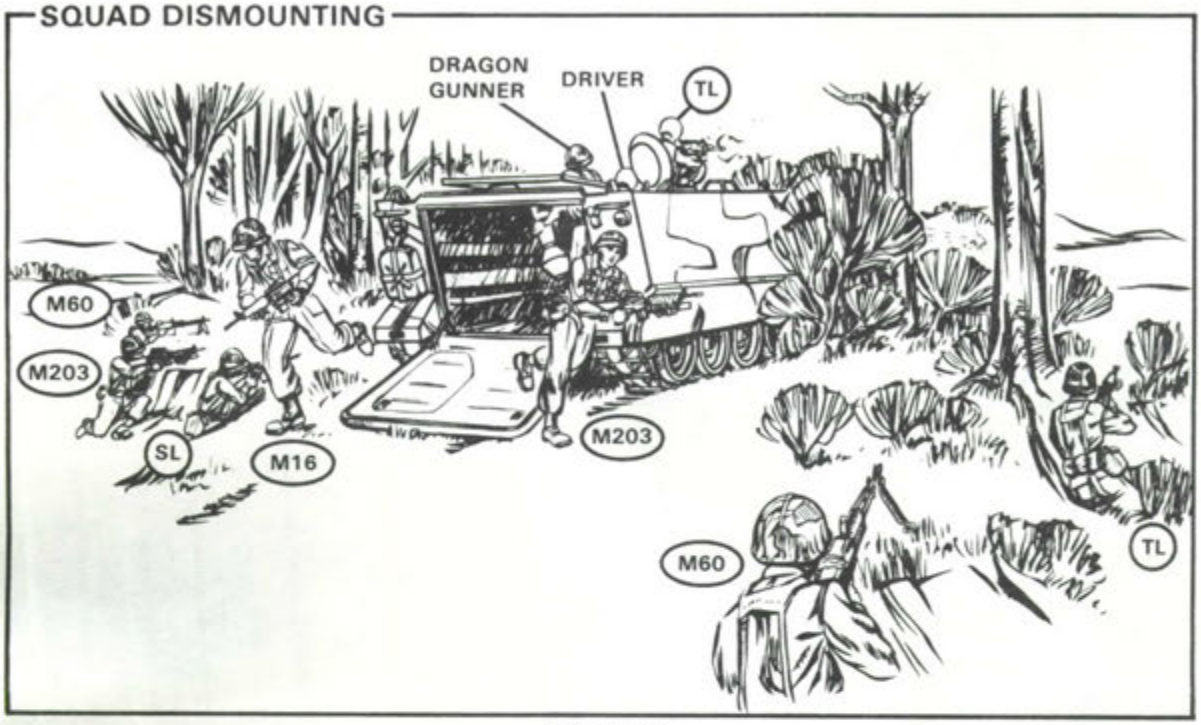


Figure 2.

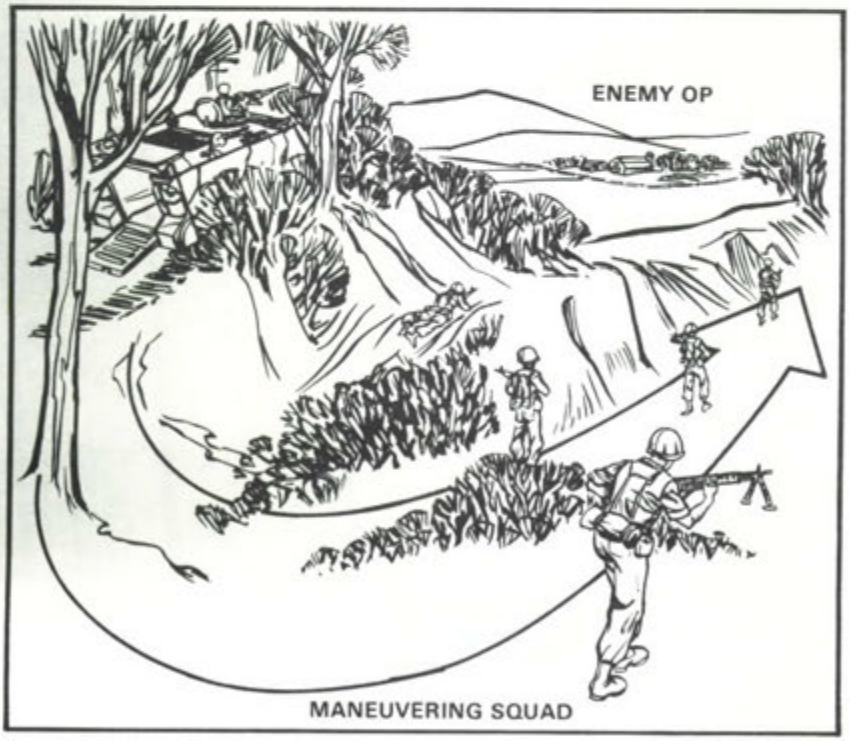


Figure 3.

