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TACTICAL ENGAGEMENT SIMULATION TRAINING TECHNIQUES: REALTRAIN F--ETC(U)

JAN 79 J J BOSELY, R BLANTON, P W ONONSKO

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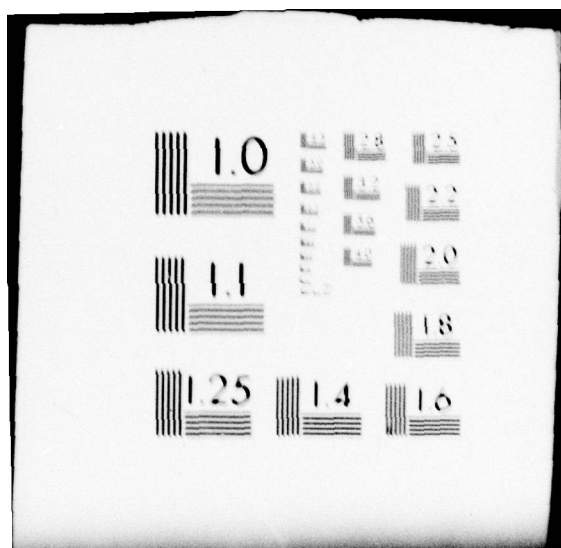
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Tactical Engagement Simulation  
Training Techniques:

REALTRAIN  
for  
Armored Cavalry Platoons

Engagement Simulation Technical Area

January 1979

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The armored cavalry platoon functions as the "eyes and ears" of the maneuver forces, performing reconnaissance missions involving the gathering and reporting of tactical information about the enemy, terrain and the friendly situation. However, an armored cavalry platoon must be prepared to engage the enemy if the tactical situation demands. Tactical training for armored cavalry units must therefore provide realistic practice for two major combat functions; previous REALTRAIN applications emphasized only the engagement function.

Field research was carried out to develop and refine engagement simulation techniques to support armored cavalry tactical training. As a first step in this research program, exercise control procedures and rules of engagement were developed by research personnel to support armored cavalry engagement simulation training. Weapon signature simulation techniques for armored cavalry weapons for which simulation techniques did not exist were also developed. These were tested in a series of field tests. These field tests were developmental in nature, rather than validations of a completed system.

1. Procedures designed to emphasize the reconnaissance functions of the armored cavalry platoon in ES exercises.
2. Procedures for incorporating feedback on reconnaissance performance into the After Action Review conducted following each exercise.
3. Controller procedures and the exercise control system, and
4. The effectiveness of the weapons effects and signature simulators for armored cavalry weapons.

Noteworthy is the fact that these tests were the first time in engagement simulation training exercises that an indirect fire weapon--in this case, the 4.2 inch (107mm) mortar--was incorporated physically into exercise play.

The tests allowed research personnel to observe their developmental product in the hands of a representative user on two occasions. Researchers' observations, wherever possible buttressed by objective data, were used to refine the developmental product. The Training Circular which comprises the major portion of this report is the visible product of this research.

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**TACTICAL ENGAGEMENT SIMULATION TRAINING TECHNIQUES:  
REALTRAIN FOR ARMORED CAVALRY PLATOONS**

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## FOREWORD

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Learning tactical skills on the battlefield is costly; learning tactical skills short of a real combat environment is difficult. Yet this is precisely the Army's training mission -- the training of troops in tactical skills and the constant improvement of the effectiveness and efficiency of that training.


In 1971 the Army Research Institute for the Behavioral and Social Sciences (ARI) with TRADOC initiated research which led to development of a tactical training method now known as tactical engagement simulation training. Two tactical engagement simulation training techniques have been implemented Army-wide: SCOPES (Squad Combat Operations Exercises (Simulation)) for infantry squad training and REALTRAIN for armor, anti-armor and combined arms training.

Engagement simulation training was designed to require the same tactical behaviors as combat. Embodied in the REALTRAIN model are a number of learning principles which have again been demonstrated to be important for effective training. Probably most important is that the competitive nature of REALTRAIN exercises provides the motivation to learn, an element often lacking in Army training.

The potential of engagement simulation training has been demonstrated. For this potential to be realized fully, further research has been required to refine current engagement simulation training techniques to make them more effective and to extend these techniques to other areas of application. This document describes research conducted to develop tactical engagement simulation training techniques for armored cavalry units and presents, as a useful research product, a draft training circular for armored cavalry units written on the basis of the field research.

This research was part of a larger research program which is responsive to the requirements of RDT&E Project 2Q763743A773 and the TRADOC System Manager for Tactical Engagement Simulation of the US Army Training Support Center, Fort Eustis, Virginia.

This document is the first in a new ARI series designated as Research Products. These are intended to be tangible, user-oriented documents or other tools which are prepared for operational use in the Army. Other Research Products produced under the same contract as the present one include RP 79-2, "Improved Tactical Engagement Simulation Training Techniques: Two Training Programs for the Conduct of After Action Reviews", and RP 79-3, "Tactical Engagement Simulation Training Techniques: Indirect Fire Simulation Procedures."

  
JOSEPH ZEIDNER  
Technical Director



## PREFACE

Armored cavalry units differ in certain very important aspects from other combat arms units. These differences necessitated a research program, including a series of field tests, to develop appropriate modifications to basic engagement simulation techniques to meet the unique performance requirements of armored cavalry platoons.

The armored cavalry platoon is the smallest combined arms team in the US Army. Each regimental platoon is composed of the platoon leader, two scout sections, a light armor section, a rifle squad and a mortar squad. It is a mechanized unit, with all elements mounted on tracked or wheeled vehicles. The size of the armored cavalry platoon -- in terms of the number of vehicles and men involved -- places especially heavy demands on the platoon leader's capacity to control and coordinate his unit's activities. The variety of vehicles and the number of different MOSs further complicates his job.

The armored cavalry platoon differs from other units in the nature of the missions for which it is responsible. The armored cavalry functions as the "eyes and ears" of the maneuver forces, performing reconnaissance missions involving the gathering and reporting of tactical information about the enemy, terrain and the friendly situation. Reconnaissance is their primary function rather than engagement of the enemy. However, an armored cavalry platoon must be prepared to engage the enemy if the tactical situation demands; members of the platoon must be able to respond effectively if the enemy takes them under fire or they are ordered to attack. Tactical training for armored cavalry units must

(1)

therefore provide realistic practice for two major combat functions; previous REALTRAIN applications emphasized only the engagement function.

Armored cavalry units typically work under conditions of uncertainty as to enemy location and intent. Their reconnaissance function is designed to reduce this uncertainty. Reconnaissance activities are often carried out at greater ranges than combat engagements. The exercise control system for armored cavalry engagement simulation therefore had to be modified to permit exercise controllers to report targets detected (and fired upon) by estimated location (not by REALTRAIN numbers) when the REALTRAIN numbers were not visible.

Field research was carried out to develop and refine engagement simulation techniques to support armored cavalry tactical training. As a first step in this research program, exercise control procedures and rules of engagement were developed by research personnel to support armored cavalry engagement simulation training. Weapon signature simulation techniques for armored cavalry weapons for which simulation techniques did not exist were also developed. These were tested in a series of field tests. These field tests were developmental in nature, rather than validations of a completed system.

First, small scale, exploratory tests were run to examine draft control procedures, new rules of engagement and new weapon signature simulation procedures for armored cavalry weapons.

Two larger field tests conducted at Ft Bliss, TX, in May and November, 1977, involved the conduct of engagement simulation exercises for the tactical training of a complete armored cavalry platoon. Both tests had as their primary objectives to examine critically:



1. Procedures designed to emphasize the reconnaissance functions of the armored cavalry platoon in ES exercises.
2. Procedures for incorporating feedback on reconnaissance performance into the After Action Review conducted following each exercise,
3. Controller procedures and the exercise control system, and
4. The effectiveness of the weapons effects and signature simulators for armored cavalry weapons.

During the first test conducted at Ft Bliss, TX, six days of engagement simulation exercises were run. Each exercise pitted an armored cavalry platoon against another armored cavalry platoon. Exercise missions were selected from the Army Training and Evaluation Program for Armored Cavalry Squadron and Armored Cavalry Troop (ARTEP 17-55). The missions selected were intended to emphasize the cavalry's reconnaissance function. The results of this test showed that the number of reconnaissance reports made during the test exercises was too low, given the reconnaissance missions assigned the participating platoons. It was concluded that one of the strengths of tactical engagement simulation training -- the competitive spirit engendered by two-sided, free-play exercises with credible casualty assessment -- worked against effective reconnaissance reporting; that is, participating troops would rather "shoot it" then "report it." This result strongly indicated the need to develop control procedures which would require more complete and accurate reconnaissance reporting. The results also indicated that there was a need to refine procedures for integrating information on reconnaissance and reporting performance with casualty information into the After Action Review (AAR) following the completion of each exercise. There was indication that,

while exercise procedures in general worked well, refined procedures had to be worked out for identifying target vehicles by map coordinates rather than REALTRAIN numbers because of the longer distances involved.

Noteworthy is the fact that this test was the first time in engagement simulation training exercises that an indirect fire weapon -- in this case, the 4.2 inch (107mm) mortar -- was incorporated physically into exercise play.

The second field test was directed at the evaluation of refined armored cavalry REALTRAIN engagement simulation training techniques. The test program consisted of six free-play exercises, each involving an armored cavalry platoon and a platoon-sized combined arms opposition force. For this test only one side was a cavalry platoon; the opposition was a combined arms team.

In order to force the armored cavalry platoon to concentrate on the reconnaissance and reporting function, missions assigned to the opposing forces in the first few exercises minimized direct contact. More conventional, engagement-producing, combined arms missions were given to the opposing forces in later exercises. In addition, objects with intelligence value were prepositioned at known locations on the training lane to encourage reporting and to aid in establishing unit locations for control purposes as an exercise unfolded. In this instance it may be seen that the nature of the orders given to each side and the use of "plants" helped meet a specific training objective: increased reconnaissance reporting.

During the series of test exercises, another technique was employed to further insure adequate reporting by the armored cavalry platoon. This technique was a "weapons hold" -- a tactical command and control



status under which a player element could not fire on a target without permission of the Senior Controller (usually instituted in combat to prevent premature position disclosure). Its use for training was not felt to affect exercise realism. Under this condition, vehicle commanders reported information concerning the enemy, along with requests for release from the weapons hold. They used their reports to substantiate their need to fire. Thus, weapons hold status appeared to elicit reconnaissance activity; permission to fire became a reward for building a credible reconnaissance record.

This test also provided an opportunity to try out refined controller procedures and the exercise control system required to support armored cavalry REALTRAIN exercises. Observers felt that procedures used during this test worked well and that their utility was verified.

The tests described here allowed research personnel to observe their developmental product in the hands of a representative user on two occasions. Researchers' observations, wherever possible buttressed by objective data, were used to refine the developmental product. The Training Circular which comprises the major portion of this report is the visible product of this research.

## **REALTRAIN FOR ARMORED CAVALRY**

### **1. Introduction**

In war, armored cavalry units must maximize their sparse but highly mobile and hard-hitting resources to accomplish the traditional missions of reconnaissance, screening and economy-of-force. In peacetime, armored cavalry units have the difficult task of training soldiers with a wide assortment of skills: scouts, tankers, infantrymen, mortar and anti-tank missile crewmen, into a team capable of successfully accomplishing these myriad combat missions.

REALTRAIN gives the armored cavalry commander an effective method of training his soldiers under conditions as close to combat as possible. By judicious selection of missions, force ratios and terrain, the commander can use REALTRAIN to emphasize the subjects he feels his unit needs most work on, whether it be reconnaissance techniques, long range target engagements, use of indirect fire or combined arms tactics. Small unit leaders learn and refine command and control procedures over dispersed elements. Track commanders and drivers practice movement techniques that minimize detection. All troopers learn to work together. All this learning occurs in the face of a very realistic opposing force whose activities are not programmed and cannot be predicted and yet who can directly and violently affect the unit's success or failure in its mission. After the mission is ended, the leaders and the troops analyze for themselves why they did or did not succeed in their mission and thus reinforce their own learning and learn from each others actions. No other training method has proved as successful in driving home teaching points, developing team coordination and motivating the soldiers.

If it is to be effective, REALTRAIN requires a substantial investment in time, effort, and resources. Additional equipment such as radios, telescopes, pyrotechnics must be drawn from sources outside the troop. Controllers must be trained—which means more men and more time. These requirements should not be viewed as reasons to avoid REALTRAIN. Experience has proven that the controllers learn at least as much as the participants in a REALTRAIN exercise. Procuring the additional equipment is excellent training for the supply sections. Extensive use of radios makes sure they are in top condition. The maintenance sections learn to work under pressure of near-combat deadlines. In short, the unit that has become proficient in preparing to conduct REALTRAIN training will find that it is also proficient in preparing for real combat.

**REALTRAIN for armored cavalry is a modification of the combined arms procedures found in TC 71-5. The rest of this TC will explain in detail the steps in preparing for and conducting the exercise.**

- **Chapter 2 covers pre-exercise activities, including planning, preparation and preliminary training.**
- **Chapter 3 gives the steps in the conduct of the actual field exercise from the issuance of OPORDs to the termination of the battle.**
- **Chapter 4 provides more detail on the responsibilities and actions of the controllers.**
- **Chapter 5 describes what happens after the battle, i.e., the controller debrief and the After-Action Review.**



### 1-1. The Need for Special Armored Cavalry Training Procedures

Armored cavalry REALTRAIN procedures must be applied to a wider variety of unit performances than those that focus on engaging and destroying the enemy. The main purpose of this training circular is to spell out in detail the more extensive procedures that REALTRAIN for armored cavalry requires, due to the following factors:

- Armored cavalry reconnaissance and security missions place special emphasis on tactical reporting through the chain of command. The information reported is quite often more important to higher commands than casualties inflicted. Thus, cavalry missions do not always lead to casualty-producing engagements typical of other types of ground combat units.
- The armored cavalry platoon is a self-contained arms force, including scouts, infantry, armor, anti-armor elements, and an organic indirect fire capability. Often, elements will be widely dispersed. The need to employ its different weapons, its maneuverability, and the dispersed nature of its operations all place heavy demands on the capacity of all cavalry leaders to control and coordinate unit actions.
- Many armored cavalry task assignments require the unit to operate under conditions of great uncertainty as to enemy location and intentions, so that if and when contact is made, the unit must react rapidly and wisely.

### 1-2. Armored Cavalry REALTRAIN Application

a. Armored cavalry REALTRAIN *integrates* existing infantry, armor, anti-armor and combined arms engagement simulation techniques with the procedures required to train units to carry out armored cavalry reconnaissance functions. Integration of the armored cavalry reconnaissance and security functions with the simulation of weapons engagements is accomplished through a REALTRAIN control system which includes:

- A senior controller for each of the opposing forces.
- Individual controllers for each tactical element.
- Indirect fire markers.
- A Net Control Station (NCS).

b. Armored cavalry REALTRAIN exercises are jointly supervised by two senior controllers—one per side. (One of these is designated as the exercise controller, with responsibility for overall supervision.) Each senior controller plays the higher headquarters of each side.

Senior controllers brief opposing force commanders on their mission assignments prior to an exercise. Then, senior controllers monitor the conduct of the exercise to insure that REALTRAIN procedures are followed, that safety standards are adhered to, and that tactical actions are consistent with training objectives. Exercises must be planned so that cavalry elements have a full opportunity to perform reconnaissance and security missions and to make reports. Troops like to mix it up in head-to-head engagements. As a part of the overall training program, senior controllers must be prepared to intervene as needed to insure that reconnaissance and reporting actions are fully covered.

c. The structure of a typical REALTRAIN training organization for armored cavalry is shown in Figure 1 on the next page.

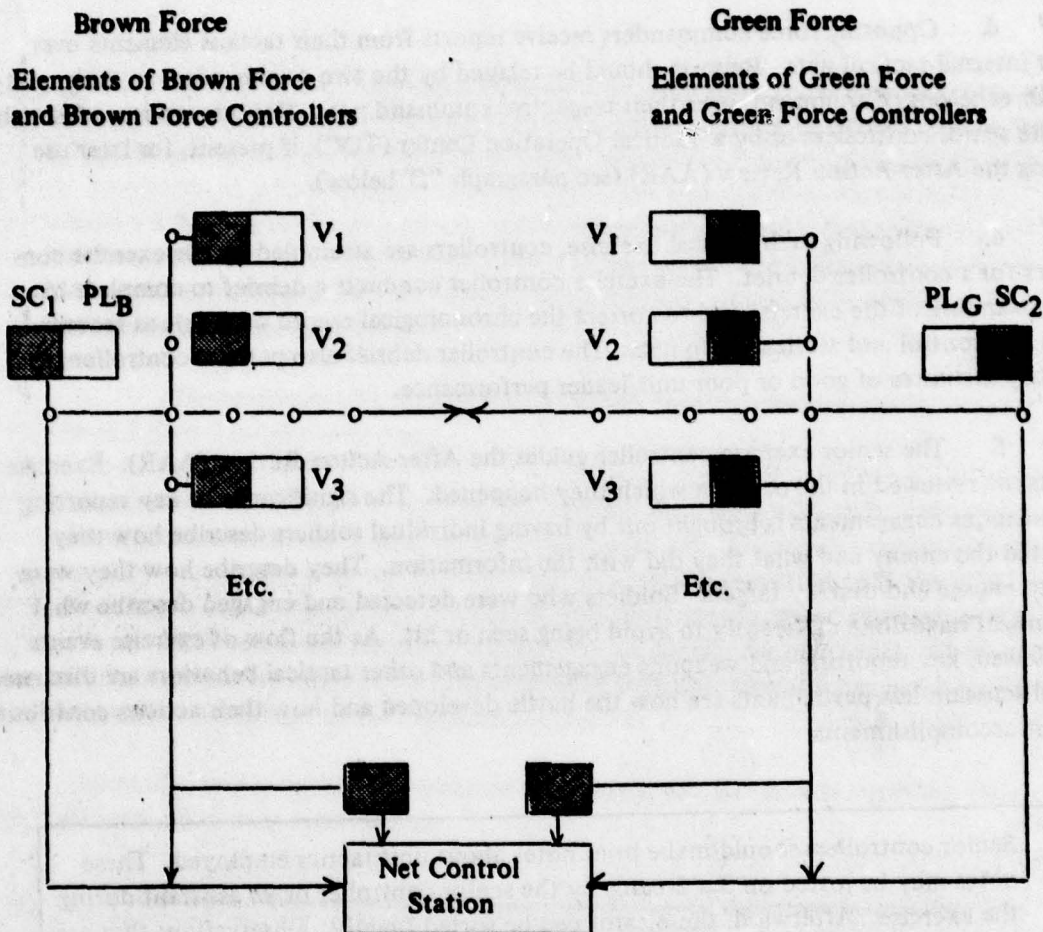
A controller rides on every vehicle. Controllers are linked with each other and with the Net Control Station (NCS) by a separate controller radio net. During an engagement, a hit is reported by the controller with the firer over the radio to the controller with the target. The target controller assesses the damage in keeping with his rules of engagement and confirms target damage to the NCS, where the outcome is logged on a Casualty Record Sheet. When a tactical element is brought under indirect fire, the controller with that element also assesses effects and reports casualties or damage to the Net Control Station.

Normally, senior controllers monitor the control net, but do not transmit. However, if things go awry, they may intervene to:

- make sure that tactical elements acquire and report information required by their orders and/or unit SOP.
- put into effect or maintain a "weapons" hold status to stress scouting and reporting.
- correct failures to confirm target hits in a timely manner.
- help controllers identify target REALTRAIN numbers at extreme ranges or under conditions of poor visibility.

**FIGURE 1**

**Schematic for Platoons, Platoon Elements,  
Controller Net and Net Control Station**



= Controllers



= Participating Players

PL<sub>B,G</sub>

= Platoon Leaders, Brown and Green Forces

SC<sub>1,2</sub>

= Senior Controllers with Brown and Green Forces

Lines represent the control net. They provide two-way communications between controllers on each side, and to controllers with opposing forces. The separate radio net which is used by the indirect fire simulation team is not shown in this simplified diagram.



There is a general and continuous need for alert and timely action by all controllers to keep REALTRAIN exercises realistic, and to insure that training fully meets its objectives.

d. Opposing force commanders receive reports from their tactical elements over their internal tactical nets. Reports should be relayed by the two commanders to their next higher echelons of command, over their respective command nets. Reports are recorded either by the senior controllers or by a Tactical Operation Center (TOC), if present, for later use during the After-Action Review (AAR) (see paragraph "f" below).

e. Following each tactical exercise, controllers are assembled by the exercise controller for a controller debrief. The exercise controller conducts a debrief to complete his understanding of the exercise and to correct the chronological record of events as recorded from the control and tactical radio nets. The controller debrief also permits controllers to identify instances of good or poor unit/leader performance.

f. The senior exercise controller guides the After-Action Review (AAR). Exercise events are reviewed in the order in which they happened. The significance of key reporting and weapons engagements is brought out by having individual soldiers describe how they detected the enemy and what they did with the information. They describe how they were able to engage and destroy targets. Soldiers who were detected and engaged describe what they might have done differently to avoid being seen or hit. As the flow of exercise events is reviewed, key reporting and weapons engagements and other tactical behaviors are discussed. This discussion lets participants see how the battle developed and how their actions contributed to unit accomplishments.

Senior controllers should make brief notes about unit tactics employed. These notes may be jotted on 3 x 5 cards by the senior controller or an assistant during the exercise. Afterward, these cards can be sorted rapidly. Observations that are supported by NCS records or information from controllers can be selected to highlight critical turning points during the battle.

g. Careful planning and preparations are required to conduct REALTRAIN well. A well-thought-out training program should guide all activities. Armored cavalry REALTRAIN also requires adequate material support: controllers, equipment, and training ammunition. When conducted properly, REALTRAIN tactical training is an extremely valuable and effective training method.

