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Research Product 86-19

Multiple Integrated Laser Engagement System Training Checklist

ARI Field Unit at Presidio of Monterey, California
Training Research Laboratory

May 1986

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ARI Research Product 86-19

20. (Continued)

trainers with critical prompts on what to do before, during, and after an exercise to obtain maximal gains from training exercises.

Research Product 86-19

Multiple Integrated Laser Engagement System Training Checklist

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FOREWORD

This research product provides a checklist to assist those who conduct Multiple Integrated Laser Engagement System (MILES) training, and summarizes the many Army documents giving guidance on how to use MILES for tactical engagement simulation (MILES) training. This guide is suitable for use in the field and is being published as a graphic training aid (GTA) to give unit trainers critical insights on what to do before, during, and after an exercise to derive maximal benefit.



EDGAR M. JOHNSON
Technical Director

MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM TRAINING CHECKLIST

CONTENTS

	Page
INTRODUCTION	1
PREPARING FOR MILES-SUPPORTED TRAINING	5
MONITORING MILES-SUPPORTED EXERCISES	15
REVIEWING MILES-SUPPORTED TRAINING: AFTER-ACTION REVIEWS	19
REFERENCES	25

LIST OF FIGURES

Figure 1. MILES training flow chart	2
2. Objective casualty assessment components	3

CHAPTER 1

INTRODUCTION

This checklist was developed to assist unit trainers to conduct MILES training within the tactical engagement simulation framework. It briefly summarizes the extensive training guidance in FM 25-3 and TC 26-6 (Appendix A) into an orderly series of critical training steps. That detailed "how to do" information on MILES training is complimented here by this "what to do" checklist for use in the field. A summary flow chart of major categories of MILES training contained in this checklist is presented in Figure 1.

The effectiveness of MILES training depends upon providing collective training feedback. This requires an adequate number and employment of controllers to ensure critical steps for preparing, monitoring, and reviewing MILES training. Controllers are particularly needed to enforce objective casualty assessment. The components for such assessment are listed in Figure 2 and related checklist items are marked with an asterisk.

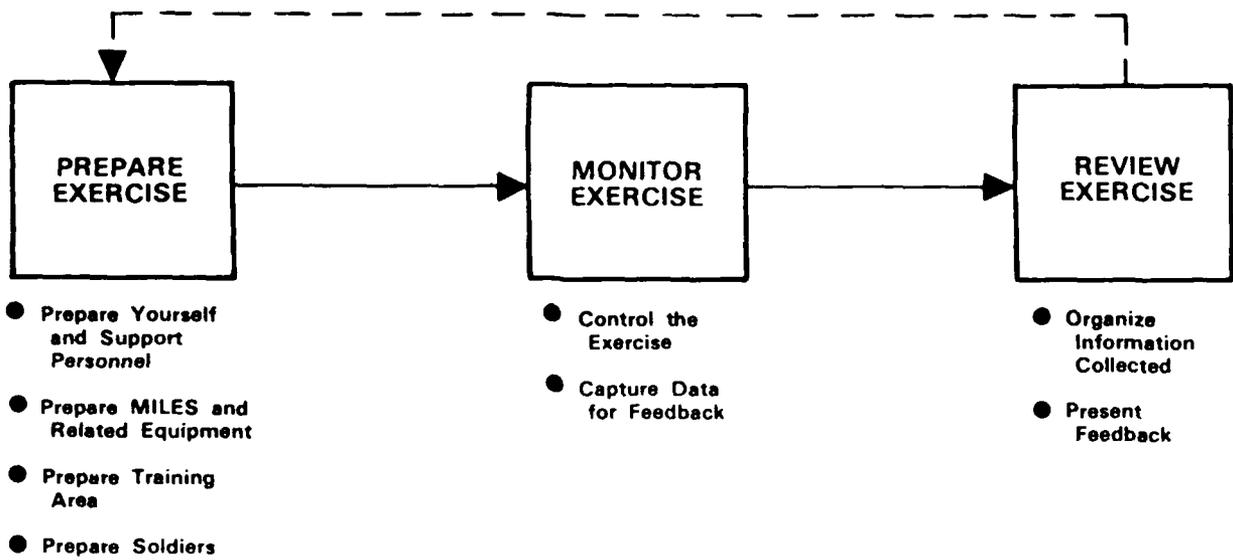


Figure 1. MILES training flow chart.

OBJECTIVE CASUALTY ASSESSMENT IS ASSURED						
All Players Equipped w/Operational Devices				Rules of Engagement Communicated & Enforced		
Enough Equipment for All Players	Equipment is Operational			Rules of Engagement Are Communicated	Rules of Engagement Enforced	
	Transmitters Aligned	Detectors Checked	Inoperable Equipment Removed From Play		Cheating Prevented	IDF Casualties Assessed

Figure 2. Objective casualty assessment components.