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon and Squad, Sep 77 (chap 4, page 4-23 thru 4-37; app L, page 2)

APPENDIX B
CONSOLIDATED LIST OF REFERENCES
(FM 7-11B3)

FIELD MANUAL (FM)

FM 3-12	Operational Aspects of Radiological Defense, C1, 2	Aug 68
FM 5-20	Camouflage	May 68
FM 5-25	Explosives and Demolitions	Feb 71
FM 7-7	The Mechanized Infantry Platoon and Squad	Sep 77
FM 7-8	The Infantry Platoon and Squad	TBP
FM 20-32	Mine-Countermine Operations at the Company Level	Nov 76
FM 21-6	How to Prepare and Conduct Military Training	Nov 75
FM 21-20	Physical Readiness Training, C1-3	Mar 73
FM 21-26	Map Reading, C1	Jan 69
FM 21-40	Chemical, Biological, Radiological, and Nuclear Defense	May 71
FM 21-60	Visual Signals	Dec 74
FM 21-75	Combat Skills of the Soldier	TBP
FM 23-12	Techniques of Fire of the Rifle Squad and Tactical Application	Oct 67
FM 23-34	TOW Heavy Antitank Weapons System	TBP
FM 30-5	Combat Intelligence	Oct 73

TRAINING CIRCULAR (TC)

TC 7-24	Antiarmor Tactics and Techniques for Mechanized Infantry	Sep 75

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TECHNICAL MANUAL (TM)

TM 3-220	CBR Decontamination, C1, 2	Nov 67
TM 3-6665-225-12	Operator's and Organizational Maintenance Manual: Alarm, Chemical Agent Automatic: Portable, Manpack, M8	Aug 75
TM 9-1340-203-20	Rocket Launcher M190 with Subcaliber 35-mm Practice Rocket M73	Jul 73
TM 11-5820-549-12	Receiving Set, Radio AN/PRR-9; Transmitting Set Radio AN/PRT and AN/PRT-4A	Oct 66
TM 11-6665-213-12	Operator and Organizational Maintenance Manual: Radiacmeter IM-174/PD	Jul 69
TM 11-6665-232-12	Operator and Organizational Maintenance Manual: Radiacmeter IM-174A/PD	Jul 67
TM 38-750	The Army Maintenance Management System (TAMMS), C1	Nov 72

DA PAMPHLETS

DA Pam 350-SQT	A Guide for Leaders	Apr 77
DA Pam 623-1	Preparation of Enlisted Evaluation Reports	May 75
DA Pam 750-31	The M561 Gamma Goat	Nov 70

TRAINING EXTENSION COURSES (TEC)

LAND NAVIGATION

930-071-0018-F	Navigating with Map and Compass

SQUAD RADIO

010-071-1001-F	Introduction to the Squad Radio
010-071-1002-F	Operation of the Squad Radio

MILITARY INSTRUCTOR TRAINING

901-071-0091-F	Unit Development and Training, Part 1
901-071-0092-F	Unit Development and Training, Part 2
901-071-0093-F	Developong Training Objectives

901-071-0094-F	Developing Intermediate Training Objectives
901-071-0095-F	Developing a Lesson Plan
901-071-0096-F	Selecting Methods of Instruction, Training Aids, and Media
901-071-0097-F	Evaluating Training

QUESTIONNAIRE

SOLDIER'S MANUAL

To provide you a better manual, please give us your comments after studying this field manual. Note that some of the questions apply to soldiers only and some to trainers only. Please fill out the following before continuing.

MOS _____ **RANK** _____ **TIME IN GRADE** _____

TIME IN SERVICE _____ **UNIT** _____

DIVISION _____

_____

1. The following comments are a result of my review of the Soldier's Manual for Skill Level _____.

2. My duty position is: _____

_____

_____

_____

3. The Soldier's Manual contains only the critical combat skills the infantryman needs to fight and survive on the battlefield. I think it contains:

☐ Too many tasks ☐ The right number ☐ Too few tasks

4. Are there tasks that should be added?

☐ Yes **(See the list below)** ☐ No

_____ **Continue in block 15 if needed.** _____

5. **Are there tasks that should be dropped?**

☐ Yes **(See the list below)** ☐ No

Continue in block 15 if needed.

6. **How difficult was it to find the tasks which you must perform?**

☐ Easy, I had no trouble.

☐ Not difficult, but I think the instructions were confusing. **(Please tell us how to improve the instructions in the space below).**

☐ Difficult, I had to have someone explain how to do it.

Continue in block 15 if needed.

7. **Will the Soldier's Manual help you do a better job as an infantryman?**

☐ No, I don't think it will help at all.

☐ Yes, it will be a big help.

☐ Yes, but it will be better if improvements are made. **(List the improvements you would like to see.)**

Continue in block 15 if needed.

8. **Did the conditions for each task describe the real conditions under which you usually perform each task?**

☐ Yes ☐ No, I would change:

Continue in block 15 if needed.

9. **The STANDARDS are:**

☐ Too easy ☐ Too hard ☐ About right

10. **Can the PERFORMANCE MEASURES help you perform the task to the standard?**

☐ Yes ☐ No If you check NO please explain in block 15.

11. **(Trainers only): Will the Soldier's Manual help you as a trainer in improving the combat proficiency of 11B soldiers?**

☐ Yes, I think it will be a big help.

☐ Yes, but the Soldier's Manual needs to be changed as I recommended in question 10.

☐ No, it will not help at all **(please explain in block 15).**

12. **Which of the following best tells what an infantryman must be able to do in combat?**

☐ Job Description in AR 611-201, Personnel Selections and Classification.

☐ Study Guides for MOS Tests.

☐ Soldier's Manual.

☐ 11B Study Reference Manual.

☐ Other _____

Continue in block 15 if needed.

13. **If I could make any improvement(s) in the Soldier's Manual it (they) would be:**

Continue in block 15 if needed.

14. **Is the artwork used in this field manual understandable and correct for each task?**

☐ Yes ☐ No

If you checked no, please make suggestions concerning replacement of artwork in block 15 or enclose suggested line drawing, sketch, photo, etc., with this questionnaire.

15. **Comments.**

15. Comments (continued).

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