### 1-3. An Overview of Preparation for and Conduct of Armored Cavalry Tactical Collective Training Using REALTRAIN Methods

a. Careful *planning*, thorough *preparation* and effective *execution* are critical to success in combat. They are just as important for tactical training using engagement simulation. Trainees and soldiers will only get out of tactical engagement simulation training what *you* put into it.

b. This section should help training managers and units get the most out of armored cavalry tactical training. First, general guides as to how best to go about conducting armored cavalry tactical engagement simulation training are reviewed. Described next are steps to be followed during *planning*, *preparation*, and *execution* of armored cavalry REALTRAIN exercises.

#### 1-3-1. Planning

a. Establish training objectives. Consider the structure and character of the armored cavalry platoon in setting up training objectives. It is the smallest combined arms force in the Army. As such, control requires coordination of elements with different capabilities. Its basic missions involve reconnaissance and security. It may fight to get information, but more often than not, it will try to avoid becoming decisively engaged. It follows that two training objectives which should be included in the planning of *any* REALTRAIN exercise are (1) complete and accurate reporting of information obtained by reconnaissance, and (2) effective command and control of the different organic platoon elements.

The mission or missions selected for REALTRAIN training exercises should reflect the unit's training status and special circumstances. Don't overestimate the unit's state of readiness. It is better to be conservative and plan for overtraining than to be overly optimistic and start the unit at a point beyond their capabilities. Major and intermediate objectives should be realistic, based on the time and assets available; they should be stated in "do-able" terms (e.g., as an intermediate objective, vehicle commanders should be able to call for indirect fire by map coordinates).

b. Structure training. Time available for training is limited. Use it wisely and efficiently. Spend some time structuring a meaningful training *program*, whether you're going to run two exercises or ten. Listed below are a few pointers that should help. These are supplemented in Annex G to this chapter, which includes a sample training program.



c. Leave sufficient lead time for getting necessary resources. It takes material and personnel resources to conduct effective REALTRAIN exercises. Try to select terrain that will help meet training objectives; don't accept just any terrain because it's available. For example, open flat terrain leads naturally to early engagement at long ranges and, thus, defeats the development of reconnaissance and reporting skills. On the other hand, using terrain which permits long-range engagements in *later* exercises encourages troops to learn what it means to take the enemy under fire at *maximum* range—but not beyond it! You must also acquire controller personnel to support the exercises. If controllers must be obtained from another unit, a big selling point to other commanders is that men serving as controllers also gain significant tactical experience; this has been demonstrated by years of experience with REALTRAIN. The checklists found in the following section will help to make sure that no important resource requirements "slip through the cracks." In sum, terrain, controllers and equipment must be selected and requirements integrated in a schedule to accomplish training objectives.

#### 1-3-2. Preparation

Preparation covers activities starting with the writing and dissemination of the training plan and ends when the first exercise is conducted. Getting training ammunition and lining up tactical radios will take time—allow enough time for preparations. Checklists covering preparation activities that must be carried out just before field training begins are shown in a later section.

#### 1-3-3. Execution

In execution of exercises, senior controllers can fully exploit the training value of REALTRAIN by keeping the following thoughts in mind:

- *Start simply.* For example, scout sections may be matched against other elements of the same platoon and practiced in reporting enemy sightings. Meanwhile, armor and anti-armor elements may be given training in use of terrain to provide long fields of observation, and for cover/concealment. Throughout, terrain and road nets may be selected so as to vary the difficulty of reconnaissance and of using cover and concealment during movement and at halts. Later, the full platoon may go up against a similar platoon. Start small with relatively easy missions and build up to larger, more complex exercises.

- *Leave time for remedial training.* As a result of the first few exercises, you will see *collective tasks* that are being poorly performed. For example, you may note that unit SOP for situation reporting is not being followed. Some review and practice could improve this situation. Informal remedial training in the field, which can be accomplished in an hour or so, will provide men a chance to practice these tasks properly. In later exercises, they will then be able to employ these skills correctly.
- *Employ special techniques to insure that actions that occur follow from training objectives.* In a two-sided, free-play REALTRAIN exercise, certain training objectives may not be met because the required skills are not called for as a result of the way the battle unfolds. Armored cavalry troops may engage the enemy at the expense of reconnaissance and reporting. Here, a *selective* "weapons hold" technique, where the senior controller will not permit the firing of direct and/or indirect fire weapons until he feels participants have provided sufficient reports, is effective.

#### 1-3-4. Summary: REALTRAIN Benefits

The rest of this Training Circular tells *how* to conduct effective armored cavalry tactical training using REALTRAIN techniques. Throughout execution, three important features of REALTRAIN should be emphasized:

- REALTRAIN provides an unparalleled learning opportunity for tactical units. Commanders and training managers should make the most of this opportunity. Personnel *enjoy* this type of training; they are motivated to learn (which is not always the case with other methods). Take advantage of this.
- REALTRAIN exercises and the subsequent After Action Review provide the commander and training manager with an excellent opportunity to diagnose a unit's tactical proficiency. Careful attention to what goes on during an exercise and to what comes out during the course of an AAR will clearly show areas requiring remedial training. If sufficient time has been provided in training programs for remedial training, deficiencies can be eliminated quickly in the field. Then, later exercises can be used to insure that these skills have been mastered.



- **REALTRAIN, including the After Action Review, also provides the men with direct awareness of where they are strong and where weak as individuals and as combat teams. You don't have to lecture them about their performance. They see the results as they try to carry out their tasks and missions. This is motivating in the best sense of the word, because instead of merely trying to meet some pre-set standards, the whole unit wants to do "better" than it did before. Trainers and commanders will find men much more receptive to guidance, and to coaching on how to do better.**

## **2. Detailed Instructions on How to Conduct Armored Cavalry REALTRAIN**

Detailed instructions for conduct of REALTRAIN exercises are provided in three phases:

**Phase I: Pre-Exercise** (this has been described in general terms in Section 1-2)

**Phase II: Execution of Tactical Exercise(s)**

**Phase III: Post-Exercise**

Further sub-phases are identified to help translate guidance into specific tasks. In view of the number of these tasks, delegate responsibilities to unit cadre.

### **2-1. Phase I—Pre-Exercise Activities**

This phase includes tasks that must be performed *before* the first full-scale tactical exercise is conducted. This phase can be further subdivided into planning, preparation, and pre-exercise training sub-phases.

#### **2-1-1. Planning**

For armored cavalry REALTRAIN tactical field exercises, this process *must* start well in advance of the date training is scheduled to start. Here, training managers must:

- (1) Select major and intermediate objectives and organize them into a sequential training program.
- (2) Select participating tactical elements/units for the exercises.
- (3) Select pairs of missions for the units for each exercise.
- (4) Select training lanes for each exercise.
- (5) Prepare OPORDs (scenarios) for each exercise.
- (6) Determine logistic, administrative support requirements.
- (7) Develop daily activity time schedules.
- (8) Coordinate logistic, administrative and routine support requirements.

a. The planning process starts with the selection of major and intermediate training objectives. Section 1-2 of this TC gives general guidance for planning engagement simulation exercises. Annex G shows a prototype plan. The training objectives should be based on the training requirements identified and described by the commander and his staff. ARTEP 17-55 and FM 17-2, which outline the basic missions that a combat-ready armored cavalry unit should be able to perform, can be used as a guide in defining training objectives. Major and intermediate training objectives should be selected for *both* of the opposing forces.

#### Designation of Forces

This TC uses the terminology of Green *versus* Brown (the two colors of the REALTRAIN numbered helmet covers) to refer to the two units which are being trained.

b. A REALTRAIN-based training program within an armored cavalry troop will normally begin with squads or sections opposing one another, and build up to more complex and extended missions with larger forces. A series of what are called "mini-exercises" involving only a few elements, train sub-units to perform basic collective tasks suitable to their specific mission roles. Scout sections learn to "sneak and peek" and report, light armor sections learn to coordinate overwatching movements, etc. Through practice, the operation of the REALTRAIN control system becomes more efficient. Controllers practice how to communicate effectively, how to use the signature simulators, and to follow the rules. Senior controllers learn to keep track of the action, to support their maneuver controllers, and to conduct controller debriefs and After-Action Reviews. The troops also get used to REALTRAIN procedures while they're learning basic tactical skills. After several mini-exercises, training at the platoon level will work smoothly.

A technique for stretching available assets to simulate greatly unbalanced force ratios involves stretching one armored cavalry platoon across a wide front, while concentrating the combat power of another platoon (or OPFOR CA team) at a very narrow point. Obviously, this technique requires surprise and hence the *OPORDs* (scenarios) must be distributed on a very limited need-to-know basis.

c. The missions selected for each tactical exercise from the ARTEP or FM should permit accomplishment of the training objectives defined earlier. For example, if a major training requirement involves a platoon's ability to move quickly and in a coordinated manner over covered and concealed routes, an area reconnaissance mission to an area several kilometers away might be assigned. Its opposing unit may need training in effective coordination between moving and overwatching elements. Thus, the opposing force might be given a



mission to act as a screening unit on a movement to contact mission for a larger force, on an axis of advance which will intersect the route of movement of the units with the area reconnaissance mission.

d. The specific terrain (training lanes) selected within the available training area for each of the tactical exercises can also affect the degree to which the training objectives are achieved. Less than ideal terrain is often encountered in combat; therefore, virtually any training area *can be used* for armored cavalry REALTRAIN tactical exercises. New situations within the same training lanes can be created by adjusting boundaries, or by changing the direction of maneuver, so as to avoid using the same ground in the same way repeatedly.

e. Standard five-paragraph operations orders (OPORDs) should be prepared for both the sides for each exercise. Each opposing force commander then must develop his tactical plans for mission accomplishment from the information provided in the OPORDs. The OPORDs, by constraining the tactical commanders' plans, can help assure that training meets stated training objectives. OPORDs must reflect resources available, and they must be adapted to terrain to be used. General background situations as outlined for each of the armored cavalry missions delineated in ARTEP 17-55 or How to Fight manuals can be used as a guide when preparing OPORDs.

**Factors Influencing Effectiveness of an Armored  
Cavalry REALTRAIN Training Program**

- The missions selected for each force.
- The nature of the terrain selected for maneuvers.
- The general and specific instructions (OPORDs) given the unit commander of each side.
- The total amount of REALTRAIN training given (i.e., the number of REALTRAIN exercises, and remedial training given).
- The sequence of (progressively more complex) engagements chosen.

f. Activity-by-time schedules should be developed for each day that the armored cavalry unit will be in the field. Pre-exercise training is normally given in the field. A detailed daily schedule, which includes both pre-exercise and exercise training, must be developed. *For an armored cavalry unit inexperienced in engagement simulation training, familiarization training will normally require a few days.* In the detailed schedule prepared for each day, the same



general sequence of events will occur as each exercise is executed. The schedule should allocate sufficient time for the tactical exercises and leave some time for remedial training. See Figure 5 for a typical pre-exercise training schedule. See Figure 7 for a typical tactical exercise activity schedule.

#### **2-1-2. Equipment and Other Support Requirements**

a. Support required for the conduct of REALTRAIN training falls into three main categories:

- Individual soldier and vehicle equipment;
- Radios for the control system; and
- Training ammunition and pyrotechnics.

Because of the distances over which transmissions may need to be made, armored cavalry REALTRAIN places a special premium on having well-maintained radios. All controllers should have their own 1:50,000 maps, for accurate position location for tactical elements, and to effectively exercise control. Armored cavalry units will require some non-standard optical aids and weapons signature simulation devices, which are described in Annex F. These can be fabricated (with the help of the local TASO). Finally, since acquisition and reporting of information is so crucial in many armored cavalry missions, each element commander should be provided a training aid kit consisting of (1) samples of properly formatted reports of the types to be used, and (2) a "fill-in-the-blanks" sheet on which essential report elements can be jotted down and organized prior to transmission by radio.

(1) The exact requirement for REALTRAIN equipment will depend upon the number and type of combat vehicles/tactical elements involved in an exercise. REALTRAIN equipment is available at regimental level, or can be obtained from a TASO. It includes:

- Panel numbers for each type of combat vehicle;
- Helmet cover numbers for participating soldiers;
- Controller optics for most weapons; and
- Special communications kits for combat vehicles such as the Sheridan and the M60 tank.

The local TASO or prior users of REALTRAIN can help in determining equipment requirements, based on the number and type of combat vehicles and weapons, and the number of soldiers to be involved in the training. See also, Annex F, Armored Cavalry Combat Vehicles and Weapon Systems.

(2) The requirement for control system radios depends upon the number of controllers, which in turn depends upon the composition of the forces involved in the armored cavalry REALTRAIN exercises. The specific requirements outlined in Figure 2 permit the training manager to define the control system's total radio requirements from the composition of the opposing forces. Provisions should be made for spare radios to replace any that malfunction, and for sufficient spare batteries for the AN/PRC-77 radios.

(3) The basic load of training ammunition should be issued for each combat vehicle/weapon system prior to each exercise. Generally, not all of the basic ammunition load will be used during an exercise. At the end of an exercise, the unused training ammunition should be collected and reissued as a part of the basic load for the next exercise.

b. As with any type of tactical field training, the timely and effective coordination of logistic, administrative and routine support requirements is essential. Once requirements have been determined, those providing the support must be made aware of what will be required, when, where, and under what conditions. REALTRAIN equipment, training ammunition and control system radios are required for engagement simulation training. Other support requirements such as fueling, food, troop transportation, etc., must be coordinated.

## 2-2. Preparation

Preparation includes those tasks that should be accomplished before units move to the field to begin REALTRAIN training. Such tasks include:

- (1) Drawing REALTRAIN equipment.
- (2) Drawing training ammunition.
- (3) Selecting personnel who will serve as controllers, senior controllers, and fire markers.
- (4) Checking combat crews'/teams' assignments.
- (5) Occupying the base camp area.\*
- (6) Establishing a base camp in the training area.\*

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\*Optional; see paragraph 2-2(a).

**FIGURE 2**  
**CONTROLLER AND CONTROL SYSTEM**  
**RADIO REQUIREMENT**

| Tactical Element   | Number Controllers Required           | Control System Radio Requirements                            |
|--------------------|---------------------------------------|--|
| Command Section    | 1 per combat vehicle                  | 1 AN/PRC-77 per combat vehicle                               |
| Scout Section      | 1 per combat vehicle                  | 1 AN/PRC-77 per combat vehicle                               |
| Armor Section      | 1 per Sheridan<br>1 per M60 Tank      | 1 AN/PRC-77 per vehicle<br>1 REALTRAIN commo kit per vehicle |
| TOW Section        | 1 per weapon                          | 1 AN/PRC-77 per weapon                                       |
| Infantry Section   | 2 per infantry squad                  | 2 AN/PRC-77s per infantry squad                              |
| Mortar Section     | 2 per mortar                          | 1 AN/PRC-77 per mortar<br>1 AN/GRA-39 per mortar (1)         |
| Fire Markers       | 2 per each of the opposing forces (2) | 1 AN/VRC-64 per M151 Jeep (3)                                |
| Senior Controllers | 1 per each of the opposing forces     | 1 AN/VRC-49 and 1 AN/PRC-77 per M151 Jeep (4)                |

- (1) The AN/GRA-39 per M34 Mortar is desirable but not absolutely essential.
- (2) Based on platoon-size exercises.
- (3) Each fire marker is normally provided with an M151 Jeep equipped with an AN/VRC-64 radio.
- (4) Each senior controller is normally provided with an M151 Jeep equipped with an AN/VRC-49 radio. It is also desirable but not absolutely essential that each senior controller be provided with an AN/PRC-77 radio to monitor the *internal* tactical communications of the force he is controlling.



a. When an armored cavalry unit has planned for several days' training, it may not be practical to road march or move the combat vehicles back to garrison at the end of each training day. Under these conditions, a training base camp is established. In selecting a location for the base camp, consider road/trail network accessibility from garrison. The camp should be convenient to the training area selected for tactical exercises. The layout for the base camp must provide for combat vehicle parking, vehicle maintenance and refueling, an Ammunition Supply Point (ASP) and REALTRAIN equipment, radio and weapons storage. Platoon-sized AARs may be conducted in the base camp, so it is also desirable to provide shelter that can be used in the event of inclement weather.

b. Controllers should be identified and allocated to the training units for the duration of training. The exact number of controllers required depends upon the tactical organization of the opposing forces that will be involved in the REALTRAIN exercises. Controllers should be MOS-qualified and have an understanding of the weapons systems for which they will be responsible. Controllers assigned to the 107 mm mortar should be highly proficient in all the skills required to deliver accurate mortar fire support. Troops selected to serve as controllers need not be NCOs. Motivation is most important; any E-3 or E-4 who has previously demonstrated a willingness to accept responsibility can be trained as a controller.

c. After the REALTRAIN equipment is transported to the base camp, it should be broken into packages for each type of combat vehicle/weapons system. Training ammunition should be secured in a base camp ASP. The basic ammunition load that will be issued for each tactical exercise should be made up ahead of time as a package for each combat vehicle/weapons system to take part in the exercise. See Figure 3 for guidance on recommended quantities.

#### Control of Training Ammunition Use

As you are probably well aware, training ammunition is scarce. Therefore, you may wish to set up simulated "ASRs" and hold your units to these ceilings, in a series of successive exercises, to make sure you have enough ammunition/pyrotechnics to last.

You can also increase training realism by modifying the *mix* of different types of ammo (e.g., main gun, mortars) you play. To assess casualties and damage properly, controllers must know *the type of round fired*. Therefore, they must be thoroughly briefed on the type of rounds available for the weapons they control.

**FIGURE 3**

**BASIC TRAINING AMMO LOAD & ESTIMATED USE  
(Per Exercise)**

| Training Ammo Item     | Weapon              | Basic Load | Estimated Use Per Exercise |
|------------------------|---------------------|------------|----------------------------|
| Smoke Grenade, Red     | Per Combat Vehicle  | 2          | 0 (1)*                     |
|                        | Per Inf. Fire Team  | 2          | 0                          |
| Smoke Grenade, Green   | Per Combat Vehicle  | 2          | 1 (2)*                     |
| Smoke Grenade, White   | Per Fire Marker     | 10         | 3                          |
| Ground Burst Simulator | Per Fire Marker     | 15         | 10                         |
| Air Burst Simulator    | Per Fire Marker     | 10         | 6                          |
| Smoke Pot              | Per Fire Marker     | 5          | 1                          |
| Hoffman Device Ammo    | Per M551 Sheridan   | 9          | 2 (3)*                     |
|                        | Per M60 Tank        | 9          | 2 (3)*                     |
| Grenade Simulator      | Per M34 Mortar      | 60         | 28                         |
| 5.56 mm Ammo           | Per M114            | 40         | 15                         |
|                        | Per M113 (TOW)      | 80         | 16                         |
|                        | Per Infantry Sqd.   | 360        | 98                         |
|                        | Per M551 Sheridan   | 40         | 13                         |
|                        | Per M34 Mortar Sqd. | 160        | 20                         |
|                        | Per M60 Tank        | 40         | 23                         |
| 7.62 mm Ammo Linked    | Per M114            | 200        | 30                         |
|                        | Per Infantry Sqd.   | 600        | 253                        |
|                        | Per M551 Sheridan   | 400        | 40                         |
|                        | Per M60 Tank        | 400        | 0                          |
| Blast Simulator        | Per TOW             | 10         | 0 (4)*                     |
| M69 Grenade            | Per Infantry Sqd.   | 18         | 2                          |
| M68 Claymore           | Per Infantry Sqd.   | 2          | — (5)*                     |
| M117 Flash Simulator   | Per M139 20 mm Gun  | 15         | 4                          |

- (1)\* Used only in actual emergency.
- (2)\* One grenade for 30% of combat vehicles participating.
- (3)\* Substitute grenade simulators if Hoffman Device is not used.
- (4)\* Substitute grenade simulators if blast simulator is not used.
- (5)\* Two grenade simulators required for each Claymore.



d. To maximize training effectiveness, the crew/squad/teams participating in the exercises should, if possible, be brought up to TO&E strength, by temporarily assigning personnel from non-participating elements within the parent unit. The support requirements and the cost of engagement simulation training are the same whether the participating tactical elements are at or below authorized strength. The more soldiers who participate, the greater the training benefits.

### 2-3. Pre-Exercise Training

Thorough pre-exercise training of all controllers is essential for the conduct of armored cavalry REALTRAIN exercises. Proper play of armored cavalry REALTRAIN requires quick, skillful responses from the exercise control system. Achieving this degree of skill requires the following preparations:

- (1) Train controllers and senior controllers.
- (2) Train fire markers.
- (3) Train players in rules of engagement and weapons casualty/damage effects.
- (4) Conduct practical exercises in all of the above.

a. The two senior controllers required for an armored cavalry REALTRAIN exercise are called upon to perform complex and demanding tasks. They must be well-trained. Senior controllers should be identified early in the planning phase, and take an active part in plans and preparations. They should help to develop and conduct the training of individual controllers. If possible, a third controller should be trained to act as senior controller to provide a backup in case one of the designated senior controllers must be absent from an exercise.

### How to Select and Train Senior Controllers

Candidates for this job should be the most tactically proficient officers or senior NCOs available. Each candidate should be thoroughly familiar with this TC.