CHAPTER 2

PREPARING FOR MILES-SUPPORTED TRAINING

PREPARE YOURSELF AND SUPPORT PERSONNEL

** All Asterisked Items Relate to Objective Casualty Assessment.

	Y E S	N O	N / A
The Cdr is trained as a MILES controller.			
All controllers are trained as MILES controllers.			

PREPARE MILES AND RELATED EQUIPMENT

● MILES REQUISITION

** The Cdr uses TC 25-6 ammo expenditure rate tables to plan needed ammo.			
** The Cdr uses TC 25-6 to plan the types and number of batteries needed.			
** The Cdr coordinates with the TASC to ensure availability of MILES devices for all personnel and vehicles.			

	Y E S	N O	N / A
** The Cdr requests an additional 10% of the MILES devices, including batteries, as "spares".			
** Each controller is provided with a control gun and a green key.			

● MILES INFANTRY EQUIPMENT

- Small Arms Transmitters

Formal procedures are used for issuing transmitters (designated site, supervision, sub-hand receipts, etc.).			
M60 and M16 weapons have blank firing adaptors (BFAs).			
** All personnel verify M16 boresights by firing at the Small Arms Alignment Fixture (SAAF) from 50-100 meters.			
** Soldiers adjust, under close supervision, M16 sights to align transmitters.			
** M60 machine guns are aligned with transmitters by firing at a SAAF.			
** M2 machine guns are aligned with transmitters by firing at a MILES detector down range.			

- Anti-Armor Transmitters

	Y E S	N O	N / A
** Weapons are checked by examining load windows and inspecting for cracks in body.			
** Weapons are set for anti-tank weapons effect signature simulator (ATWESS) fire when fired at a MILES detector down range.			

- Man-Worn Laser Detectors (MWLDs)

Formal procedures are used for issuing MWLDs (designated site, supervision, sub-hand receipts, etc.)			
Each weapon key is secured with a lanyard.			
** Controllers assemble soldiers and test each MWLD with a control gun before each exercise.			
Non-working MWLDs are checked for batteries, installation, connectors etc.			
** Torso or head harnesses with more than one bad detector are exchanged before the exercise.			
Inoperable MWLDs are tagged before being exchanged.			
** Soldiers do not wear inoperable MWLDs into the lane.			

● MILES ARMOR EQUIPMENT

- Transmitters

	Y E S	N O	N / A
** M85 machine guns are aligned with transmitters by firing at a MILES detector down range.			
** Tank main guns have a working Hoffman device.			
** Tank main guns are aligned with transmitters.			
Non-working transmitters are checked for batteries, connectors, headspace etc.			
Inoperable transmitters are tagged before being exchanged.			
** Soldiers and vehicles do not carry inoperable transmitters into the lane.			

- Vehicular Detector Systems

Formal procedures are used to issue vehicular detector systems (designated site, supervision, sub-hand receipts etc).			
** Controllers assemble vehicles and test detectors with a control gun before each exercise.			

	Y E S	N O	N / A
An Electronic System Test Set (ESTS) is on-site for trouble shooting MILES vehicular equipment.			
Non-working vehicle systems are checked for loose cables, installation etc.			
** All belts with more than one bad detector are replaced before the exercise.			
Inoperable equipment is tagged before being exchanged.			
** Vehicles do not carry inoperable detector equipment into the lane.			

● SPARE EQUIPMENT

Controllers have spare:

MILES transmitter and detector gear,			
batteries,			
tags for inoperable/broken MILES equipment.			

- **RADIOS**

The following personnel have tactical radios:

	Y E S	N O	N / A
Bn Cdr,			
Co Cdrs,			
Plt Ldrs,			
Sqd Ldrs/TCs,			
FMCC,			
Fire Markers,			
NCS.			
Controllers have access to all tactical nets and have a separate net for control.			
Radios are operational.			

PREPARE TRAINING AREA

- **MINIMIZE TRAINING DISTRACTORS**

The unit signs for the equipment several days before moving to the field.			
---	--	--	--

	Y E S	N O	N / A
Precautions are taken for weather conditions.			
MILES and related equipment and vehicles arrive on time.			
Personnel arrive on time.			
Field mess activities are timely and not disruptive.			
The area for installing and testing MILES equipment is large enough for all personnel and equipment.			

- REFERENCE MATERIALS

Training documents are available on site for commanders and controllers (see lists contained within Appendix A references).			
---	--	--	--

- TERRAIN

Training areas allow units to be isolated to avoid stray laser rounds from one area disrupting the training in another.			
---	--	--	--

	Y E S	N O	N / A
The senior controller and the OPFOR controller perform a reconnaissance of the site to select a training lane meeting the training objectives.			

PREPARE SOLDIERS

● SAFETY

Controllers inform all personnel about:

Laser transmitter eye safety,			
ATWESS and Hoffman cartridges backblast safety,			
Blank ammo and BFA safety,			
Simulator safety.			

● TRAINING OBJECTIVES

The Cdr briefs all participants on the following.

Training objectives are given to unit members and controllers and include a description of the skills to be mastered.			
Training objectives are either from or as in the ARTEP T&EOs; tasks, conditions and standards are stated for each training objective.			