Once they are familiar with the details of REALTRAIN methods, senior controllers need practice in order to develop the ability to follow and react to the developing action. Proceed as follows:

- Start simple. Assign senior controller *trainees* to supervision of the "mini-exercises" that are part of getting the whole REALTRAIN system prepared. Have them monitor controller communications exercises (Annex E) to get a feel for how radio traffic will sound during training.
- Let trainees work in pairs at first. Control of armored cavalry elements involves many tasks. (If one of the two has had some REALTRAIN experience, he can help orient the new trainee to the job.) By having two senior controllers per side with a clear definition of responsibility for each, important control functions are less likely to get overlooked. Controllers work together and work out methods and procedures for solving problems as they arise.
- Have a meeting of all controller trainees concurrent with the "mini-exercises." Discussions will surface common problems and permit the group to develop solutions.
- Try to provide senior controller trainees with an assistant for their first few platoon-size exercises. This assistant can take notes, help monitor radio nets, and otherwise free the senior controller to be an active training supervisor.

b. As in all types of REALTRAIN exercises, the goals of training for the controllers who accompany the tactical elements, and the fire markers who mark indirect fire are: *To gain technical proficiency in applying REALTRAIN rules of engagement and to insure that these rules are followed without exception.* Controllers and fire markers require practice to insure that they can effectively support the training through proficient and impartial actions. Areas in which pre-exercise training is required are described next.



(1) Controllers with *direct fire* weapons need training in:

- ***Installation and Use of Optics.*** Each controller assigned to a long-range direct fire weapon must be trained to install, bore sight and properly use the controller optics for that system.
- ***Installation and Use of Communications Equipment.*** Controllers assigned to some weapons systems such as the M551 Sheridan and M60 Tank are provided with special communication equipment. Each controller assigned to such weapons systems must be trained in the installation and use of the special communications equipment.
- ***Rules of Engagement (ROE) and Damage/Casualty Assessment Procedures.*** Controllers must be trained in REALTRAIN rules of engagement and damage/casualty assessment procedures. They must be able to quickly and accurately verify hits or misses when the tactical elements to which they are assigned fire their weapons, and to assess damage/casualties when their tactical element is brought under fire.
- ***Communication Procedures.*** The controller radio must operate reliably and well. Controllers must be trained to use their radios properly and efficiently. *REALTRAIN radio telephone operating (RTO) procedures differ from tactical RTO procedures.* A controller communications exercise has been developed specifically for training REALTRAIN controllers to use radios properly. Communications exercise instructions are given in Annex E.
- ***Use of Controller Note Cards.*** Controllers must be trained to use a note card as an aid. This card is used in two ways. First, on one side of the card it lists all of the REALTRAIN numbers in play, so it can be referred to if there is some confusion concerning numbers. Second, the other side of the card provides a means for recording significant tactical events which the controller can use during the Controller Debrief and AAR as a memory aid. (See Figure 4 for a typical note card format.)

(2) Controllers with the 107 mm mortar need skill in fire direction procedures to include:



- Measuring the azimuth of the direction of fire (FM 6-50, page 9-26, para. 9-19);
- Verifying the squad leader's solution of the firing problem;
- Directing the movement of fire markers.

If available personnel do not have these specialized skills, special remedial training is necessary. (See TC , Indirect Fire Procedures, for a description of the mortar controller's duties and responsibilities.)

(3) Fire markers must be trained to locate positions quickly throughout the training area by grid coordinates. Experience has shown that many soldiers can't land navigate well enough, without further training, to act as fire markers with the speed and precision needed. Plan to hold pre-exercise fire marker training. Training should routinely include:

- A brief hands-on review of map reading and use of the lensatic compass;
- Familiarization with training area terrain; and
- Practical drill in fire marking procedures, with the indirect fire (mortar) controllers sending fire markers out on "dummy" fire missions.

c. All members of the units being trained must become familiar with the REALTRAIN control procedures and the rules of engagement. Troops must be aware of what the rules are and how they work, if they are to accept decisions of controllers that take them out of the action. The fairness of procedures, and the accuracy which they are applied with by controllers must be evident. An important part of this familiarization is a "refresher" in the destructive capability of weapons to be used. Troops may note data for use as memory jogs.

d. Emphasize training in reconnaissance duties by prior preparation.

**FIGURE 4**  
**TYPICAL CONTROLLER NOTE CARD FORMAT**

### Front

[illegible]

## Back

[illegible]

### **Preparation of Exercise Area to Emphasize Training in Reconnaissance**

Armored cavalry REALTRAIN should stress training units in non-combat skills, such as acquiring and reporting information. Because troops tend to be more motivated by the "shoot-'em-up" features of REALTRAIN, training managers must take extra measures to keep unit attention on reconnaissance.

One way to help do this is to place items of intelligence value on the terrain for maneuvering units to discover and report. Such things as "bodies" (e.g., plastic dummies), maps, documents, vehicles, etc., may be placed on the terrain before an exercise. Objects can be located to tell a tactically plausible story to the unit that discovers them. For example, an "abandoned" OP can be prepared in a location that hints at the probable location of the unit that set it up. The OP can be "salted" with documents or maps that require the finder to use proper procedures for passing battlefield information to higher headquarters quickly, accurately and securely.

Since these inanimate objects don't shoot back, they allow training in reconnaissance functions, thus maintaining trainee interest, while avoiding firefights.

e. The final preparatory step is to conduct several "mini-exercises." These exercises provide training for both controllers and troops in small scale rehearsals. They provide a "feel" for REALTRAIN. Controller training is emphasized. REALTRAIN panel numbers are installed on the combat vehicles, controller optics on the weapons, and players are issued numbered helmet covers. Then, sections or squads are assigned missions by frag orders and oppose one another. Meanwhile, assigned controllers receive practice in applying rules of engagement, and in casualty reporting. Usually, these mini-exercises involve brief, intense weapons engagements, so that several can be run in a morning or afternoon. A controller debrief and an AAR are held following each mini-exercise. These exercises also provide good "hands-on" experience for senior controllers in the conduct of the AAR, since the entire action can be easily reconstructed from memory even if NCS logs and other records are not yet being kept fully and accurately. These small scale exercises permit quick identification of REALTRAIN control problems and immediate corrections of misunderstandings, or of errors by controllers. A summary schedule of a typical pre-exercise training period is shown in Figure 5.



f. The mini-exercises should be continued until it is evident that:

- All controllers can properly apply rules of engagement and use radio nets.
- Senior controllers can reconstruct the simulated engagements during the controller debrief.
- Senior controllers are able to conduct effective After Action Reviews.
- The troops to receive tactical training know how REALTRAIN works.

#### 2-4. Pre-Exercise Checklist

Tasks preparatory to the first full-scale tactical exercise have been described in paragraphs 2-1 through 2-3. Figure 6 provides a checklist for training managers.

**FIGURE 5**

**TYPICAL PRE-EXERCISE TRAINING SCHEDULE**

| Period | Time      | Training/Event Activity  | Personnel Involved          | Training Location | Support Material |
|--------|-----------|--|-----------------------------|-------------------|------------------|
| 1      | 0800-1030 | Introduction to REALTRAIN  | All Personnel               | Garrison          | TV Film          |
| 2      | 1030-1130 | Draw Weapons and board bus for Base Camp Area  | All Personnel               | N.A.              | N.A.             |
| 3      | 1130-1200 | Lunch  | All Personnel               | Base Camp         | C Rations        |
| 4      | 1200-1300 | Controller duties & responsib.   | Controllers                 | Base Camp         | Lesson Plans     |
|        |           | Installation of Controller Optics & Commo. Equip.  | Controllers                 | Base Camp         | See Below        |
|        |           | M-114s (Scouts & Command)  | Sgt. & Comd Controllers     | Base Camp         | Lesson Plans     |
|        |           | M-113 TOWs   | TOW Controllers             | Base Camp         |                  |
| 4A     | 1300-1600 | M-551 Sheridans  | M-551 Controllers           | Base Camp         | Lesson Plans     |
|        |           | M-60 Tanks   | M-60 Tanks Controllers      | Base Camp         |                  |
|        |           | Infantry Weapons   | Infantry Controllers        | Base Camp         | Lesson Plans     |
|        |           | Indirect Fire  | Mtr Controllers & Fire Mar. | Base Camp         | Lesson Plans     |
| 4B     | 1200-1600 | Instal. of Vehicle Numbers   | Combat Vehicle Crews        | Base Camp         | N.A.             |
| 5      | 1600-1700 | Rules of Engag. Recap<br>M-114 Weapons<br>M-113 TOWs<br>M-551 Weapons<br>M-60 Weapons<br>Infantry Weapons<br>Indirect Fire | All Personnel               | Base Camp         | Lesson Plans     |

**SCHEDULE OF TRAINING/EVENT ACTIVITY-T+1**

| Period | Time      | Training/Event Activity      | Personnel Involved   | Training Location | Support Material |
|--------|-----------|------------------------------|----------------------|-------------------|------------------|
| 1      | 0800-0900 | NCS                          | NCS                  | Base Camp         | Lesson Plans     |
| 1A     | 0800-0900 | Reporting Procedures         | Comb. Vehicle Cmdrs. | Base Camp         | Lesson Plans     |
| 2      | 0900-1100 | Communications Exercise      | Controllers          | Base Camp         | Lesson Plans     |
| 2B     | 0800-1100 | Combat Veh. Service & Maint. | Combat Crew Members  | Base Camp         | N.A.             |
| 3      | 1100-1130 | Lunch                        | All Personnel        | Base Camp         | C Rations        |
| 4      | 1130-1730 | Mini Exercises               | All Personnel        | Training Area     | N.A.             |

**SCHEDULE OF TRAINING/EVENT ACTIVITY-T+2**

| Period | Time      | Training/Event Activity     | Personnel Involved  | Training Location | Support Material |
|--------|-----------|-----------------------------|---------------------|-------------------|------------------|
| 1      | 0800-1600 | Mini Exercises              | All Personnel       | Training Area     | N.A.             |
| 2      | 1600-1730 | Comb. Veh. Service & Maint. | Combat Crew Members | Base Camp         | N.A.             |

**FIGURE 6**  
**PRE-EXERCISE ACTIVITIES/TASKS CHECKLIST**

| Activity/Task  | N.A. | Completed |    |
|--|------|-----------|----|
|  |      | Yes       | No |
| Planning Phase   |      |           |    |
| (1) Major and intermediate training objectives selected.                   |      |           |    |
| (2) Tactical elements for ARCFOR/OPFOR selected.                           |      |           |    |
| (3) ARCFOR/OPFOR missions selected for each exercise.                      |      |           |    |
| (4) Training lanes selected for each exercise.                             |      |           |    |
| (5) OPODs (scenario) prepared for each exercise.                           |      |           |    |
| (6) Logistic, administrative, and routine support requirements determined. |      |           |    |
| (7) Daily activity time schedules developed.                               |      |           |    |
| (8) Support requirements coordinated.                                      |      |           |    |
| Preparation Phase  |      |           |    |
| (1) Base camp established in training area.                                |      |           |    |
| (2) Controllers, senior controllers, and fire markers selected.            |      |           |    |
| (3) REALTRAIN equipment obtained.  |      |           |    |
| (4) Training ammunition obtained.  |      |           |    |
| (5) Base camp occupied.  |      |           |    |
| (6) Personnel assigned to combat crews/teams.                              |      |           |    |
| Pre-Exercise Training Phase  |      |           |    |
| (1) Controllers and senior controllers trained.                            |      |           |    |
| (2) Fire markers trained.  |      |           |    |
| (3) Personnel trained in rules of engagement.                              |      |           |    |
| (4) Familiarization training completed.                                    |      |           |    |



### **3. Phase II—Conduct of Tactical Exercises**

#### **3-1. Steps in Execution**

Thorough, careful planning permits REALTRAIN tactical training programs to be executed so as to fully exploit the advantages of the method. Steps to be followed in execution of exercises are listed below.

#### **Steps in Execution of a REALTRAIN Exercise**

- (1) OPORDs are issued to opposing unit commanders.
- (2) Combat vehicle/weapons system crew/team commanders draw training ammunition.
- (3) Crew members prepare combat vehicles/weapons systems.
- (4) The two unit commanders prepare and brief elements on tactical operational plans.
- (5) Controllers and fire markers draw and install REALTRAIN equipment and radios.
- (6) Radios and installed equipment are checked.
- (7) Opposing elements move to and occupy assembly areas.
- (8) Fire markers move into training area.
- (9) Units occupy initial tactical positions.
- (10) Senior controllers start the exercise when the tactical elements are in position.
- (11) Training units execute their planned courses of action, acting and reacting to one another under the supervision of the REALTRAIN control system.
- (12) Senior controller terminates the exercise when training objectives have been achieved and/or when one of the opposing forces wins the battle.

### 3-2. Activities Performed Just Prior to Exercises

Actions to be taken each time units depart the administrative or base camp area for a daily block of REALTRAIN training are described more fully below. If two or more missions are conducted without returning to camp or garrison, each mission is preceded by an abbreviated, in-the-field version of this list.

- a. Operations Orders (OPORDs), prepared earlier in accordance with training program plans (see paragraph 2-1-1e), are issued to commanders of opposing forces. Ensure that opposing forces do not know each other's operations orders.
- b. While unit commanders are receiving their orders, the other combat vehicle commanders or squad leaders draw the required training ammunition from the ASP. The basic ammunition load for each combat vehicle should be packaged, labeled, and issued with the REALTRAIN panel number of the vehicle. An NCO at the ASP should remind those who draw ammunition that *all* unused ammunition is to be turned in to the ASP immediately after the exercise.
- c. Combat crew members must prepare their vehicles for the tactical exercise. Weapons must be mounted, radios and REALTRAIN panel numbers checked, and vehicles serviced, as necessary. Controllers draw their REALTRAIN equipment (including radios) and prepare the weapons they will control by installing and boresighting the controller optics. Remember to issue rations if meals will be eaten while the exercise is in progress, or while personnel are away from the base camp/garrison.
- d. After they have received their operations orders, the opposing force commanders prepare their tactical operational plans and brief their tactical elements. Encourage planning. *Allow sufficient time for leaders to plan and to conduct troop leading procedures (TLP).* Senior controllers watch the commanders to whom they have given OPORDs, and listen to each commander's OPCORDs to his troop. Thus, senior controllers are alert to plans and orders to be carried out by each side, once the action starts.
- e. Controllers and fire markers receive their assignments and are briefed on the missions assigned to both forces. Normally, this is done by the exercise controller. Senior controllers should summarize the major training objectives for the exercise and alert controllers to the kinds of supervisory steps they may be taking (weapons hold, possible frag orders, etc.), to bring out key training points. Senior controllers should stress that this overview is being given *only* to help the controllers anticipate likely events, and that controllers must not divulge plans to the elements they are accompanying. During the briefing, all controllers are given the REALTRAIN player helmet cover numbers by the senior controller, along with the combat vehicle panel numbers to be used. Numbers of helmet liners and panel numbers are recorded by controllers on their note cards.

f. Before leaving the assembly area, all controllers conduct a radio check under the supervision of the senior controller. All controller radios must be able to transmit and receive at long range. Therefore, the senior controller or someone he designates should move at least one kilometer away from other controllers to conduct the check. Radios found during the radio check to have malfunctions should be replaced. Spare batteries should also be available for the AN/PRC-77 radios.

g. Note that preparations for a REALTRAIN exercise call for simulated pre-combat actions, and for administrative preparations. Senior controllers must supervise both types of activities closely (using available non-participating NCOs to assist them as needed) to insure that all these preparations are accomplished. In particular, commanders of each side should not be called on to supervise administrative preparations to the detriment of their troop-leading procedures. Senior controllers may want to allow some extra time for TLP until preparations become routine. Later, commanders can be placed under more stringent time constraints to simulate realistic battlefield conditions.

h. On completion of administrative and pre-combat activities, all elements move out to the training lane. The fire markers normally move out first, directly into the training lane that will be used for the exercise. The Green and the Brown units road march to assembly areas from which they deploy into their initial tactical positions. In earlier stages of training, it will normally not matter if the size and composition of Green and Brown are known to each other. Later on, however, when an armored cavalry unit is learning to sharpen its reconnaissance skills, the cavalry unit should be denied knowledge of the strength and composition of the OPFOR. In this situation, the armored cavalry unit should depart the base camp *before* the OPFOR, and the latter may then be task-organized in secrecy to challenge the cavalry unit's information-gathering skills.

i. When each senior controller determines that his tactical elements have occupied their initial tactical positions, he so informs the senior controller of the opposing force. When the tactical elements of both forces are in position, the supervising senior controller starts the exercise. Although exact predictions about the duration of various exercise events are almost impossible to make in REALTRAIN, Figure 7 shows an approximate "schedule" of events for a *platoon-sized* exercise on a *specific area* of terrain. In order to fit REALTRAIN into the daylight hours at various times of the year, or to make adjustments for other reasons, training managers will have to set their own daily targets for critical milestones, e.g., the point at which exercises are terminated. Simply reducing the size of the training area (if training objectives permit) will compress the schedule given in Figure 7 considerably, for example.



**FIGURE 7**  
**A TYPICAL SCHEDULE FOR A**  
**SINGLE EXERCISE**

Platoon-size armored cavalry engagement simulation exercises normally require a training lane that is from 3 to 4 kilometers wide and 7 to 12 kilometers long. At the present time, engagement simulation exercises can be conducted only during daylight hours. Experience has indicated that as a result of these factors, it is extremely difficult to conduct more than one platoon-size armored cavalry engagement simulation exercise in a single day. The times indicated in the typical exercise activity schedule that follows, which is based on the assumption that the AAR will be conducted in the base camp area, are for illustrative purposes only and should not be considered as a rigid schedule that must be maintained as an exercise is executed. A typical sequence of events for a platoon-size armored cavalry engagement simulation exercise is as follows:

| TIME      | ACTIVITY   |
|-----------|--|
| 0800      | – Commanders are given OPORDs.   |
| 0800-0845 | – Commanders prepare tactical plans.<br>– Controllers draw REALTRAIN equipment and radios.<br>– Combat crews draw training ammunition and prepare combat vehicles and weapons. |
| 0845-0930 | – Commanders brief tactical elements.<br>– Senior controller briefs controllers.   |
| 0930-1015 | – Units prepare to depart starting point (SP).<br>– NCS conducts controller radio check. Fire markers depart for their initial stations.                                       |
| 1015      | – Green departs SP in road march.  |
| 1030      | – Brown departs SP in road march.  |
| 1100      | – Green reports arrival at its release point (RP) and proceeds to and occupies its initial tactical position.  |
| 1115      | – Brown reports arrival at its RP and proceeds and occupies its initial tactical position.   |
| 1200      | – The exercise starts with forces crossing the line of departure (LD).   |
| 1200-1500 | – Senior controller terminates exercise when training objectives have been achieved or when either of the opposing forces achieves a decisive advantage.                       |
| 1500-1630 | – Green and Brown assemble in the training area in preparation for a road march back to the base camp.   |
| 1545-1630 | – Green and Brown road march back to the base camp.  |
| 1630-1715 | – Senior controller conducts Controller Debrief.<br>– Combat crew members turn in unused ammunition.   |
| 1715-1815 | – Senior controller conducts AAR.  |
| 1815-1900 | – Controllers turn in radios and REALTRAIN equipment.<br>– Combat crew members secure weapons and combat vehicles.   |

#### **4. Dynamics of REALTRAIN Exercises**

a. Each exercise involves the clash between the two forces in two-sided freeplay. Once a REALTRAIN maneuver begins, a novel and everchanging sequence of events will unfold. Actions and events will reflect the soundness of mission planning, the skills of the units in carrying out their plans, their ability to locate the enemy, to interpret and react to developing situations, and so on. The units are, or should be, largely "on their own"—free to excel as well as to make mistakes in striving toward mission accomplishment.

b. As the tactical situation develops, the unit commanders of the opposing forces carry out their command and control functions as if they were in actual combat. This will commonly involve changing tactical plans, and redeploying elements to compensate for losses, and for changes in the tactical situation. It also includes the planning for and use of indirect fire, smoke, etc. Reports are made as in an actual combat situation. The opposing force commanders receive situation, spot, shell, bridge, ford, road, etc., reports from their tactical elements over their internal tactical radio nets. Reports are relayed by the opposing force commanders to their next higher echelon of command over their respective command nets. Player personnel carry out their normal crew/team/squad combat duties.

##### **4-1. Control and Tactical Nets; Operations of the Control Net**

Players and their vehicles are surrounded by an organization of controllers. Controllers are assigned to each element. Tactical and control nets are diagrammed in Figure 8. Player units use the platoon tactical net. The platoon leader has a radio link to the troop. All controllers are linked with each other and with the Net Control Station (NCS) by a common net. Each senior controller follows the unit to which he has given the OPORD. REALTRAIN controllers check the aim of direct fire weapons and determine "hits" or "misses." A hit is reported by radio to the controller with the target. The target controller assesses the damage in accordance with his rules of engagement and radios confirmation of the damage to the Net Control Station (NCS) where the outcome of the engagement is logged on a Casualty Record Sheet. When a tactical element is brought under fire, the controller with the element also assesses the effects and reports casualties or damage to the Net Control Station.

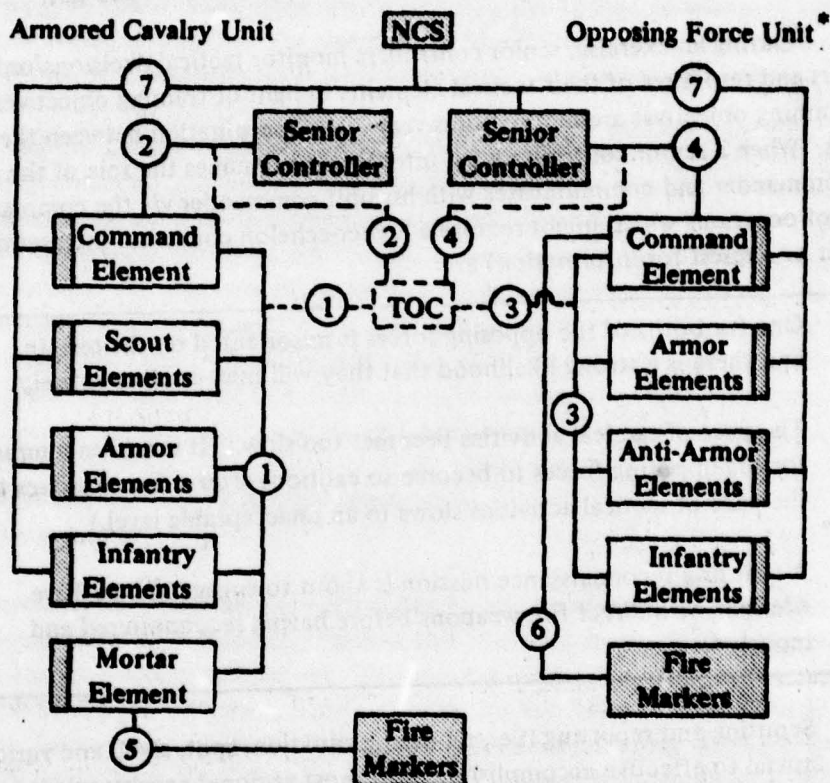
##### **4-2. Senior Controller Duties During Conduct of Exercises**

a. The value of REALTRAIN tactical training depends in large part on how well each senior controller does his job, and how well they coordinate with each other. Each senior controller should position himself where he can best observe the deployment and actions of his unit. He must, however, avoid exposing his vehicle, or acting in any way that would reveal the location of the tactical elements under his control. As tactical elements



FIGURE 8

Schematic Organization for  
Armored Cavalry REALTRAIN Showing Radio Nets



Key: Unshaded portions are elements of the units being trained. Shaded portions represent control system elements.

- ① Armored Cavalry Force Unit Tactical—internal unit tactical communications.
- ② Armored Cavalry Force Command Net—external tactical communications.
- ③ Opposing Force Unit Tactical—internal unit tactical communications.
- ④ Opposing Force Command Net—external tactical communications.
- ⑤ Armored Cavalry Fire Marker Net—for controlling indirect fire.
- ⑥ Opposing Force Fire Marker Net—for controlling indirect fire.
- ⑦ Control Net—weapons engagement damage/casualty assessment reports.

\*May be another armored cavalry unit. In that case, the right side of this diagram is identical with the left.



maneuver, their senior controllers keep up with their location and status. Senior controllers must monitor both the control net, and the unit command net. Senior controllers may also monitor the unit's internal tactical net. When senior controllers are acting as commanders of the next higher echelon, communication is by the *command* net.

b. During an exercise, senior controllers monitor tactical decisions/orders of the unit leaders and responses of their tactical elements in light of training objectives. Insuring that the training objectives are met requires very close coordination between the two senior controllers. When a senior controller must intervene, he assumes the role of the next higher echelon commander and communicates with his unit commander via the command net. Examples of occasions which might require a higher-echelon command intervention (e.g., a frag order or request for information) are:

- One (or both) of the opposing forces is misoriented on the terrain, and there is a strong likelihood that they will miss contact entirely.
- The pace of tactical activities becomes too slow. (It is not uncommon for the opposing forces to become so cautious after a few exercises that the pace of tactical activities slows to an unacceptable level.)
- A unit or a reconnaissance mission is about to engage in a decisive firefight with direct fire weapons before having reconnoitered and reported.

c. Scouting and reporting (i.e., rendering situation, spot, shell, and various other reports) are crucial to effective accomplishment of most armored cavalry missions. *All* REALTRAIN exercises should be planned and managed so that units have both the opportunity and the need to reconnoiter and to report. Pre-exercise planning and attention to these duties during an exercise by senior controllers combine to ensure that the unit receives sufficient training in reconnaissance and reporting. If reports are infrequent, incomplete or confusing, the senior controllers should:

- (1) step in, as superior commanders, to stimulate the flow of information, and
- (2) note lessons to be brought out regarding reporting for discussion in the AAR.

Units which are just beginning to work together in the field will sometimes neglect even the most basic SOPs for reports, particularly once enemy contact is made. Senior controllers may elect to not be overly demanding *during* the exercise ("1" above), but

rather should emphasize the consequences of poor reporting during the AAR ("2"). Senior controllers can, for example, bring out how lack of information at higher levels makes it difficult for commanders and their staff to make their own plans and to provide effective support for a unit in trouble. In later exercises, after a unit in training becomes more proficient in control and coordination of elements, senior controllers can call for reports during exercises without overloading the command capabilities of the unit leader. For example, if SOP calls for hourly SITREPs, the senior controller should insure that these are delivered on time. He may also request additional SITREPs from time to time. If the terrain has been prepared through placement of items to be discovered by thorough reconnaissance, the senior controller may prod or prompt the maneuver unit for a SPOT-REP if he finds that one or more pre-planted items have been bypassed and not reported.

There are other occasions for prompting unit leaders to make timely and necessary reports. These might include calling for reports of:

- Direct fire engagements.
- Indirect fire received by the unit.
- Unusual activity on the part of one or more elements—rapid movement to cover, abrupt changes in axes of movement, etc.

Experience has shown that armored cavalry personnel are encouraged to report battlefield information correctly and promptly if each vehicle commander and squad leader is given a list of proper formats for various report types. This gets leaders into the habit of organizing the information *before* reporting, and making reports brief and complete. However, even with this aid during training, soldiers may continue to be careless in formulating reports. They may need to be reminded by senior controllers of the necessity to follow format guidelines and to use proper radio telephone procedures. Proper reporting can be stressed in the AAR as well as while the exercise is in progress.

d. Putting into effect "weapons hold" is another means for stressing scouting and reporting duties. In the competitive atmosphere that REALTRAIN creates, troops of opposing sides want to go directly to the firefight. A "weapons hold" may be put into effect to restrict the use of direct and/or indirect fire weapons. This restriction can be justified tactically on the grounds that cavalry units will often avoid decisive engagements with an enemy force. Senior controllers must coordinate closely with one another to impose, and maintain, a *weapons hold* status. Under this condition, a unit leader must obtain clearance from his senior controller before any of his direct or indirect fire elements is allowed to engage a target. Before clearance is given, senior controllers should consider such factors as:



- the extent of reporting that has already occurred;
- the overall tactical positions of the opposing forces;
- the type of weapon to be used in an engagement;
- the potential effect of the requested fire on the outcome of the exercise; and
- how long the exercise has been underway.

An example of the reasoning of senior controllers and communications in imposing a weapons hold status is given on page

#### 4-3. Maneuver Controllers' Actions During an Exercise

a. Maneuver controllers remain with the combat vehicle/weapons system or the tactical element to which assigned. Sometimes a vehicle is hit and only part of its crew or squad killed. If the remainder of the crew elects to dismount to continue fighting, or to join another tactical element, the controller moves with them. Controllers must *not* expose themselves or in any way disclose the position of the element they are with.

b. Even well-trained maneuver controllers sometimes are unable to identify targets by REALTRAIN number. There is also always a possibility that their radios will not work, or that terrain will interfere with UHF radio communications. In such cases, the senior controllers must help their maneuver controllers to solve such problems.

Examples of how senior controllers work together and with their other controllers to handle two common problems are shown starting on the next page.

c. As the action and counteraction between sides becomes more intense, NCS or senior controller records may be incomplete or inaccurate, and memory can be unreliable. Tactical events can be more accurately reconstructed if maneuver controllers record *what* happens, *when* it happens, on a 3 x 5 inch controller note card (Figure 4). As noted earlier, one side of the card provides a format for the controllers to record the REALTRAIN numbers assigned to vehicles and helmet liner numbers of soldiers. The other side provides room for recording tactical events, which individual controllers with tactical elements can readily observe. This format helps maneuver controllers to organize their observations. Controllers do not try to record everything; they focus attention on key tactical events, and circumstances under which they occurred. For the vehicle controller is riding, a key event would occur when it is hit, or when it engages an enemy vehicle. The circumstances under which the event occurs should be noted as well.



## MANAGING A WEAPONS HOLD

**Initial Situation:** Green senior controller has imposed a *direct fire* weapons hold on his force. Elements must request permission to fire on each potential target.

### DEVELOPMENTS

On his *command net*, the senior controller receives a request for such permission from the platoon leader on Scout 24. (Tactical call signs use REALTRAIN numbers.)

The Green senior needs to check with the senior controller on the other side to determine the advisability of permitting 33 to fire. He has also been getting very few tactical reports from Green elements up to this time.

Brown control checks the coordinates given, and judges that this is very likely to be his platoon leader's vehicle. He recognizes that the PL is not using the best available route, but also wants to see if Brown forward elements will outrun their overwatching fires before the PL dies.

Green checks his map and determines that, unless Brown PL calls for smoke, he will continue to move through TOW 33's field of fire on his present course.

### CONTROL PROCESS

Green PL: GOLF 6, THIS IS GOLF 24, OVER.

Green SC: GOLF 24, THIS IS 6; SEND YOUR MESSAGE.

Green PL: GOLF 6, MY 33 ELEMENT (a TOW) HAS AN ENEMY VICTOR IN SIGHT AT GRID 092786. REQUEST PERMISSION FOR HIM TO FIRE IT UP. OVER.

Green SC: 24; THIS IS 6. I HAVE YOUR REQUEST FROM 33. WAIT-OUT.  
(Senior controller shifts to *control* frequency, on his other radio.)

Green SC: BRAVO CONTROL, THIS IS GOLF CONTROL, OVER.

(Brown SC acknowledges.)

BRAVO CONTROL, ONE OF MY TOW'S HAS ONE OF YOUR GUYS IN SIGHT AND IN RANGE AT 092786. CAN YOU IDENTIFY THAT TARGET, AND HOW DO YOU FEEL ABOUT LOSING HIM? OVER.

Brown SC: GOLF CONTROL, THIS IS BRAVO CONTROL. THAT'S MY PL, AND I'D LIKE TO SEE HOW HE HANDLES THE NEXT ROUND BEFORE I LOSE HIM. IS YOUR TOW POSITIONED SO THAT HE COULD FIRE HIM UP LATER? HE IS MOVING ALONG AN AZIMUTH OF ABOUT 160 DEGREES FROM LAST LOCATION. OVER.

Green SC: BRAVO, GOLF. MY ESTIMATE IS THAT YOUR PL WILL BREAK OUT INTO AN OPEN AREA WHERE 33 CAN HIT HIM, IF HE CONTINUES HIS PRESENT DIRECTION OF MOVEMENT FOR 5-10 MIKES. WILL THAT GIVE YOU THE TIME YOU NEED? OVER.

## DEVELOPMENTS

Brown control judges that his PL should call up his overwatching section within the next five minutes, so his training objective will be met by continuing the hold on 33 for that period of time.

Green understands Brown's reasons for wanting to postpone the engagement, so he will deny the request for fire. However, he will also use this occasion to prompt a SPOTREP from the TOW. He also notes that other elements of the Brown force are closing to within maximum TOW/main gun range, so he decides to lift the weapons hold in 5 minutes.

## CONTROL PROCESS

Brown SC: GOLF, THIS IS BRAVO. THAT'S AFFIRMATIVE. I'D LIKE TO GIVE HIM ONE MORE CHANCE, NEXT TIME HE'S IN A POSITION TO HALT IN DEFILADE. THAT SHOULD BE IN 2-3 MIKES. IF HE GOOFS IT UP THEN, LET TOW 33 FIRE WHEN HE MOVES. OVER.

Green SC: BRAVO, THIS IS GOLF. ROGER YOUR LAST TRANSMISSION. I'M GOING TO DENY THIS REQUEST, BUT I NOTE THAT SEVERAL OF YOUR ELEMENTS ARE GETTING PRETTY CLOSE. I PROPOSE TO LIFT THE WEAPONS HOLD IN 5 MIKES SO WE CAN HAVE A FAIR SHOOT-OUT. OVER.

Brown SC: ROGER THAT, GOLF. I'LL BE WATCHING FOR YOUR FIRES FROM OVER HERE. BROWN CONTROL, OUT.

(Green SC switches back to his command radio.)

Green SC: GOLF 24, THIS IS GOLF 6.

Green PL: GOLF 6, THIS IS 24, OVER.

Green SC: 24, BE ADVISED THAT 33 ELEMENT SHOULD HOLD FIRE AT THIS TIME. ALSO HAVE 33 GIVE YOU A PROPER SPOT-REP ON THAT ENEMY ELEMENT, AND RELAY IT TO ME. YOU HAVEN'T BEEN KEEPING ME VERY WELL INFORMED ABOUT YOUR SITUATION, INCLUDING ENEMY SIGHTINGS. TELL 33 THAT WHEN HE SEES THAT VICTOR COME OUT OF THE TREELINE HE CAN SHOOT. ALSO BE ADVISED THAT FREE FIRE WILL SOON BE ALLOWED AT MY COMMAND. OVER.

Green PL: 6, THIS IS 24. ROGER YOUR LAST INSTRUCTION. 24 OUT.

(24 then relays denial of request to 33.)



## PROMPTING A CASUALTY CONFIRMATION

**Initial Situation:** An M60 tank has killed an armored cavalry M114. The tank controller has properly called the kill twice but received no confirmation.

| DEVELOPMENTS   | CONTROL PROCESS   |
|--|---|
| Senior controller of Green force is attempting to contact target.  | Senior controller: SCOUT 44, THIS IS GOLF CONTROL; OVER. . . SCOUT 44, THIS IS GOLF CONTROL, DO YOU READ ME? OVER. . .            |
| Senior controller of Green force displaces toward last known position of the M114, attempts to relay message en route.   | (Scout 44 does not reply; senior controller suspects radio problem.)  |
|  | Senior controller: ANY GOLF ELEMENT, DO YOU HAVE COMMO WITH 44? OVER. . .   |
|  | Sheridan controller: GOLF CONTROL, THIS IS SHERIDAN 29, I HAVE 44 IN SIGHT. SEND YOUR MESSAGE AND I WILL ATTEMPT RELAY, OVER. . . |
|  | Senior controller: 29, THIS IS GOLF CONTROL; TELL 44 HE HAS BEEN KILLED AND TO STOP AND POP GREEN, OVER. . .                      |
| Sheridan controller attempts to contact 44.  | Sheridan controller: ROGER, GOLF CONTROL-BREAK-SCOUT 44, THIS IS SHERIDAN 29, OVER. . .   |
|  | 2nd Sheridan controller: 29, THIS IS 44, OVER. . .  |
|  | Sheridan controller: 44, THIS IS 29, BE ADVISED YOU HAVE BEEN DESTROYED. STOP AND POP GREEN, OVER. . .                            |
| Senior controller monitors last series of transmissions. Since 44 had been having radio problems, the Senior controller should record the time he finally confirms the casualty, in case NCS did not successfully monitor. | Scout 44: ROGER 29, WE ARE OUT OF THE PROBLEM. BREAK-44, CONFIRMED, 44, CONFIRMED.  |



## IDENTIFYING AN UNKNOWN TARGET

**Initial Situation:** A vehicle has been seen and taken under fire by a TOW from the armored cavalry platoon. Range and conditions of visibility prevent target identification by the TOW controller. Here is how the senior controllers might use the control net to assist in identification.

| DEVELOPMENTS  | CONTROL PROCESS   |
|---|---|
| Maneuver controller gives as much information as possible about nature and location of target.  | TOW controller: ENEMY VICTOR IN GULLY AT 027893 HIT BY TOW 22; ENEMY VICTOR IN GULLY AT 027893 HIT BY TOW 22.                       |
| Senior controllers monitor control net.   | (After one minute, no confirmation has been received.)  |
| Senior controller of Brown force checks last known positions of all his elements, identifies Tank 48 or APC 91 as possible targets. He calls Tank 48 to update information on its position. | Senior controller: TANK 48, THIS IS BRAVO CONTROL, WHAT IS YOUR LOCATION? OVER. . . .   |
| Senior controller of Brown force checks APC 91's current location.  | Tank 48 Controller: BRAVO CONTROL, THIS IS 48; WE ARE PRESENTLY AT 028910, OVER. . . .  |
| Senior controller of Brown force calls a kill on APC 91 and confirms.   | (Based on this transmission, Brown senior controller tentatively eliminates Tank 48 as target.)                                     |
|   | Senior controller: TANK 48, THIS IS BRAVO CONTROL; ROGER-BREAK-TRACK 91, WHAT IS YOUR LOCATION? OVER. . . .                         |
|   | APC 91 controller: BRAVO CONTROL, THIS IS 91. WE ARE STOPPED IN DEFILADE AT 028892, OVER. . . .                                     |
|   | (Based on this description, Brown control decides that this is the target called by TOW 22.)  |
|   | Senior controller: APC 91 HIT BY TOW 22 AND CONFIRMED; APC 91 HIT BY TOW 22 AND CONFIRMED. 91, POP GREEN SMOKE. BRAVO CONTROL, OUT. |

d. It is helpful for maneuver controllers to record information for use in the Controller Debrief and After-Action Review; however, when the tactical element being controlled engages an enemy, the controller's *most important* job is accurate and timely damage/casualty assessment and reporting.

e. As is shown in the example on a previous page, the senior controllers authorize the unrestricted use of weapons when they have determined by monitoring the tactical nets that units have had enough practice in reporting, and/or when further advance by either force leads to unrestricted fire-fight.

f. The weapons hold technique must be implemented with care to avoid degrading the realism of the exercise. Troops tend to become less concerned with concealment and cover once they realize a weapons hold is in effect. However, ordering a request for permission to fire provides practice in combat reporting, for any request for permission must include some information about the potential target, which otherwise might not have been reported. Effective use of the weapons hold, then, requires exercise of judgment by senior controllers.

g. During execution of an exercise, senior controllers keep in mind that a complete, chronological description of significant events will be needed to guide discussion during the AAR. Three sources can provide this information: the NCS records, notes taken by maneuver controllers, and notes of senior controllers. The Net Control Station (NCS) records provide a written record of routine weapons engagements (see below). The notes taken by individual controllers help describe engagements and the circumstances under which they occurred. These two sources of information, however, do not provide a sufficiently complete body of information about the exercise. Therefore, the senior controllers (or when used, their assistants) should record additional information to supplement NCS records and notes of individual controllers. Information recorded by senior controllers should stress general observations of the unit and coordination among its elements. It may include:

- The performance of the unit in the assembly areas.
- Whether the line of departure (LD) was crossed on time.
- The initial deployment of the tactical elements.
- The redeployment of tactical elements as the tactical situation develops.
- The use of indirect fire.
- The maneuver of tactical elements, i.e., the use of concealment and cover.
- Relationships between plans and actions.
- The most significant reports submitted by the unit leaders, i.e., what was reported when by whom.
- Command and control activities of the unit leaders.
- Overall observations concerning the unit's tactical behavior; i.e., significant examples of both good and poor tactical behavior.

#### 4.4. The Net Control Station (NCS) in Exercise Play

a. The minimum requirement for manning the NCS is one soldier. He monitors the control net to record weapons engagements in the order in which they are reported. The NCS, which does *not* become involved in tactical or command activities, should be located in, or adjacent to, the training lane on ground that will permit the reception of radio transmissions from any place in the training lane. Only one radio *transmitter* is required for the NCS. A second receiver is *required* as a back-up for use in the event of radio failure.



### USING A TOC IN REALTRAIN

A Tactical Operations Center (TOC) can be established to record reconnaissance reports. Establishing the TOC in an M577 vehicle, along with the NCS, makes it a lot easier for the person recording reports and control net traffic to work, especially in inclement weather. Unfortunately, an M577 is not readily available at all times. If it isn't, a jeep with two radios will work as an NCS and will also permit the monitoring and logging of tactical reports from *one* force only.

If your training objectives focus on recon/reporting for only one unit, an M577 may be overkill. However, if you want to train both units in recon/reporting, you will need three radios (at least) because tactical reports from both sides should be logged systematically. Then, an M577 is a lot better than a makeshift arrangement with a quarter-ton.

If you want to make a case for using an M577 to your higher echelon commander, point out that the personnel in the TOC will get excellent training in communications procedures from participation in REALTRAIN exercises.

b. Weapons engagements and outcomes should be recorded sequentially on the controller casualty/damage record (NCS log) form that has been filled in during an exercise. The Tactical Element Record part of the form, which includes the REALTRAIN *numbers* of all vehicles and personnel participating, is completed prior to the start of the exercise. The Event Sequence Record is completed in the NCS during the exercise as weapons engagements occur. When *kills* are confirmed, a line is drawn through the REALTRAIN number of the individual or vehicle killed in the Tactical Element Record. In a typical armored cavalry REALTRAIN exercise involving platoons, two or three Event Sequence Record sheets will be required. The training manager should produce the form (shown in Figure 9) or make up a similar form adapted to his particular requirements. The soldier maintaining the NCS log should be told to write down comments on any problems he encounters, especially on any type of event that the training manager wants to emphasize in the AAR.

## TACTICAL ELEMENT RECORD

[illegible]Time Terminated 148.5 HRS

| Target Element       | Firing Element | Time of Fire | Time of Confirm | Comments, Notes   |
|----------------------|----------------|--------------|-----------------|---|
| TANK (63)            | SH 50          | 1232         | 1237            | Rpt at 801283<br>Senior Controller confirmed<br>as 63     |
| INDIVIDUALS<br>17/29 | MORTAR 91      | 1233         | 1234            | Confirmed by Controller 65                                |
| SH 50                | TOW 90         | 1238         | 1239            | Confirmed by Controller 50<br>PERSONNEL EXPOSED           |
| SC 94                | FL 40 (20mm)   | 1313         | 1314            | Confirmed by Controller 94                                |
| APC<br>(TOW 90)      | SC 28 (20mm)   | 1316         | 1319            | Rpt at 807272<br>Senior Controller confirmed<br>as TOW 90 |
| APC 27               | FL 40 (20mm)   | 1320         | 1322            | Confirmed by Controller 27                                |

## 5. Phase III—Post-Exercise Activities

Several things must be done as soon as the exercise is over. What needs to be done depends partly on whether additional exercises will be run on the same day. When additional exercises are to be conducted, tactical elements may need to be resupplied. The Controller Debrief and After-Action Review will then be held in the field.