● RULES OF ENGAGEMENT

Controllers tell the rules of engagement to all participants.

	Y E S	N O	N / A
Every weapon firing must produce a simulated signature.			
Laser detectors on personnel, weapons, and vehicles MUST be properly worn/mounted, unobscured, and operative.			
Indirect fire casualties from artillery, claymore mines and grenades will be assessed by controllers.			
"Killed" players will remove their helmets, remain still, and not assist other players.			
"Killed" vehicles will remain in place and not assist other players.			
The penalties that will be assessed for violating the rules of engagement.			

● MEDICS

When medics participate as players:

Medics are identifiable by an arm band.			
Medics wear a MWLD.			

	Y E S	N O	N / A
A medical evaluator evaluates medics during the exercise.			

CHAPTER 3

MONITORING MILES-SUPPORTED EXERCISES

CONTROL THE EXERCISE

• GENERAL CONTROLLER ACTIVITIES

	Y E S	N O	N / A
Act as the next higher command and give the unit leader his tactical order.			
Determine if the orders issued by unit leaders agree with that previously issued to them.			
Inform other controllers of the unit's location, direction of movement and intent.			
Listen to tactical nets to collect information.			
Remain tactical and neutral.			
Enforce the rules of engagement.			
Assess casualties for indirect fire and grenades.			
Enforce safety requirements.			

- EXERCISE TERMINATION

The senior controller terminates the exercise when:

	Y E S	N O	N / A
Training objectives have been accomplished,			
Units become hopelessly bogged down,			
Units are lost and cannot be quickly reoriented,			
Casualties reach a point where the unit cannot be expected to accomplish its mission.			

COLLECT DATA FOR FEEDBACK

- DATA COLLECTION

Controllers record information for the After-Action Review (AAR), rather than trying to remember several hours later. Performance checklists, based on the training objectives, are used to record information on:

Routes of travel by time and location,			
Significant weapon firings,			
Significant radio communications,			
Casualties or suppression caused by firings,			

	Y E S	N O	N / A
Critical events - events that influence the mission's outcome			

CHAPTER 4

REVIEWING MILES-SUPPORTED TRAINING: AFTER-ACTION REVIEWS

ORGANIZE INFORMATION COLLECTED

	Y E S	N O	N / A
After the exercise, controllers enter vehicles to record codes on Control Interface Assemblies (CIAs) and Loader Control Assemblies (LCAs).			
Controllers check all MILES devices for operability to insure reporting and replacement of inoperable equipment.			

Preparing and conducting an AAR requires up to 40 percent of the time allocated for each training exercise.

The senior controller debriefs the other controllers immediately after an exercise to determine the total sequence of events. This is a major part of preparing for a good AAR. Controllers' notes made during the exercise answer the following points.

Initial activity after issue of OPORD (e.g., communication of OPORD, AA security, planning)			
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	Y E S	N O	N / A
The first detection/contact and reaction to it (e.g., get down, maneuver, fire),			
Reports of detection/contact passed back to leaders,			
FRAG order(s),			
Events during engagement,			
Final results of engagement.			

PRESENT FEEDBACK

The AAK feedback session is conducted as soon as possible after the training event.			
The feedback session location should allow the players to see where the majority of action/critical events took place during the exercise.			
A terrain model is used, especially if the feedback session cannot be conducted where the location of all major events can be observed.			
All OPFOR and BLUEFOR exercise players are assembled in separate groups and seated facing each other.			

	Y E S	N O	N / A
The senior controller positions himself so that he can be seen and heard by all the participants.			
The senior controller asks the troops "leading questions", rather than lecturing. He encourages unit members to describe what happened in their own words.			
Ridicule is not used.			

The controller guides the discussion to:

Provide detailed examination only of events directly related to major training objective(s)			
Relate tactical events to their subsequent results			
Reveal shortcomings and insure that alternative courses of action are explored			
Cut off unit members' excuses for inappropriate tactical action			

The AAR follows this format.

	Y E S	N O	N / A
The senior controller gives a brief review of the training objective(s).			
The OPFOR leader states his mission and presents his initial plan.			
The BLUEFOR leader states his mission and presents his initial plan.			
All players describe the events following the issue of the OPORD.			
All players describe how the first detection/contact was made and their reactions to it.			
Leaders describe FRAGOs and review the major event (e.g., final assault).			
Feedback covers successful as well as unsuccessful actions.			
The senior controller summarizes events and final results with respect to the training objective(s).			
Troops are allowed to rate themselves (give themselves a "go" or "no-go").			

	Y E S	N O	N / A
The AAR emphasis shifts to collective tasks after unit members are satisfactorily performing lower level tasks.			
In the final AAR step, the controller describes clear and precise training objectives for the following exercise.			
The AAR is completed within 20-30 min.			

If no immediate repetition or corrective training is scheduled, the senior controller explains actions the soldiers should take to minimize forgetting (e.g., discussion of actions and events among unit members).

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