### 5-1. Assembling the Forces for the Controller Debrief and the After-Action Review

The Green and Brown tactical elements should be quickly assembled for the Controller Debrief and the After-Action Review (AAR). Where the exercise area is small, the forces may be assembled more rapidly if the individual tactical elements have been directed by the senior controller to proceed directly to the designated assembly point. When the exercises are held on large terrain areas, distant from the assembly point, it may be desirable for the senior controller to have the tactical elements form and road march to the designated assembly point.

It is not uncommon for combat vehicles that have been *destroyed* to be strung out over several kilometers. Assembly of the forces after an exercise is over can be expedited if *destroyed* vehicles which became casualties during an exercise proceed directly, after a short period of time, to a designated point *adjacent* to the training lane. Vehicles that are out of the exercise should show a white flag or some other clearly visible signal.

### 5-2. Conducting the Controller Debrief

a. The Controller Debrief provides the senior controller, who will conduct the After-Action Review (AAR), an opportunity to clarify and confirm key events to be discussed during the AAR. All controllers must be present for the Controller Debrief. The senior controller uses the NCS records, his own notes, and the individual controller exercise event notes to obtain a clear picture of what happened.

b. A simple target cloth terrain model and miniature models of maneuver element combat vehicles have proven to be highly effective training aids for showing tactical deployments and maneuvers of each side, for use in both the Controller Debrief and the AAR. Each combat vehicle model should be identified by REALTRAIN number. Prominent terrain features and the coordinate grid system should be depicted on the terrain model.



c. The senior controller conducting the Controller Debrief first places the opposing forces' combat vehicle models on the terrain model to depict their relative positions when the exercise started. He then goes over the chronology of events *quickly* as his records indicate them to have occurred. This is done by moving the combat vehicle models to successive positions to reflect their active deployments. Individual controllers contribute to the reconstruction of the chronology of events by filling in gaps and correcting the senior controller's understanding of what occurred. Little time should be spent on those events on which controllers agree. The Controller Debrief should be focused on critical events from which key lessons can be derived, and on resolving differences of opinion as to what actually happened.

- *All differences of opinion regarding what occurred or what events took place must be resolved during the Controllers' Debrief.*
- *The Controller Debrief should be kept as short as possible. Player troops should not be kept waiting for the AAR any longer than necessary.*

### 5-3. Conducting the After-Action Review

a. The purpose of the After-Action Review (AAR) is to extend the learning from the exercise by reconstructing the action so that all aspects of unit performance may be examined in detail. All controllers and participating troops must be present. One senior controller guides the description of actions by players. He uses the consolidated exercise record to identify and call upon key participants in each sequential event. (See Part II, Chapter 7, of TC 71-5 for a general discussion of the AAR.) In examining unit performance, good tactical decisions and techniques are highlighted and reinforced. Mistakes are identified and better courses of action suggested. As the senior controller leads the discussion of exercise events, he attempts to the extent possible to get comments on what lessons were learned by *all* the participants, not just soldiers involved in key exchanges of fire, or those who acquired and reported critical information.

b. The AAR starts with the senior controller asking the opposing force unit commanders in turn to describe their respective OPORDs as received for the exercise. Each also describes the tactical *plans* he developed for accomplishing his assigned mission, i.e., his scheme of maneuver and/or defensive plan. The *unit/commanders* show the initial deployment of their forces by placing the combat vehicle models in the appropriate place on the terrain model. The senior controller then guides the discussion through the chronology of events in the order that the events occurred. As each event, i.e., indirect fire mission, report, direct fire weapon engagement, etc., is discussed, the troops who initiated the action move the vehicle model as they describe what actions they took and why. The troops against whom the action was taken describe what they were doing and how they responded. The senior controller must resolve any differences of opinion that may arise between the troops on either side who engaged in weapons play. In guiding the discussion, the senior

controller ensures that good tactical decisions and battlefield behaviors are highlighted and that mistakes are identified as needing correction in later exercises.

#### **Handling Reports in an AAR**

Armored cavalry REALTRAIN differs from other REALTRAIN applications in its emphasis on reconnaissance and effective reporting. This difference shows up clearly in the AAR. Good reporting should be given as much attention as effective use of weapons. The AAR leader should bring out responses from troops on both sides, as to the kinds of effects the reports rendered had on later actions. Reports allow unit commanders to make more informed changes in tactical plans. The opposing force will move more cautiously if its members sense that their actions are being quickly reported and responded to.

It is sometimes difficult to keep troops interested in reporting requirements. However, comments like, "Please recognize here that the enemy had first been sighted 30 minutes ago at this point, and higher still didn't have *any* reports," can be useful.

#### **5-4. The Turn-In or Resupply of Training Ammunition**

a. When two tactical exercises are to be conducted on the same day, it may be necessary to resupply the tactical elements with training ammunition. Ammunition may be redistributed or resupplied. Redistribution is likely to be more time-consuming than resupply if basic loads have been prepackaged at the Ammunition Supply Point (ASP). For resupply, the ASP picks up all unused ammunition and issues a full prepackaged basic load to each tactical element.

b. On completion of the exercise(s), each crew/team/squad commander places all unused ammunition in a box marked with the combat vehicle's REALTRAIN number and turns the box in to the ASP. The ASP NCO replaces material as required to prepare the basic load for issue the next day.

#### **5-5. Securing Weapons and Equipment**

a. If additional tactical exercises are to be conducted on the same day, vehicle crew members prepare their vehicles and weapons for the next exercise while the senior controller is conducting the Controller Debrief. Preparation includes the correction of radio and weapons malfunctions and combat vehicle service and minor maintenance as



required. The Controller Debrief is normally of short duration; therefore, the time available for preparing the combat vehicles and weapons for the next exercise will be short. Malfunctioning combat vehicles and weapons that cannot be repaired during this limited time should be replaced for the next exercise, assets permitting.

b. After the last exercise of the day, combat vehicles and weapons are secured after the AAR is held. Weapons are inventoried, cleaned, and placed in a central storage area where they can be kept under guard. Combat vehicle service and minor maintenance is performed at this time.

#### **5-6. Controller Radios and REALTRAIN Equipment**

a. All controllers are involved in the Controller Debrief and the After-Action Review. When additional exercises are to be conducted on the same day, the senior controller issues the OPORDs and briefs the forces for the next exercise following the completion of the AAR. During this time, all controllers prepare their radios and REALTRAIN equipment for the next exercise. Malfunctioning equipment, i.e., radios, special communications equipment for the M551 Sheridan and the M60 Tank, and controller optical equipment should be replaced if it cannot be promptly repaired. The boresight of the controller optical equipment with their weapons should also be rechecked.

b. At the end of the day, controller radios are turned in to a central location where they can be secured. Malfunctioning radios should be identified. Controller optical equipment such as binoculars and the 10x telescope with the TOW should also be turned in and secured.



## **ANNEX E**

### **COMMUNICATIONS EXERCISE**

#### **1. General**

The communications exercise (COMEX) is an expedient method of training REALTRAIN controllers as well as the personnel who will be manning the Net Control Station (NCS) in the use of REALTRAIN radio-telephone procedures (RTP). It is conducted during the controller training period prior to the start of a series of REALTRAIN exercises. The COMEX is a series of radio transmissions that provide practice on proper RTP to be followed by REALTRAIN controllers.

The entire training mission consists of two exercises (called 1st COMEX and 2nd COMEX). During the first COMEX, each controller receives message cards on which there is a REALTRAIN message (e.g., "Sheridan 33 hit by TOV 2"). This is transmitted verbatim and the appropriate controller on the other side (in this case, the controller for Sheridan 33), confirms the transmission. In the second COMEX, instead of a REALTRAIN message on the message card, a situation is described which the controller must transmit using REALTRAIN RTP. The object of the COMEX is to train controllers. Thus, all controllers should be afforded the opportunity to transmit a message and confirm a kill at least once. NCS operators complete the NCS sheet as they would during an exercise.

A typical sequence would occur as follows. Each controller is issued a controller identification card which tells him the REALTRAIN number of his assigned weapons system. The senior controller (in accordance with his senior controller's schedule) issues a message card to the appropriate controller who makes a transmission. This is recorded at the NCS. The respondent controller on the other side confirms the transmission. This process continues until the senior controller's message schedule is completed.

A critique is held at the conclusion of the COMEX highlighting proper and poor use of REALTRAIN RTP.

#### **2. Participants and Equipment**

The COMEX requires the two senior controllers, all the controllers and the NCS operators. All participants must have an AN/PRC-77 radio. NCS personnel should use whatever radio they will use in the REALTRAIN exercise. The two senior controllers will need stopwatches or watches with a sweep second hand.

### **3. Radio Training**

Since some controllers may never have previously used the AN/PRC-77 radio and most will need a review, it is suggested that the COMEX start with a brief review of procedures to operate the radio.

### **4. COMEX Preparation**

Certain components of the COMEX must be prepared locally. They are:

- Controller Identification Cards (1st and 2nd COMEX),
- Message Cards (1st and 2nd COMEX),
- Senior Controller's Schedule (1st and 2nd COMEX), and
- NCS Sheet.

Controller Identification Cards (1st and 2nd COMEX) are 3 x 5 inch cards that tell the controller which weapon system he is assigned to, his location, the REALTRAIN number of his weapon system, and the Crew Helmet Numbers. Each controller is issued one.

### **5. Conduct of the COMEX**

- a. Assemble all participants and explain the COMEX.
- b. Divide the controllers into Green and Brown sides. Controllers should be assigned to the same side (color of helmet cover) they will control during the REALTRAIN exercises.
- c. Issue the controller vehicle/crew/weapon identification cards to the controller. Each controller should be assigned to the same weapon system that he will control during the REALTRAIN exercises.
- d. Conduct a radio check for each radio.
- e. Locate Green and Brown sides 25-75 meters apart. Each side should have a senior controller.
- f. The two senior controllers conduct a time check with the NCS.

## **EXAMPLES OF CONTROLLER IDENTIFICATION CARD**

### **Example 1**

#### **GREEN SIDE**

**You are controller with Sheridan 10.  
You are located at coordinates 234561.  
The following individual numbers are  
assigned to you: 50, 99.**

### **Example 2**

#### **BROWN SIDE**

**You are controller with TOW 81.  
You are located at coordinates 673215.  
The following individual numbers are  
assigned to you: 18, 45.**

**The Controller Identification Cards are the same for the 2nd COMEX but the  
REALTRAIN numbers should be changed.**



- g. **Start first COMEX.** The appropriate senior controller issues the first message card to the first controller scheduled to transmit. During the first COMEX, controllers read verbatim the message on the card during the transmission, the senior controllers monitor, checking for correctness of RTP. The NCS records the traffic as it would during a real exercise.
- h. The transmissions continue according to the senior controller's schedule.
- i. Upon termination of the first COMEX, participants are assembled and the senior controllers critique the performance, using the NCS record of messages as a basis for comments.
- j. The second COMEX. The new controller identification cards are issued and the Green and Brown sides return to their locations. The second COMEX is conducted in the same fashion as the first COMEX. However, the controllers will be required to transform the message as it appears on the message card into proper RTP.
- k. Reassemble all participants and critique.

# INFORMATION ON PLAYER IDENTIFICATION CARDS

1st COMEX

BROWN

PLAYER IDENTIFICATION CARD

You are controller with Sheridan 48. You are located at coordinates 321654. The following individual numbers are assigned to you: 57, 73.

You are controller with Sheridan 67. You are located at coordinates 216543. The following individual numbers are assigned to you: 15, 46.

You are controller with Sheridan 33. You are located at coordinates 165432. The following individual numbers are assigned to you: 69, 95.

You are controller with TOW 81. You are located at coordinates 673215. The following individuals numbers are assigned to you: 18, 45.

You are controller with TOW 24. You are located at coordinates 567321. The following individual numbers are assigned to you: 40, 11.

You are controller with Scout 22. You are located at coordinates 732156. The following individual numbers are assigned to you: 07, 28.

You are controller with Scout 19. You are located at coordinates 321567. The following individual numbers are assigned to you: 98, 35.

You are controller with Scout 97. You are located at coordinates 215673. The following individual numbers are assigned to you: 76, 14.

You are controller with INF 02a. You are located at coordinates 632146. The following individual numbers are assigned to you: 91, 33.

You are controller with INF 02b. You are located at coordinates 632146. The following individual numbers are assigned to you: 72, 08.

PLAYER IDENTIFICATION CARD

GREEN

You are controller with Sheridan 10. You are located at coordinates 234561. The following individual numbers are assigned to you: 50, 99.

You are controller with Sheridan 63. You are located at coordinates 345612. The following individual numbers are assigned to you: 43, 27.

You are controller with Sheridan 37. You are located at coordinates 456123. The following individual numbers are assigned to you: 04, 85.

You are controller with TOW 42. You are located at coordinates 561234. The following individuals numbers are assigned to you: 36, 61.

You are controller with TOW 68. You are located at coordinates 123456. The following individual numbers are assigned to you: 52, 94.

You are controller with Scout 49. You are located at coordinates 612345. The following individual numbers are assigned to you: 75, 23.

You are controller with Scout 92. You are located at coordinates 654321. The following individual numbers are assigned to you: 41, 18.

You are controller with Scout 79. You are located at coordinates 543216. The following individual numbers are assigned to you: 25, 88.

You are controller with INF 12a. You are located at coordinates 432165. The following individual numbers are assigned to you: 48, 32.

You are controller with INF 12b. You are located at coordinates 432165. The following individual numbers are assigned to you: 81, 60.

63, 64.



## INFORMATION ON PLAYER IDENTIFICATION CARDS

### 1st COMEX

#### GREEN PLAYER IDENTIFICATION CARD

You are controller with Sheridan 10. You are located at coordinates 234561. The following individual numbers are assigned to you: 50, 99.

-----  
You are controller with Sheridan 63. You are located at coordinates 345612. The following individual numbers are assigned to you: 43, 27.

-----  
You are controller with Sheridan 37. You are located at coordinates 456123. The following individual numbers are assigned to you: 04, 85.

-----  
You are controller with TOW 42. You are located at coordinates 561234. The following individual numbers are assigned to you: 36, 61.

-----  
You are controller with TOW 68. You are located at coordinates 123456. The following individual numbers are assigned to you: 52, 94.

-----  
You are controller with Scout 49. You are located at coordinates 612345. The following individual numbers are assigned to you: 75, 23.

-----  
You are controller with Scout 92. You are located at coordinates 654321. The following individual numbers are assigned to you: 41, 18.

-----  
You are controller with Scout 79. You are located at coordinates 543216. The following individual numbers are assigned to you: 25, 88.

-----  
You are controller with INF 12a. You are located at coordinates 432165. The following individual numbers are assigned to you: 48, 32, 47, 93.

-----  
You are controller with INF 12b. You are located at coordinates 432165. The following individual numbers are assigned to you: 81, 60, 63, 64.

#### BROWN PLAYER IDENTIFICATION CARD

You are controller with Sheridan 48. You are located at coordinates 321654. The following individual numbers are assigned to you: 57, 73.

-----  
You are controller with Sheridan 67. You are located at coordinates 216543. The following individual numbers are assigned to you: 15, 46.

-----  
You are controller with Sheridan 33. You are located at coordinates 165432. The following individual numbers are assigned to you: 69, 95.

-----  
You are controller with TOW 81. You are located at coordinates 673215. The following individual numbers are assigned to you: 18, 45.

-----  
You are controller with TOW 24. You are located at coordinates 567321. The following individual numbers are assigned to you: 40, 11.

-----  
You are controller with Scout 22. You are located at coordinates 732156. The following individual numbers are assigned to you: 07, 28.

-----  
You are controller with Scout 19. You are located at coordinates 321567. The following individual numbers are assigned to you: 98, 35.

-----  
You are controller with Scout 97. You are located at coordinates 215673. The following individual numbers are assigned to you: 76, 14.

-----  
You are controller with INF 02a. You are located at coordinates 632146. The following individual numbers are assigned to you: 91, 33, 83, 34.

-----  
You are controller with INF 02b. You are located at coordinates 632146. The following individual numbers are assigned to you: 72, 08, 85.



## INFORMATION ON PLAYER IDENTIFICATION CARDS

### 2nd COMEX

#### GREEN PLAYER IDENTIFICATION CARD

You are controller with Sheridan 35. You are located at coordinates 234561. The following individual numbers are assigned to you: 01, 70.

-----  
You are controller with Sheridan 43. You are located at coordinates 345612. The following individual numbers are assigned to you: 58, 16.

-----  
You are controller with Sheridan 95. You are located at coordinates 456123. The following individual numbers are assigned to you: 76, 29.

-----  
You are controller with TOW 06. You are located at coordinates 561234. The following individual numbers are assigned to you: 20, 36.

-----  
You are controller with TOW 59. You are located at coordinates 123456. The following individual numbers are assigned to you: 03, 86.

-----  
You are controller with Scout 78. You are located at coordinates 612345. The following individual numbers are assigned to you: 21, 14.

-----  
You are controller with Scout 86. You are located at coordinates 654321. The following individual numbers are assigned to you: 44, 09.

-----  
You are controller with Scout 61. You are located at coordinates 543216. The following individual numbers are assigned to you: 39, 94.

-----  
You are controller with INF 74a. You are located at coordinates 432165. The following individual numbers are assigned to you: 03, 28, 31, 57.

-----  
You are controller with INF 74b. You are located at coordinates 432165. The following individual numbers are assigned to you: 46, 15, 98, 82.

#### BROWN PLAYER IDENTIFICATION CARD

You are controller with Sheridan 53. You are located at coordinates 321654. The following individual numbers are assigned to you: 88, 40.

-----  
You are controller with Sheridan 04. You are located at coordinates 216543. The following individual numbers are assigned to you: 77, 50.

-----  
You are controller with Sheridan 55. You are located at coordinates 165432. The following individual numbers are assigned to you: 84, 27.

-----  
You are controller with TOW 65. You are located at coordinates 673215. The following individual numbers are assigned to you: 54, 07.

-----  
You are controller with TOW 11. You are located at coordinates 567321. The following individual numbers are assigned to you: 05, 23.

-----  
You are controller with Scout 96. You are located at coordinates 732156. The following individual numbers are assigned to you: 13, 26.

-----  
You are controller with Scout 30. You are located at coordinates 321567. The following individual numbers are assigned to you: 38, 56.

-----  
You are controller with Scout 30. You are located at coordinates 215673. The following individual numbers are assigned to you: 66, 73.

-----  
You are controller with INF 25a. You are located at coordinates 632146. The following individual numbers are assigned to you: 69, 51, 75, 89.

-----  
You are controller with INF 25b. You are located at coordinates 632146. The following individual numbers are assigned to you: 52, 87, 99, 71.

**MESSAGE CARDS**  
**(1st COMEX)**

The Message Cards are 3 x 5 inch cards that contain messages for controllers to transmit. They are issued to the appropriate controller by the senior controller. *The message is read verbatim by the controller.* The message on the card is the same as the messages of the "Firer Message" column of the senior controller's schedule. Only one message should appear on each card. The message number in the lower right corner indicates the sequence in which the message should be transmitted. Examples of Message Cards (1st COMEX):

**GREEN 42**

**MESSAGE: SHERIDAN 33 HIT BY TOW 42**

**MESSAGE NUMBER: 3**

**BROWN 81**

**MESSAGE: 18 AND 45 HIT BY INDIRECT FIRE  
AND CONFIRMED**

**MESSAGE NUMBER: 7**

### **MESSAGE CARDS (2nd COMEX)**

The 2nd COMEX Message Cards serve the same purpose as the 1st COMEX Message Cards and are handled the same way. The difference is in the wording. In the 2nd COMEX Message Cards a situation is described that the controller must transmit using **REALTRAIN** RTP instead of reading the message verbatim.

#### **Example of Message Cards (2nd COMEX)**

**BROWN 53**

**MORTAR ROUNDS IMPACT 15 METERS  
TO THE LEFT OF THE TRACK YOU ARE  
WITH. THE TRACK IS "BUTTONED UP"  
BUT CREWMEN 13 & 70 WERE STANDING  
BETWEEN THE IMPACT AREA AND THE  
TRACK.**

**MESSAGE NUMBER: 1**

### **SENIOR CONTROLLER'S SCHEDULE (1st and 2nd COMEX)**

The senior controller's schedule tells each senior controller which controller is supposed to transmit a message, what the controller is to say, which message is to be transmitted, and what the appropriate controller reaction on the other side should be. Both senior controllers must have a copy of the senior controller's schedule. The 1st and 2nd COMEX senior controller's schedules are identical except that the **REALTRAIN** numbers are different.



SENIOR CONTROLLER'S SCHEDULE  
(1st COMEX)

| Controllers | Firer Message   | Message Number | Target Message                 |
|-------------|---|----------------|--------------------------------|
| Green 42    | SHERIDAN 33 HIT BY TOW 42                             | 1              | SHERIDAN 33 CONFIRMED          |
| Brown 02a   | 60 HIT BY 17  | 2              | 60 CONFIRMED (12b)             |
| Brown 48    | SCOUT 92 HIT BY SHERIDAN 48                           | 3              | SCOUT 92 CONFIRMED             |
| Brown 81    | SHERIDAN 37 HIT BY TOW 81                             | 4              | SHERIDAN 37 CONFIRMED          |
| Green 12b   | SCOUT 22 HIT BY LAW 63                                | 5              | SCOUT 22 CONFIRMED             |
| Brown 67    | UNKNOWN PC AT COORD 123456<br>HIT BY SHERIDAN 67      | 6              | TOW 68 CONFIRMED               |
| Green 12a   | 08 HIT BY 93  | 7              | 08 CONFIRMED (02b)             |
| Green 10    | SCOUT 19 HIT BY SHERIDAN 10                           | 8              | SCOUT 19 CONFIRMED             |
| Brown 24    | SCOUT 49 HIT BY TOW 24                                | 9              | SCOUT 49 CONFIRMED             |
| Green 12a   | 32 AND 47 HIT BY INDIRECT<br>FIRE AND CONFIRMED.      | 10             |                                |
| Brown 02b   | SHERIDAN 63 HIT BY LAW 72                             | 11             | SHERIDAN 63 CONFIRMED          |
| Brown 02a   | SHERIDAN 63 HIT BY LAW 83                             | 12             | SHERIDAN 63 CONFIRMED          |
| Green 63    | SHERIDAN 67 HIT BY SHERIDAN<br>63                     | 13             | SHERIDAN 67 CONFIRMED          |
| Brown 97    | APC 12 HIT BY SCOUT 97 20 MM                          | 14             | APC 12 CONFIRMED               |
| Brown 19    | UNKNOWN APC AT COORD<br>567321 HIT BY SCOUT 19 20 MM  | 15             | TOW 24 CONFIRMED               |
| Brown 02a   | 81 HIT BY 62  | 16             | 81 CONFIRMED (12b)             |
| Green 12b   | 72 HIT BY 64  | 17             | 72 CONFIRMED (02b)             |
| Brown 81    | 18 AND 45 HIT BY INDIRECT FIRE<br>AND CONFIRMED       | 18             |                                |
| Green 37    | SHERIDAN 48 HIT BY SHERIDAN<br>37                     | 19             | SHERIDAN 48 CONFIRMED          |
| Green 49    | TOW 81 HIT BY SCOUT 49 20 MM                          | 20             | TOW 81 CONFIRMED               |
| Brown 33    | TOW 42 HIT BY SHERIDAN 33                             | 21             | TOW 42 CONFIRMED               |
| Brown 22    | SCOUT 97 HIT BY SCOUT 22 20 MM                        | 22             | SCOUT 97 CONFIRMED             |
| Green 79    | APC 02 HIT BY SCOUT 79 20 MM                          | 23             | APC 02 CONFIRMED               |
| Green 92    | INF IN WOODLINE COORD 632146<br>HIT BY SCOUT 92 20 MM | 24             | 91, 33, 83, 34 CONFIRMED (02a) |
| Green 12a   | 85 HIT BY 93  | 25             | 85 CONFIRMED (02b)             |
| Green 68    | SHERIDAN 33 HIT BY TOW 68                             | 26             | SHERIDAN 33 CONFIRMED          |
| Brown 02b   | 48 HIT BY 83  | 27             | 48 CONFIRMED (12a)             |

SENIOR CONTROLLER'S SCHEDULE  
(2nd COMEX)

| Controllers | Firer Message   | Message Number | Target Message                 |
|-------------|---|----------------|--------------------------------|
| Green 06    | SHERIDAN 55 HIT BY TOW 06                             | 1              | SHERIDAN 55 CONFIRMED          |
| Brown 25a   | 46 HIT BY 69  | 2              | 46 CONFIRMED (74b)             |
| Brown 53    | SCOUT 86 HIT BY SHERIDAN 53                           | 3              | SCOUT 86 CONFIRMED             |
| Brown 65    | SHERIDAN 95 HIT BY TOW 65                             | 4              | SHERIDAN 95 CONFIRMED          |
| Green 74b   | SCOUT 96 HIT BY LAW 98                                | 5              | SCOUT 96 CONFIRMED             |
| Brown 04    | UNKNOWN PC AT COORD 123456<br>HIT BY SHERIDAN 04      | 6              | TOW 59 CONFIRMED               |
| Green 74a   | 71 HIT BY 57  | 7              | 71 CONFIRMED (25b)             |
| Green 35    | SCOUT 30 HIT BY SHERIDAN 35                           | 8              | SCOUT 30 CONFIRMED             |
| Brown 11    | SCOUT 78 HIT BY TOW 11                                | 9              | SCOUT 78 CONFIRMED             |
| Green 74a   | 28 AND 31 HIT BY INDIRECT<br>FIRE AND CONFIRMED.      | 10             |                                |
| Brown 25b   | SHERIDAN 43 HIT BY LAW 52                             | 11             | SHERIDAN 43 CONFIRMED          |
| Brown 25a   | SHERIDAN 43 HIT BY LAW 75                             | 12             | SHERIDAN 43 CONFIRMED          |
| Green 43    | SHERIDAN 04 HIT BY SHERIDAN<br>43                     | 13             | SHERIDAN 04 CONFIRMED          |
| Brown 41    | APC 74 HIT BY SCOUT 41 20 MM                          | 14             | APC 74 CONFIRMED               |
| Brown 30    | UNKNOWN APC AT COORD<br>567321 HIT BY SCOUT 30 20 MM  | 15             | TOW 11 CONFIRMED               |
| Brown 25a   | 46 HIT BY 87  | 16             | 46 CONFIRMED (74b)             |
| Green 74b   | 52 HIT BY 82  | 17             | 52 CONFIRMED (25b)             |
| Brown 65    | 54 AND 07 HIT BY INDIRECT FIRE<br>AND CONFIRMED       | 18             |                                |
| Green 95    | SHERIDAN 53 HIT BY SHERIDAN<br>95                     | 19             | SHERIDAN 53 CONFIRMED          |
| Green 78    | TOW 65 HIT BY SCOUT 78 20 MM                          | 20             | TOW 65 CONFIRMED               |
| Brown 55    | TOW 06 HIT BY SHERIDAN 55                             | 21             | TOW 06 CONFIRMED               |
| Brown 96    | SCOUT 41 HIT BY SCOUT 96 20 MM                        | 22             | SCOUT 41 CONFIRMED             |
| Green 67    | APC 25 HIT BY SCOUT 61 20 MM                          | 23             | APC 25 CONFIRMED               |
| Green 86    | INF IN WOODLINE COORD 632146<br>HIT BY SCOUT 86 20 MM | 24             | 69, 51, 75, 89 CONFIRMED (25a) |
| Green 74a   | 87 HIT BY 57  | 25             | 87 CONFIRMED (25b)             |
| Green 59    | SHERIDAN 55 HIT BY TOW 59                             | 26             | SHERIDAN 55 CONFIRMED          |
| Brown 25b   | 03 HIT BY 75  | 27             | 03 CONFIRMED (74a)             |



## MESSAGES FOR THE 2nd COMEX

Message No. 1  
Green 06

The TOW you are with sees Sheridan 55 cross over a ridgeline at a range of 1500 meters. The TOW fires and you determine that the Sheridan was hit.

-----

Message No. 2  
Brown 25a

You are following dismounted infantry from the track you are with when they come into contact. Rifleman 69 fires his weapon and calls out "46."

-----

Message No. 3  
Brown 53

The Sheridan you are with sees Scout 86 moving along a treeline at a range of 800 meters and fires at it. You determine that Scout 86 was hit.

-----

Message No. 4  
Brown 65

The TOW you are with sees Sheridan 95 cross over a ridgeline at a range of 1500 meters. The TOW fires and you determine that the Sheridan was hit.

-----

Message No. 5  
Green 74b

You are following some dismounted infantry from your track when they see Scout 96 on a trail about 200 meters away. Rifleman 98 picks up a LAW and fires. You determine that Scout 96 is hit.

-----

Message No. 6  
Brown 04

The Sheridan you are with sees an APC forward of a treeline at a range of 1700 meters but because of sun reflection, the REALTRAIN number cannot be seen. The Sheridan fires and you determine that the APC was hit. You figure that the APC was at coordinates 123456.

-----

Message No. 7  
Green 74a

You are following dismounted infantry from the track you are with when they come into contact. Rifleman 57 fires his weapon and calls out "71."



Message No. 8  
Green 35

The Sheridan you are with sees Scout 30 moving along a woodline at a range of 800 meters and fires at it. You determine that Scout 30 was hit.

-----

Message No. 9  
Brown 11

The TOW you are with sees Scout 78 cross over an exposed ridgeline at a range of 1500 meters. The TOW fires and you determine that the scout vehicle was hit.

-----

Message No. 10  
Green 74a

You are dismounted with two men from the track (28 and 31) when a fire marker drops 3 artillery simulators 20 meters away. You determine that 28 and 31 are casualties.

-----

Message No. 11  
Brown 25b

You are following some dismounted infantry from your track when they see Sheridan 43 on a trail about 75 meters away. Rifleman 52 picks up a LAW and fires. You determine that Sheridan 43 is hit.

-----

Message No. 12  
Brown 25a

You are following some dismounted infantry from your track when they see Sheridan 43 on a trail about 100 meters away. Rifleman 75 picks up a LAW and fires. You determine that Sheridan 43 is hit.

-----

Message No. 13  
Green 43

The Sheridan you are with sees Sheridan 04 cross an open field at a range of 700 meters. Your Sheridan fires and you determine that Sheridan 04 was hit.

-----

Message No. 14  
Brown 41

The scout you are with sees APC 74 moving along a treeline about 200 meters away and fires its 20 mm gun. You determine that the APC was hit.

**Message No. 15**  
**Brown 30**

The scout vehicle you are with sees an APC forward of a treeline at a range of 300 meters but, because of sun reflection, the REALTRAIN number cannot be seen. Your scout fires its 20 mm gun and you determine that the APC was hit. You figure that the APC was at coordinates 567321.

-----

**Message No. 16**  
**Brown 25a**

You are following dismounted infantry from the track you are with when they come into contact. Rifleman 87 fires his weapon and calls out "46."

-----

**Message No. 17**  
**Green 74b**

You are following dismounted infantry from the track you are with when they come into contact. Rifleman 82 fires his weapon and calls out "52."

-----

**Message No. 18**  
**Brown 65**

You are dismounted with two men from the track (54 and 07) when a fire marker drops 3 artillery simulators 20 meters away. You determine that 54 and 07 are casualties.

-----

**Message No. 19**  
**Green 95**

The Sheridan you are with sees Sheridan 53 cross an open field at a range of 700 meters. Your Sheridan fires and you determine that Sheridan 53 was hit.

-----

**Message No. 20**  
**Green 78**

You are with Scout 78 when he sees a TOW track (65) moving along a woodline. Scout 78 fires his 20 mm gun from a distance of 200 meters and you determine that TOW 65 was hit.

-----

**Message No. 21**  
**Brown 55**

The Sheridan you are with sees a TOW track (06) cross over an exposed ridgeline. Your Sheridan fires and you determine that the TOW track was hit.

**Message No. 22**  
**Brown 96**

The scout vehicle you are with sees another scout vehicle (41) moving along a woodline and fires at it with the 20 mm gun. You determine that Scout 41 was hit.

-----

**Message No. 23**  
**Green 61**

The scout vehicle you are with sees APC 25 cross an open field. Your scout fires its 20 mm gun and you determine that APC 25 was hit.

-----

**Message No. 24**  
**Green 86**

The scout vehicle you are with sees dismounted infantry in a woodline about 200 meters away. Neither you nor the scout TC can identify any REALTRAIN numbers. You figure the infantry is at coordinates 632146 and the scout fires its 20 mm gun at the infantry.

-----

**Message No. 25**  
**Green 74a**

You are following dismounted infantry from the track you are with when they come into contact. Rifleman 57 fires his weapon and calls out "87."

-----

**Message No. 26**  
**Green 59**

The TOW you are with sees Sheridan 55 cross over an exposed ridgeline at a range of 1500 meters. The TOW fires and you determine that the Sheridan was hit.

-----

**Message No. 27**  
**Brown 25b**

You are following dismounted infantry from the track you are with when they come into contact. Rifleman 75 fires his weapon and calls out "03."

-----



### CONTROLLER CASUALTY/DAMAGE RECORD (NCS LOG)

**DATE: \_\_\_\_\_ EXERCISE NUMBER: \_\_\_\_\_ RECORDER: \_\_\_\_\_**

**(Rank/Name)**

[illegible]

(The above portion will be filled out *before* the exercise.)

**Time Start:** \_\_\_\_\_

**Time Terminated:** \_\_\_\_\_

### EVENT SEQUENCE RECORD

[illegible]

**EXAMPLE OF A PROPERLY FILLED IN  
CONTROLLER CASUALTY/DAMAGE RECORD (NCS LOG)**

DATE: 12 MAY EXERCISE NUMBER: 1 RECORDER: SP4 SMITH  
(Rank/Name)

| GREEN FORCE: |     |                |    |    |    |    | BROWN FORCE: |     |                |    |    |    |    |
|--------------|-----|----------------|----|----|----|----|--------------|-----|----------------|----|----|----|----|
| Vehicle      |     | Helmet Numbers |    |    |    |    | Vehicle      |     | Helmet Numbers |    |    |    |    |
| Type         | No. |                |    |    |    |    | Type         | No. |                |    |    |    |    |
| 551          | 10  | 50             | 99 |    |    |    | 551          | 48  | 57             | 73 |    |    |    |
| 551          | 63  | 43             | 27 |    |    |    | 551          | 67  | 15             | 46 |    |    |    |
| 551          | 37  | 04             | 85 |    |    |    | 551          | 33  | 69             | 95 |    |    |    |
| TOW          | 42  | 36             | 61 |    |    |    | TOW          | 81  | 18             | 45 |    |    |    |
| TOW          | 68  | 52             | 94 |    |    |    | TOW          | 24  | 40             | 11 |    |    |    |
| 114          | 49  | 75             | 23 |    |    |    | 114          | 22  | 07             | 28 |    |    |    |
| 114          | 92  | 41             | 18 |    |    |    | 114          | 19  | 98             | 35 |    |    |    |
| 114          | 79  | 25             | 88 |    |    |    | 114          | 97  | 76             | 14 |    |    |    |
| 113          | 12  | 48             | 32 | 47 | 93 | 81 | 113          | 02  | 91             | 33 | 93 | 34 | 72 |
|              |     | 60             | 63 | 64 |    |    |              |     | 08             | 85 |    |    |    |
|              |     |                |    |    |    |    |              |     |                |    |    |    |    |

(The above portion will be filled out before the exercise.)

Time Start: 1110

Time Terminated: 1245

**EVENT SEQUENCE RECORD**

| Target  | Firer   | Time of Fire | Time of Confirm | Comments, Notes  |
|---------|---------|--------------|-----------------|------------------|
| SHER 33 | TOW 42  | 1130         | 1130            |                  |
| 60      | 17      | 1155         | 1155            |                  |
| SCT 92  | SHER 48 | 1157         | 1157            |                  |
| SHER 37 | TOW 81  | 1201         | 1203            |                  |
| SCT 22  | LAW 63  | 1205         | 1205            |                  |
| TOW 68  | SHER 67 | 1208         | 1210            | UNK PC At 123456 |



# EVENT SEQUENCE RECORD

(Continuation Sheet)

| Target            | Firer        | Time of Fire | Time of Confirm | Comments, Notes |
|-------------------|--------------|--------------|-----------------|-----------------|
| SET 97            | SET 22(20mm) | 1235         | 1238            |                 |
| APC 02            | SET 79(20mm) | 1238         | 1238            |                 |
| 91, 33,<br>93, 34 | SET 92(20mm) | 1240         | 1240            | INF at 632146   |
| 90                | 93           | 1241         | 1241            |                 |
| SHER 53           | TOW 68       | 1243         | 1243            |                 |
| 48                | 83           | 1244         | 1245            |                 |
|                   |              |              |                 |                 |
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|                   |              |              |                 |                 |
|                   |              |              |                 |                 |
|                   |              |              |                 |                 |



# EVENT SEQUENCE RECORD

(Continuation Sheet)

| Target  | Firer         | Time of Fire | Time of Confirm | Comments, Notes  |
|---------|---------------|--------------|-----------------|------------------|
| 08      | 93            | 1210         | 1210            |                  |
| SCT 19  | SHER 10       | 1211         | 1211            |                  |
| SCT 49  | TOW 24        | 1215         | 1216            |                  |
| 32, 47  | INDIRECT FIRE | 1219         | 1220            |                  |
| SHER 63 | LAW 72        | 1221         | 1221            |                  |
| SHER 63 | LAW 82        | 1223         | 1223            |                  |
| SHER 67 | SHER 63       | 1224         | 1224            |                  |
| APC 12  | SCT 97 (20mm) | 1224         | 1225            |                  |
| TOW 24  | SCT 19 (20mm) | 1226         | 1226            | UNK PC at 567321 |
| 81      | 62            | 1227         | 1228            |                  |
| 72      | 64            | 1230         | 1230            |                  |
| 18, 45  | INDIRECT FIRE | 1232         | 1232            |                  |
| SHER 48 | SHER 37       | 1233         | 1235            |                  |
| TOW 81  | SCT 49 (20mm) | 1235         | 1235            |                  |
| TOW 42  | SHER 33       | 1235         | 1236            |                  |

**(Continuation Sheet)**

[illegible]

**ANNEX F**  
**ARMORED CAVALRY COMBAT VEHICLES**  
**AND WEAPONS SYSTEMS**

The discussion in this section is geared to the standard tactical element configuration of armored cavalry units. An armored cavalry platoon will include a command section, a scout section, an armor section, an infantry section, and a mortar section; however, the particular combat vehicles and weapons systems found in the tactical elements of any given armored cavalry unit may vary between theaters. Individual armored cavalry combat vehicles and their weapons systems are discussed in the paragraphs that follow in terms of how each is outfitted for REALTRAIN training. Control procedures for employment of each type of weapon are also described here.

**A. The M114 Armored Command and Reconnaissance Carrier**

(1) **General:** The M114 armored command and reconnaissance carrier may be found in the command section and/or the scout section of armored cavalry units. When used in an armored cavalry unit, the vehicle is normally equipped with an M139 20 mm gun and an M60 7.62 mm machine gun.

(2) **Controller's Communications:** The controller on an M114 armored command and reconnaissance carrier is normally equipped with an AN/PRC-77 radio. The radio may be used with or without a headset; however, the use of a headset is recommended. In order to use the 10x controller telescope, which is boresighted with the M139 20 mm gun, the controller must ride on top of the M114; therefore, it is recommended that the AN/PRC-77 be worn as a backpack.

(3) **Weapon: M60 7.62 mm Machine Gun**

(a) **Controller Optics:** Controller optics consist of a pair of 6 x 50 binoculars that are used to verify M60 7.62 mm machine gun hits.

(b) **Signature Simulator:** The weapon signature of the M60 7.62 mm machine gun is simulated with the use of a blank firing adapter and blank 7.62 mm ammunition. The controller should ensure, before the start of an exercise, that the blank firing adapter is properly installed on the M60 MG. Hits are assessed during an exercise only if the M60 MG is actually fired.

(c) **Rules of Engagement for the M60 7.62 mm Machine Gun:** The M60 7.62 mm machine gun is a manually fired weapon that may be used for either direct (point) or suppressive fire.



● The rules of engagement for direct fire are as follows:

- The gunner brings the target under fire and fires a six (6) round burst for personnel or a twenty-five (25) round burst for unarmored vehicles.
- The controller observes the target with the aid of 6 x 50 binoculars held at the same level as the M60 machine gun.
- If a hit is verified, the controller transmits over the control net: 27 HIT BY M60 40, 27 HIT BY M60 40, or JEEP 15 HIT BY M60 40, JEEP 15 HIT BY M60 40. (Note: If the controller verifies the hit but is unable to read the target REALTRAIN number, some other means must be used to identify the target. For example, JEEP IN TREE LINE AT 687543 HIT BY M60 40, JEEP IN TREE LINE AT 687543 HIT BY M60 40.)
- The controller with the opposing force locates the target, notifies him that he has become a casualty and transmits on the control net: 27 CONFIRMED, 27 CONFIRMED or: JEEP 15 CONFIRMED, JEEP 15 CONFIRMED.

● The rules of engagement for suppressive fire are as follows:

- The gunner informs the controller of the area that is being placed under suppressive fire.
- The controller identifies the area over the control net, e.g.: M60 40 PLACING SUPPRESSIVE FIRE ON WOODED AREA 200 METERS SOUTH OF HILL 98, M60 40 PLACING SUPPRESSIVE FIRE ON WOODED AREA 200 METERS SOUTH OF HILL 98.
- The controller with the tactical element receiving suppressive fire announces: YOU ARE BEING SUPPRESSED, YOU ARE BEING SUPPRESSED.
- To terminate suppression, the controller with the firing element announces: SUPPRESSIVE FIRE LIFTED, SUPPRESSIVE FIRE LIFTED.

- When the suppressive fire is lifted, the controller where the fire had been placed announces: **YOU ARE NO LONGER BEING SUPPRESSED, YOU ARE NO LONGER BEING SUPPRESSED.**
- The controller with the tactical element receiving suppressive fire announces casualties by transmitting over the control net: **98 HIT BY M60 40 SUPPRESSIVE FIRE, 98 HIT BY M60 40 SUPPRESSIVE FIRE AND CONFIRMED.**

**(d) Damage and Casualty Assessment for the M60 7.62 mm Machine Gun:**  
The M60 7.62 mm machine gun is effective against exposed personnel and unarmored vehicles to a range of 1,100 meters. The gun *must* be fired to inflict casualties. If the weapon misfires, no casualties are inflicted.

- Damage and casualty assessment procedures for direct fire are as follows:

- Exposed troops up to 1,100 meters in range become casualties when they are brought under direct fire. A burst of six (6) rounds is required for each troop declared a casualty.
- A burst of twenty-five (25) rounds will destroy an M151 (jeep) and other unarmored vehicles up to a range of 1,100 meters. All on-board personnel are assessed as casualties.

- Damage and casualty assessment procedures for suppressive fire are as follows:

- Exposed troops who fail to get into the prone position or take cover when they come under suppressive fire are declared casualties.
- While in the prone position, troops may return fire or crawl to a covered position, but if they expose themselves while the gun is firing, they are declared casualties.

#### **(4) Weapon: M139 20 mm Gun**

**(a) Controller Optics:** Controller optics, used to verify M136 20 mm gun hits, consist of a 10x telescope which is mounted on the gun assembly. The 10x telescope is installed as follows:

- Ensure that the gunner's M120 6x telescope located on the left side of the gun assembly is boresighted with the gun.
- Remove the rear peep sight from the gun assembly by removing the two peep sight mounted screws.
- Secure the controller's 10x telescope on the gun assembly with the peep sight mounting screws in the same position where the peep sight is located.
- Have the gunner center the cross hairs in his M120 6x telescope on a target at a range of approximately 1,000 meters.
- Adjust the controller's 10x telescope for azimuth and elevation until its cross hairs are centered on the gunner's target and clamp the 10x telescope into place.

The 10x telescope should be checked whenever possible during an exercise to ensure that its cross hairs are still aligned with the cross hairs in the gunner's M120 6x telescope.

(b) **Signature Simulator:** Blank firing adapters and blank 20 mm ammunition are not currently available for the M139 20 mm gun; however, as an interim procedure M117 Booby Trap Flash Simulators are used to simulate the signature of the weapon. When used, the M117 Booby Trap Flash Simulators must be installed on the M114 combat vehicle prior to the start of the exercise. Procedures for installing the M117 Booby Trap Flash Simulators are as follows:

- Secure a two (2) inch x four (4) inch board across the front of the vehicle on the lower edge of the trim vane.
- Nail M117 Simulators at six (6) inch intervals on the two (2) inch x four (4) inch board.
- Connect trip wires to the M117 Simulators and run the trip wires back through the engine cover handles to the controller's position on the top of the vehicle.

(c) **Rules of Engagement for the M139 20 mm Gun:** The M139 20 mm gun is effective against personnel, crew served weapons and light armored vehicles. Ammunition for the gun is normally HEIT and APIT mix-linked. The gun can be fired in either a single shot, five (5) round burst or automatic mode. The five (5) round burst mode is normally used for REALTRAIN. The rules of engagement for the M139 20 mm gun are as follows:



- The gunner, who is normally the vehicle commander, alerts the crew and the controller by announcing: **20 MIKE MIKE TRACKING.**
- The controller sights through the controller optical system to verify target acquisition.
- When the gunner announces fire, the controller detonates an M117 Booby Trap Flash Simulator to simulate a five (5) round burst.
- If target acquisition was verified, the controller transmits the hit over the control net by announcing: **APC 20 HIT BY 20 MIKE MIKE 13, APC 21 HIT BY 20 MIKE MIKE 13.** (Note: If the target REALTRAIN number cannot be read with the assistance of the controller optics, some other means must be used to identify the target, e.g., **APC AT 687534 HIT BY 20 MIKE MIKE 13, APC AT 687534 HIT BY 20 MIKE MIKE 13.**)
- The controller with the opposing force notifies the tactical element that it has become a casualty and verifies the hit by announcing over the control net: **APC 21 CONFIRMED, APC 21 CONFIRMED, or: APC 18 AT 687534 CONFIRMED APC 18 AT 687534 CONFIRMED.**

**(d) Damage and Casualty Assessment for the M139 20 mm Gun:** The M139 20 mm gun is effective against targets to a range of 1,800 meters. Damage and casualty assessment procedures are as follows:

- Exposed personnel within 10 meters of the impact of a five (5) round burst are declared casualties.
- One five (5) round burst will immobilize a M551 Sheridan, destroy the vehicle's communications and render two (2) crewmen casualties.
- One five (5) round burst will destroy all other unarmored and lightly armored vehicles and render all personnel on board casualties.
- Two five (5) round bursts will destroy a M551 Sheridan and render all personnel on board casualties.

## **B. The M151 ¼-Ton Gun Truck (Jeep)**

(1) **General:** The M151 ¼-Ton Gun Truck may be found in the command section and/or the scout section of armored cavalry units. When used as a combat vehicle in armored cavalry units, the M151 is normally equipped with a pedestal mounted M60 7.62 mm machine gun.

(2) **Controller's Communications:** The controller on a M151 Gun Truck is normally equipped with an AN/PRC-77 radio. The radio may be used with or without a headset; however, the use of a headset is recommended. The AN/PRC-77 radio is normally secured to the back of the front seat on the passenger's side of the vehicle.

(3) **REALTRAIN Procedures for the M60 7.62 mm MG:** See paragraph A(3) of this Annex for the REALTRAIN procedures applicable to the M60 7.62 mm machine gun.

## **C. The M113 Armored Cavalry Assault Vehicle—TOW Equipped**

(1) **General:** The M113 Armored Cavalry Assault Vehicle equipped with the TOW missile and a M2 .50 cal. machine gun may be found in the scout section of armored cavalry units. The TOW missile may be fired from a pedestal mount in the vehicle or dismounted and fired from a tripod mount.

(2) **Controller's Communications:** The controller on a M113 TOW-equipped Armored Cavalry Assault Vehicle is normally equipped with an AN/PRC-77 radio. The radio may be used with or without a headset; however, the use of a headset is recommended. The AN/PRC-77 radio may be secured to the top of the M113 vehicle or worn by the controller as a backpack. Since the controller may be required to dismount from the vehicle, wearing the radio as a backpack is recommended.

### **(3) Weapon: M151 TOW Missile**

(a) **Controller Optics:** Controller optics for the M151 TOW consist of a 10x telescope that is used to verify TOW missile hits. The controllers' 10x telescope is installed as follows:

- Secure the 10x telescope to the mount on top of the gunner's 13x sight.
- Have the gunner center the cross hairs in the 13x sight on a target at a range of approximately 1,500 meters.



- Adjust the controller's 10x telescope for azimuth and elevation until its cross hairs are centered on the gunner's target and clamp the 10x telescope into place.

(b) **Signature Simulator:** The signature of the TOW may be simulated with the use of either the Blast Simulator or a M116 Grenade Simulator. The Blast Simulator is used in conjunction with the missile simulator round (MSR) to prepare the weapon for firing, the firing wires of the Blast Simulator are attached to the two alligator clips located in the rear of the MSR. When the gunner triggers the TOW weapon, the simulator is detonated by electrical current from the TOW system. When the Blast Simulator and the MSR are used, care must be taken to insure that all personnel are clear of the rear of the MSR before the weapon is fired. When the M116 Grenade Simulator is used, the simulator is placed approximately 15 meters to the rear of the weapon. An electric blasting cap is taped to the M116 and connected by claymore wires to a M57 Firing Device at the controller's position adjacent to the weapon. When the gunner gives the fire command, the controller activates the M57 which detonates the electric blasting cap and the M116 Grenade Simulator. Care must be taken before activating the M57 Firing Device to insure that all personnel are clear of the M116 Grenade Simulator which was placed to the rear of the weapon to protect troops from injury by flying debris.

(c) **Rules of Engagement for the TOW Missile:** The TOW missile is a tube launched, optically tracked, wire-guided missile that is classified as a heavy antitank weapon. The rules of engagement for the TOW missile are as follows:

- When the gunner acquires a target with the 13x TOW sight, he announces TRACKING.
- Upon hearing the gunner announce TRACKING, the controller begins to track the target through his 10x telescope, estimates the range to the target and determines the missile's flight time. (The velocity of the TOW missile is 200 meters per second, therefore, missile flight time in seconds = target range [in meters] divided by 200.)
- When the gunner triggers the TOW (or announces FIRE) and the missile signature simulator detonates, the controller starts a countdown of the missile flight time. (If the missile signature simulator fails to detonate, the controller announces MISFIRE.)
- The controller announces, if in his judgment the flight path of the missile was obstructed by vegetation or terrain, MISSILE IMPACTED 200 METERS SHORT OF TARGET.



- At the end of the flight time, if the cross hairs of the controller's 10x telescope are on the target and the flight path of the missile was not obstructed, the controller announces a hit by transmitting on the control net APC 41 HIT BY TOW 76, APC 41 HIT BY TOW 76. (Note: If the target REALTRAIN number cannot be read with the assistance of the controller's 10x telescope, some other means must be used to identify the target; e.g., APC AT 687534 HIT BY TOW 76, APC AT 687534 HIT BY TOW 76.)

(d) **Damage and Casualty Assessment for the TOW Missile:** The TOW missile can hit targets at ranges from 65 to 3,000 meters. Damage and casualty assessment procedures for the TOW missile are as follows:

- Any vehicle hit by a TOW missile at ranges from 65 to 3,000 meters is destroyed and all on-board personnel are declared casualties.
- All exposed troops within 10 meters of a hit vehicle are declared casualties.
- Exposed troops in the TOW backblast zone, which extends to the rear of the weapon through an arc of 90 degrees, are declared casualties.

(4) **Weapon: M2 .50 Cal. Machine Gun:** The M2 .50 cal. machine gun is not recommended for use in engagement simulation exercises at the present, because of problems with the blank firing adapter and blank ammunition. The M60 machine gun is recommended as a substitute weapon, with some modification of the procedures to adjust for the greater lethality and range (0-1,600 meters) of the .50 cal. machine gun. (See paragraph 6A3a, b, and c this chapter for the play of the M60 7.62 mm machine gun as a substitute for the M2 .50 cal. machine gun.)

(a) **Damage and Casualty Assessment for the M2 .50 Cal. MG:** The procedures for direct (point) fire are as follows:

- Exposed troops up to 1,600 meters in range become casualties when they are brought under direct fire. A burst of six (6) rounds is required for each troop declared a casualty.
- A burst of 25 rounds will destroy a M151 (Jeep) and other unarmored vehicles up to a range of 1,600 meters. All on-board personnel are assessed as casualties.

- A burst of 25 rounds up to a range of 600 meters in the flank or rear will destroy a M551 Sheridan or other lightly armored vehicles and render all personnel on-board casualties.

(b) **Damage and Casualty Assessment for the M2 .50 Cal. MG:** The procedures for suppressive fire are the same as the suppressive fire procedures for the M60 7.62 mm machine gun. (See paragraph A(3)(c) this Annex.)

#### **D. The M551 Sheridan Armored Reconnaissance Airborne Assault Vehicle**

(1) **General:** The M551 Sheridan AR/AAV may be found in the armor section of armored cavalry units. The vehicle is normally equipped with a 152 mm gun/launcher, a 7.62 mm coax machine gun, a M2 .50 cal. machine gun and eight turret smoke grenade launchers.

(2) **Controller's Communications:** The controller on an M551 Sheridan AR/AAV is normally equipped with a REALTRAIN communications set that includes an AN/PRC-77 radio and a modified headset kit. Included in the kit is a C-2298 auxillary control box that connects to the loader's C-2298. One earphone of the modified headset is connected through the controller's C-2298 to the vehicle's intercom system. The other earphone is connected with an audio cable to the AN/PRC-77 radio which is strapped to the vehicle's hatch cover. (For safety reasons, the hatch cover is secured in the open position at all times during a REALTRAIN exercise.) The controller can transmit over either the vehicle's intercom system or the AN/PRC-77 radio. A lip microphone connected to the headset is used to transmit over the vehicle's interphone system. A hand-held microphone connected to an AN/PRC-77 is used for radio transmissions.

#### **(3) Weapon: The 152 mm Gun/Launcher:**

(a) **Controller Optics:** Controller optics consist of a 10x telescope that is used to verify 152 mm gun/launcher hits. The 10x telescope is installed as follows:

- Mount and secure a modified missile aft cap with the 10x telescope in the open breech of the 152 mm gun.
- Boresight the 152 mm gun and the gunner's sight. (See FM 17-17 for boresighting procedures.)
- Align the gunner's sight stadia reticle at the 1,200 meter sight line with the cross hairs in the controller's 10x telescope.



The 10x telescope should be checked at regular intervals during an exercise to insure that its cross hairs are properly aligned with the gunner's stadia reticle.

(b) **Signature Simulator:** The weapons signature of the 152 mm gun/launcher is simulated with either a M116 Grenade Simulator or the Hoffman device. Use of the Hoffman device is recommended. The Hoffman device, which is attached to the tube of the 152 mm gun/launcher, is activated by the weapon's electrical system when the gunner fires the weapon. When the M116 Grenade Simulator is used, the controller pulls the arming cord and throws the simulator out the vehicle hatch when the vehicle commander announces FIRE. The Hoffman device should be used whenever available rather than the M116 Grenade Simulator.

(c) **Rules of Engagement for the 152 mm Gun/Launcher:** The 152 mm gun/launcher on the M551 Sheridan AR/AAV will fire either conventional ammunition or the Shillelagh missile. Conventional ammunition includes HEAT, HEP, and BEEHIVE rounds; however, the canister projectile, i.e., BEEHIVE, is not used in engagement simulation and there is no difference in the REALTRAIN procedures for the HEP and HEAT rounds.

- The rules of engagement for the 152 mm gun/launcher when conventional ammunition is used are as follows:
  - The vehicle commander identifies the target, makes initial lay of the gun and alerts the crew by announcing: GUNNER, HEAT (or HEP), TANK.
  - The gunner selects the proper ammunition index, announces IDENTIFIED, and makes the final lay of the gun to acquire the target.
  - The loader moves the safety switch to "safe," simulates loading the round, switches to "ready" and announces UP.
  - The controller observes crew duties to insure proper procedures and verifies target acquisition with the 10x telescope.
  - The vehicle commander commands FIRE.
  - The gunner announces ON THE WAY, pauses one second and fires the Hoffman device.
  - The controller announces TARGET (or senses the round) and immediately transmits over the control net TANK 76 HIT BY SHERIDAN 49, TANK 76 HIT BY SHERIDAN 49.



- Rules of engagement when the 152 mm gun/launcher is used to fire the Shillelagh missile are as follows:

- The vehicle commander identifies the target, makes the initial lay of the gun and alerts the crew by announcing: **GUNNER, MISSILE, TANK.**
- The gunner selects the proper ammunition index, announces **IDENTIFIED** and using the conventional sight announces the range to the target and makes the final lay of the gun to acquire the target.
- The loader moves the safety switch to "safe," simulates loading the missile, switches to "ready" and announces **UP.**
- Controller observes crew duties to insure proper procedures.
- The controller verifies the target acquisition with the 10 x telescope and calculates the time of missile flight. (Time of missile flight in seconds = target range in meters divided by 200.)
- The gunner moves the selector switch to "missile," makes the final lay of the launcher and announces **ON THE WAY.**
- The gunner fires the Hoffman device and continues to track the target.
- The controller checks for terrain interference and starts the missile flight time countdown. (Terrain interference within the first second will result in missile impact.)
- If the gunner is on target the last three seconds of the missile flight time countdown, the controller announces **TANK 10 HIT BY SHILLELAGH 80, TANK 10 HIT BY SHILLELAGH 80.**

(d) **Damage and Casualty Assessment for the 152 mm Gun/Launcher:** The damage and casualty assessment procedures for the 152 mm gun/launcher are the same for both conventional ammunition and the Shillelagh missile. The damage and casualty assessment procedures are as follows.

- One hit to a range of 3,000 meters will destroy any vehicle and render all personnel on-board casualties. Exposed personnel within 50 meters of a hit vehicle are also declared casualties.

- One hit to a range of 3,000 meters will destroy a bunker and render all personnel inside and all exposed personnel within 50 meters casualties.
- One hit to a range of 3,000 meters will destroy any crew-served weapon position and render all personnel within 10 meters casualties.

(4) **Weapon: The 7.62 mm Coax Machine Gun:** Blank firing adapters and blank ammunition are not available for the 7.62 mm coax machine gun; however, the M60 7.62 mm machine gun can be substituted for the coax. When using the M60 MG as a substitute weapon, the unused antenna mount plate cover located on the turret of the M551 is removed and replaced with an M60 mount that is fabricated by the TASO. See paragraph A(3) this Annex for the REALTRAIN procedures for the M60 7.62 mm MG.

(5) **Weapon: The M2 .50 Cal. Machine Gun:** The M2 .50 cal. machine gun is not recommended for use in engagement exercises at present because of problems with the blank firing adapter and blank ammo. The M60 7.62 mm machine gun is recommended as a substitute weapon. See paragraph A(3) this Annex.

(6) **Weapon: Turret Smoke Grenade Launchers:** Turret smoke grenade launchers are not played in engagement simulation because of safety problems.

E. **The M60 Tank:** The M60 Tank may be found in the armor section of the platoon and/or in the tank company of the squadron. The REALTRAIN equipment requirements and control procedures for this system, which are similar to those for the M551, are given in Part II, Chapter 4, of this TC.

#### F. The M113 Armored Cavalry Assault Vehicle

(1) **General:** The M113 ACAV is a special purpose self-contained fighting unit that may be found in the command section and/or the scout sections of armored cavalry units. It is a light weight vehicle that can operate over adverse terrain. The M113 ACAV may be equipped with a M139 20 mm gun and two side-mounted M60 7.62 mm machine guns or an M2 .50 cal. machine gun and two side-mounted M60 7.62 mm machine guns.

(2) **Controller Communications:** Controller communications for the M113 ACAV are the same as the controller communications for the M114 armored command and reconnaissance carrier. See paragraph A(2) this Annex.



(3) **Weapon: The M139 20 mm Gun:** See paragraph A(4) this Annex.

(4) **Weapon: The M60 7.62 mm Machine Gun:** See paragraph A(3) this Annex.

#### **G. The M106 Armored Mortar Carrier**

(1) **General:** The M106 Armored Mortar Carrier is a modified M113 Armored Personnel Carrier. The M106, which may be found in the mortar section of armored cavalry units, is normally equipped with the M30 107 mm mortar and a M2 .50 cal. machine gun. The M30 107 mm mortar, which is a crew-served weapon, may be fired from on board the M106 or set up and fired as a dismounted weapon. (See TC , Indirect Fire Procedures for a discussion of the M30 107 mm mortar REALTRAIN procedures.)

(2) **Controller Communications:** The two controllers, i.e., the senior mortar controller and the assistant mortar controller, are normally equipped with one AN/PRC-77 radio. It is desirable but not absolutely essential that the mortar controllers also be provided with an AN/GRA-39 remote for use in case the controller's radio interferes with the mortar's radio.

(3) **Weapon: M2 .50 Cal. Machine Gun:** See paragraphs A(3) and D(5) this Annex.



## **ANNEX G**

### **USING REALTRAIN IN A PROGRAM OF UNIT TRAINING— A SAMPLE PLAN FOR ARMORED CAVALRY UNITS**

#### **Foreword**

The basic Training Circular document, and the first six annexes to it, give detailed instructions on how to conduct REALTRAIN field exercises in armored cavalry units. The team that developed this engagement simulation (ES) training guidance has prepared the present annex or supplement to the basic guide on the conduct of REALTRAIN for armored cavalry to help the user program several ES training exercises together. It illustrates (by example) how one might go about planning unit ES training to have more definite aims and purposes, and how to gather better information on how well the training is producing the desired results. It outlines a process that tries to strike a balance between the need for program structure in order to manage, and the need for program flexibility in order to encourage learning.

This supplement traces through a series of actions the training manager might perform as he prepares for and uses REALTRAIN field exercises to develop desired unit skills and knowledge. Training managers to whom this is directed will be squadron or troop officers. Relatively little attention is given here to administrative and logistics support, including routine preparations for REALTRAIN. These topics are fully covered in the body of the Training Circular.

## **Planning and Execution of Tactical Training by REALTRAIN**

Planning and implementation of REALTRAIN training is accomplished in five steps as follows:

1. Initial (or updated) training diagnosis.
2. Stating overall training objectives.
3. Programming training activities and acquiring support.
4. Execution and management of exercises, making training decisions and modifying the program as needed.
5. Assessing unit training status at the end of the program in relation to objectives.

These steps are developed in greater detail below.

### **1. Establish Training Needs**

Training needs for a given unit are based on best estimates of its present training status, in relation to all of the knowledge and skills the unit should possess in order to perform its basic missions. Required knowledge and skills can be inferred from descriptions of reconnaissance and security missions found in FM 17-95, cavalry ARTEP documents, and other sources. This supplement will use examples based on a regimental troop and platoon TO&E.

Probable training needs are deduced from squadron or troop records and training schedules, and from discussions with unit personnel. Training managers will want to consider the experience of individuals to be trained, their recent training, etc. Considering all these factors, the manager should establish training needs that represent *critical* deficiencies. These may be needs for collective training by squads and sections, or needs at the level of platoons which, of course, will involve basic squad and section proficiency as well as coordination of squads and sections within the platoon.

To give a concrete example of how a training manager might approach diagnosis of needs, consider the case of a troop commander who reviews his unit records, talks to his platoon leaders and senior NCOs, and comes up with the following series of facts or opinions.

- a. There has been a considerable personnel turnover since the last period of field training involving full platoons. In the meantime, observation of classroom sessions indicate a general lack of awareness of principles of maneuver coordination. Also, the training manager has been informed by cadre NCOs that they question the land navigation skills of the junior men who are new to the unit.
- b. In the last set of unit exercises, tactical reporting was very sparse, and reports were generally inadequate in content, leading to the need for much radio traffic in order to clarify. Troops have had remedial instruction (in garrison) on proper reporting procedures but have not demonstrated the results in a field exercise context.
- c. Recent use of the Dunn-Kempf game by platoon leaders showed deficiencies in understanding and employment of overwatch. In addition, records show that in the last live-fire exercise, coordination of fires and reaction times to surprise targets were marginal.
- d. Records show that the present set of platoon leaders have not in the recent past conducted any exercises which used organic mortar fire.
- e. One of the platoon leaders was critiqued severely in his last ARTEP for poor formation of a plan based on his mission assignment and OPORD. Several of the section leaders across all platoons are new to their jobs and their ability to plan, and instruct subordinates about the plan, is a big question mark.
- f. Elements of two of the troop's platoons (1st and 3rd) were critiqued during their last ARTEP evaluation on their conduct of screening operations for bunching up, moving too fast, and disregarding the use of covered and concealed routes.

This troop commander could proceed from this point to develop a REALTRAIN plan for training which involves only his own personnel and other assets. However, he has coordinated his training goals with his squadron S-3 shop, and has been told that a tank company commander wishes to give some of his elements experience with combined arms operations. Supported by the S-3, our troop commander meets with this officer to review joint training needs, and they settle on the following training interests or needs on the part of the tank unit command group. (The squadron commander is found to be very supportive of the idea of having the cavalry troop and the tankers cooperate in training.)



- a. Many tankers have not recently been to the field with infantry. The commander of the squadron tank company wonders if they can work together effectively to bridge the armor-infantry tactical gap.
- b. The tankers involved are unfamiliar with the use of indirect fire, and tend to try to "do it all" with their main guns in field exercises.
- c. Another aspect of uncertainty about armor-infantry collaboration is whether the armor platoon leaders, who would be the team leaders, will make their plans in a way that is understood by infantry squad leaders.

Given these needs and interests, the two commanders—armored cavalry troop and tank company—decide to go to the field for REALTRAIN. The entire cavalry troop will participate for about two weeks; however, the tankers can only field one platoon (supported by infantry) for a few days due to other duties. This will be reflected in the training schedule—but first, training objectives for the participating units must be established.

## 2. Establish Training Objectives

Now, the manager must convert *needs* to statements of desired improvements, or *objectives*. Training objectives in REALTRAIN provide guidance for *emphasis* in the training program. They do not cover every aspect of training, since REALTRAIN is not highly controlled, and thus permits learning of skills not referred to in the objectives. The manager's training objectives stem from his initial training diagnosis. It will be assumed that for the objectives stated, units can profit from experience and practice in carrying out one or more major missions prescribed for an armored cavalry platoon. In other words, performing a tactical mission in REALTRAIN is the way to provide training related to the pre-selected objectives.

Below are given examples of training objectives. These are so stated that their achievement can be determined by judgments based on field observations, information available from controllers and the NCS, and from the After-Action Review. These sample objectives are geared to platoon-level operations, which is about the highest level organization that can use REALTRAIN. They are based on the examples of diagnosed needs listed in the previous section, and are stated in terms of actions that can be directly observed, or whose effectiveness in the exercise will show up in mission accomplishment indicators.

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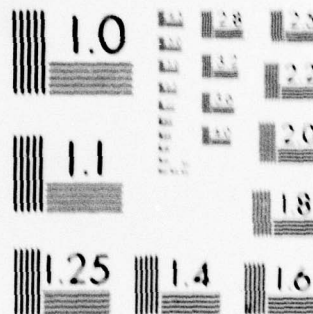
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First, a list of objectives for the cavalry units is shown.

- a. On a given reconnaissance mission, units acquire the information called for by the frag order. Intra-platoon activities are efficiently coordinated to accomplish the reconnaissance mission on time, while maintaining unit capability to react effectively to enemy contact.
- b. Reconnaissance information is transmitted to higher headquarters without delay and following closely a clear, complete message format as recommended by unit SOP.
- c. Platoons will select bounding overwatch as the movement technique, in accordance with an estimate of enemy contact as "likely" in all frag orders. Any elements taken under fire will have an overwatching element in position to engage the enemy and/or promptly call for indirect fire on the enemy.
- d. Direct fire weapon capabilities will be supplemented by using long-range indirect fires throughout exercises. Calls for fire will be properly formulated, and targets will be accurately located by elements calling for fire.
- e. Subordinate leaders will carry out their own TLP rapidly and effectively, so that all troops are aware of the mission and their assigned functions.
- f. In security operations, platoon elements will cover extended fronts (up to 2 kilometers). Elements will use natural cover and concealment in moving at prescribed rates of advance. Static positions will maximize observation range.

These objectives were presented to the tank company commander, who reviewed them in light of his interests and needs. He adopted "c" and "d" as his own primary training focuses. He was secondarily interested in training toward Objective "e", while Objectives "a," "b," and "f" are of marginal interest to him.

### **3. Establishing a Training Activity Sequence and Acquiring Support**

After the training managers and/or commanders have defined a set of training objectives, the next step is to establish the sequence in which the training to accomplish these objectives will be conducted. This forms the basis for selecting unit missions and mission pairings for

each exercise, so that the free-play contests between forces will produce learning in a natural progression of steps. Naturally, the scope and nature of this activity sequence will dictate a set of support requirements which must then be obtained.

Two main considerations about the training objectives enter into decisions on the sequence of training:

- a. The progression of training should start with a focus on simpler skills, and lead up to more complex skills, for each unit.
- b. The skills areas covered by only one or two objectives should be the focus of training early in the sequence. Later, exercises should require units to "put it all together."

To some degree, these considerations will not affect basic mission preferences as much as they will bear on specific control procedures and observations of performance within a mission. Because REALTRAIN is a free-play method of training, there is no guarantee that any particular type of unit performance will or will not be called for by the developing action. However, the stress placed on different areas of performance can be controlled to some extent, and, of course, the After-Action Review can be shaped to give particular attention to selected tactical lessons.

With reference to the objectives being used as examples here, a sequence of training, such as the following, might be established.

#### **Cavalry Units**

- a. Mini-Exercise Phase: Two days allotted. Training will focus on:
  - (1) Reporting (Objective "b") for scout elements.
  - (2) Overwatch (Objective "c") for light armor.
  - (3) Mortar squad will conduct separate training, with one fire marker, firing simulated missions, practicing displacement, etc.
- b. Platoon Exercise Phase: Six days allotted. The order of emphasis on objectives is:  
  
Days 1-2: Basic formations, especially overwatch (Objective "c"), the troop-leading procedures (Objective "e").  
  
Days 3-4: Reporting of battlefield information (Objective "b"), and thorough reconnaissance (Objective "a").



**Day 5-6:** Operations involving extensive deployment (Objective "f"), use of indirect fire (Objective "d"), *plus* all of previous skills areas. In these final exercises, each of two cavalry platoons goes against the combined arms force on successive days.

#### **Combined Arms Team**

a. **Mini-Exercise Phase:** Two days allotted. Training emphases are:

- (1) **Armor-to-Infantry** plan communication (Objective "e").
- (2) **Coordination of infantry-tank movements** (Objective "d").

b. **Platoon Exercise Phase:** Two days allotted.\* Training objectives are sequenced:

**Day 1:** Objectives "c" and "e."

**Day 2:** Objectives "c," "d" and "e."

The sequence of attention to the various training objectives can now be related to suitable armored cavalry missions. REALTRAIN involves free-play engagements between two opposing forces. Since both forces are being trained, training objectives established apply to both. Hence, two steps are involved:

**First:** selection of a mission (for each force) that will address the objective(s) in sequence, and

**Second:** matching up missions assigned to *each side* in each exercise, in mission pairs, to cause each force to use skills appropriate to the stated objectives.

Since cavalry units are assigned two major types of missions, reconnaissance and security, the first choice is between these types.

The general reconnaissance mission is further subdivided into three types: area reconnaissance, zone reconnaissance, and route reconnaissance. All three of these missions require many of the same skills at or below the armored cavalry platoon level. Hence, selection of one or another reconnaissance mission subtype is often made on such bases as:

---

\*These are Days 5-6 of the cavalry platoon sequence above.



- avoiding repetition of mission types, to sustain unit interest and motivation; and
- tailoring unit activities to specific terrain opportunities, specific control procedures to be employed, etc.

Security missions typically employ armored reconnaissance platoons as screens. Screens, however, may move or they may occupy static positions. Selection of a moving *versus* a static mission calls on different skills, and this choice should be guided by training objectives.

To follow through on our example here, the cavalry troop commander has established the sequence in which training objectives will be addressed. He next selects missions suitable for emphasizing relevant performance areas at each step. This could take the following form:

#### **Mini-Exercise Mission Structure**

**Task Organization:** Each of two platoons forms into two teams. One team consists of the light armor section, the infantry squad and two scout vehicles. The remaining scouts make up the other team. The third platoon furnishes controller personnel.

**Missions:** The scout team of each platoon is given a reconnaissance mission (zone or route). The armor-infantry scout team is given an opposing movement to contact (MTC) mission. These are assigned by means of appropriate frag orders.

**Concept of Training:** Senior controllers with the two teams primarily observe techniques of maneuver in the MTC force, stress reporting in the scout force. The platoon leader may accompany either force. Any difference the platoon leader's presence makes in actions of the force he is with is noted. On one or more of the mini-exercises, the platoon leader may be withdrawn from the play, and allowed to observe from the senior controller's perspective.

#### **Platoon-Level Exercise Mission Structure**

**Task Organization:** TO&E cavalry platoons. Two platoons train, one furnishes REALTRAIN controllers.

#### **Missions:**

- Day 1**      - 1st platoon—Route Recon (Medium Threat)  
                 3rd platoon—MTC
- Day 2**      - 1st platoon—MTC  
                 3rd platoon—Zone Recon (Medium Threat)
- Day 3 (AM)** - 1st platoon—Area Recon  
                 3rd platoon—Flank Screen (Stationary)  
                 (PM) - Reverse of above
- Day 4**      - Both platoons—MTC/Hasty Attack or repeat previous  
                 exercise for remedial purposes, extra diagnosis.
- Day 5**      - 1st platoon—Maintenance, remedial training  
                 3rd platoon—Covering force  
                 CA Team—MTC
- Day 6**      - 1st platoon—Covering force  
                 3rd platoon—Maintenance, remedial training  
                 CA Team—Defend/Delay

**Concept of Training:** A detailed training plan, such as the following illustrative plan for Day 5 will be prepared for each exercise. Observations by senior controllers focus on performance indicators included in the plan for each day. Day 4 is designated as elective. MTC missions will be conducted if training has progressed satisfactorily, or a (modified) previous exercise will be repeated if remedial training is needed.

These planning elements and training concepts are next brought down to a concrete schedule of operations. Detailed instructions on how to prepare for REALTRAIN, administratively and logistically, appear in the Training Circular. In terms of our specific example, however, we show here a training schedule worked out between the cavalry troop commander and his tanker counterpart.

#### **4. Executing and Managing the Training Program**

This section describes a method for a training *manager* to use to adapt the training program content and sequence to the unit performance strengths and weaknesses as these show up in successive exercises. This management function would most naturally be performed by the unit (troop) commander, assisted by the senior controllers (if the commander is not a senior controller). *Training management should not be a one-person job.* The person with primary responsibility should consult with other unit leaders to get their inputs on unit capabilities and recommendations for training decisions.



# REALTRAIN TRAINING SCHEDULE

| Day                      |    | T                            | T+1                                    | T+2  | T+3  | T+4                              | T+7                                |
|--------------------------|----|------------------------------|--|--|--|----------------------------------|------------------------------------|
| Armored Cavalry Platoons | AM | RT Indoctrination (Garrison) | Move to Range                          | Mini-Exercises                                     |  | Cavalry Platoon Level Training   |                                    |
|                          | PM | Controller Tng. (Garrison)   | Controller Tng. (Hands-On)             | Cav. Plt. Sections<br>versus<br>Cav. Plt. Sections | Cav. Plt. Sections<br>versus<br>Cav. Plt. Sections | Cav. Plt.<br>versus<br>Cav. Plt. | Cav. Plt.<br>versus<br>Cav. Plt.   |
| Combined Arms Team       | AM | RT Indoctrination (Garrison) | No Participation By Combined Arms Team |  |  |                                  | Move to Range                      |
|                          | PM | No Participation             |  |  |  |                                  | Refresher Training and Maintenance |

| Day                      |    | T+8  | T+9  | T+10                             | T+11                             |
|--------------------------|----|--|--|----------------------------------|----------------------------------|
| Armored Cavalry Platoons | AM | Cavalry Platoon Training                     |  | Cavalry & Combined Arms Training |                                  |
|                          | PM | Cav. Plt.<br>versus<br>Cav. Plt.             | Cav. Plt.<br>versus<br>Cav. Plt.             | Cav. Plt.<br>versus<br>Cav. Team | Cav. Plt.<br>versus<br>Cav. Team |
| Combined Arms Team       | AM | Mini-Exercises                               |  | Cavalry & Combined Arms Training |                                  |
|                          | PM | CA Team Section<br>versus<br>CA Team Section | CA Team Section<br>versus<br>CA Team Section | Cav. Plt.<br>versus<br>CA Team   | Cav. Plt.<br>versus<br>CA Team   |

NOTE: T+5 and T+6 fall on a weekend. No training will be conducted on these dates.



## **EXERCISE PLAN**

### **1st Platoon versus CA Team Platoon, Day 5**

#### **1. Exercise Objectives (Linked to Program Training Objectives)**

##### **A. Cavalry Unit (Green)**

- (1) Platoon overwatch techniques while maneuvering provide rapid, effective reaction to enemy direct fires. (Objective "c.")
- (2) Platoon maintains contact with squadron headquarters, and keeps squadron informed of the developing situation. (Objective "b.")
- (3) Platoon uses indirect fire to support maneuver. (Objective "d.")

##### **B. Combined Arms Team (Brown)**

- (1) Upon contact, overwatching fires are accurate and prompt. (Objective "c.")
- (2) Infantry-armor elements are well coordinated during operation. (Objective "e.")

#### **2. Unit Task Organizations**

##### **A. Cavalry Platoon—Regimental TO&E**

- B. Combined Arms Team—**One tank platoon (5 tanks), one mechanized infantry squad. Notional 155 mm artillery in GS. FO assigned to unit.

#### **3. Unit Missions**

- A. Cavalry Platoon—**Flank screen (as part of covering force) on right flank of a CA force moving to contact. (Frag order attached.)

- B. Combined Arms Team—**MTC. (Frag order attached.)

#### 4. Fixed Control Conditions

See attached map for exercise area outline. Cavalry platoon will move N-S along an axis centered on Route Black. LD/LC will be Route Blue. Phase lines Joe, Bob, Arthur and Louie as shown, with coordination points. Their AA will be vicinity (coordinates) and will be occupied NLT 0730.

Combined arms force will occupy an AA vicinity of the high ground at (coordinates). They will move into that position and be briefed one hour before LD time for the cavalry unit. They will be assigned an axis which will direct them to the west and north along the western boundary, to conceal their eventual destination from the cavalry unit.

#### 5. Variable Control Conditions

For the cavalry platoon, a message will be sent from squadron headquarters when they have crossed PL Bob informing them of suspected enemy activity vicinity of 472073 to their flank. After they have traveled approximately 500 meters further, indirect fire will kill the vehicle in which the forward scout section leader is riding.

For the combined arms team, phase lines with NLT times will force the pace of their forward movement to insure early contact between forces.

#### 6. Performance Indicators

Senior controllers and the training manager should focus attention on unit performance capability in the following areas, in order to judge training progress.

##### A. Cavalry Platoon

| Skills Areas (Objective)    | Key Performance Elements  |
|-----------------------------|---|
| Thorough reconnaissance (2) | As speed of movement permits, scouts move laterally to recon suspected enemy locations. DF and IDF weapons used to recon by fire when appropriate. Check response to message at PL Bob.               |
| Reporting (2)               | Situation reports are consistent with SOP. All phase lines and coordination points should be reported as crossed/reached. SPOTREP/SHELREP on pre-planned kill of scout leader checked for timeliness. |
| Use of overwatch (3)        | Use of bounding techniques on march. Response to information at PL Bob in terms of frag orders, redeployment to recognize threat. Use of covered/concealed routes.                                    |



**A. Cavalry Platoons (Cont'd)**

| <b>Skills Areas (Objective)</b> | <b>Key Performance Elements</b>  |
|---------------------------------|--|
| Use of indirect fire (4)        | Location of mortar; use for long-range engagement, smoke, recon by fire.   |
| Planning proficiency (5)        | Thoroughness of initial plan. Adherence to plan by all elements. Any changes in plan during exercise are communicated, acted upon. |
| Extended operations (6)         | Speed, security of movement. Coordination of movement. PL positioned for control, knows where his forces are continuously.         |

**B. Combined Arms Team**

| <b>Skills Areas (Objective)</b> | <b>Key Performance Elements</b>  |
|---------------------------------|--|
| Use of overwatch (3)            | Elements deployed to minimize losses on contact, maximize firepower on probable enemy locations encountered. Use of IF at/beyond main gun range. |
| Planning proficiency (5)        | Plan allocates tasks properly to armor and infantry. Both armor and infantry follow plan, respond to changes in plan.                            |

(NOTE: Section 6, "Performance Indicators," could be reproduced separately as an observation guide for controllers in the exercise.)



**Information and Orders to be Given to Platoon Leader,  
Third Platoon, C Troop, 3/339 Armored Cavalry  
at 0630, Day 5**

**1. Situation:**

a. **Background:** Two days ago, XX Corps, of which we are a part, achieved a penetration of the enemy's main battle area. Elements of XX Corps, to include TF 1/115 Armor (a combined arms battalion-sized task force to which C Troop is attached), have advanced for the past 36 hours against little or no resistance. You are just completing a halt for refueling and rest and are receiving your instructions for the continued exploitation.

b. **Enemy:** The enemy is rapidly redeploying theatre reserves to contain our penetration and we can expect contact with them sometime today. These will probably be elements of the Fifteenth Combined Arms Army which had been taken out of the line for refitting and replacements and was about ready to be recommitted. They will be well-equipped, trained and rested and have a large proportion of battle-experienced veterans among them. While their air elements were suppressed during our penetration, they have been built up, while ours are dispersed by the area of the exploitation, so they do have the capability of air strike or recon in this area. Assume all aircraft to be hostile.

c. **Friendly:** TF 1/115 has been assigned the mission of seizing bridges at Townville on the Wet River to our south. It is the extreme right flank element of the extended salient of the penetration. The TF is advancing rapidly by multiple routes and C Troop is to screen that advance, preventing enemy reconnaissance units from penetrating to the main force and forcing deployment of any attacking elements. Artillery is with TF 1/115 but short on ammo so screening activities cannot expect priority fires.

**2. Mission:** Third Platoon is to screen along route Black from route Blue to phase line Louie. (Route Black is the right flank route of the TF.)

**3. Execution:**

a. **Concept of Operation:** Third Platoon will cross route Blue at 0830, advance south on route Black and be on phase line Louie NLT 1200. Reconnaissance will be thorough enough to detect enemy scout units, which are to be destroyed. You will force larger elements to deploy and be prepared to support an attack, to defend or withdraw on order.

b. **Coordinating Instruction:** Report passage of all phase lines. Unit SOP and CEOI in effect.

**c. Essential Elements of Information:**

- (1) What enemy forces are operating in the vicinity of route Black? (Number, type, organization identity?)
- (2) What appears to be their intention? (Attack, defend, delay, recon?)
- (3) What is the condition of route Black?

**d. Supplies and Service: Unit SOP**

**Information and Orders to be Given to  
Combined Arms Team Leader at 0730, Day 5**

**1. Situation:**

a. **Background:** You are an element of the 500th Tank Regiment of the Fifteenth Combined Arms Army, which has been resting and refitting in theatre reserve. Two days ago, the Imperialist forces US XXth Corps achieved a breakthrough of our main battle area and since then have been ravaging and pillaging in our rear areas. Fifteenth Combined Arms Army has been brought up to contain the penetration. You are in an assembly area after marching from the reserve area.

b. **Enemy:** The Yankee soldiers are now widely dispersed and vulnerable to a sharp, sudden attack. Just such a gang of robbers, in combined arms battalion strength, is immediately to our north and advancing rapidly south. They have an armored cavalry screen which must be penetrated to get at the main force. They are well equipped and trained and have high morale. The enemy Air Force has achieved local supremacy and we must assume all aircraft to be hostile.

c. **Friendly:** Five Hundredth Tank Regiment attacks at 0830. Third Company, of which you are a part, attacks on the axis shown on the overlay (each platoon's axis also shown) to destroy enemy forces on route Black. The 250th Artillery Regiment is in direct support and an FO of that regiment will accompany your platoon.

**2. Mission:** Attack on axis as shown to secure Objective 1.

**3. Execution:**

a. **Concept of Operation:** Third Company attacks with three platoons abreast (two flank platoons notional) on axis shown. Use rapid bounding overwatch. If you establish contact with the armored cavalry screen, neutralize or destroy them quickly if you can with indirect or long-range direct fire and bypass them if not. Fourth Company (notional) following in the second wave, will take care of them. Cross LD at 0830, other phase lines NLT times shown on overlay and be on Objective 1 NLT 1200. Be prepared to continue attack.

b. **Coordinating Instructions:** Report passage of all LD, phase lines and arrival on objective. Report if unable to meet any phase line time. Unit SOP and CEOI in effect.

c. **Supplies and Services:** Unit SOP.



As has been stated, it is assumed that the *mechanics* of REALTRAIN are not a problem, and that exercises fulfill all the basic requirements of engagement simulation methods as described in the Training Circular text.

The training manager should set up a simple but organized framework for maintaining a daily record of indicators of unit performance relative to the stated training objectives for the exercise. A suggested sample format to organize day-by-day performance observations is given in Form A, which follows.

The utility of this (or a similar) format for recording unit performance observations as a management tool can be illustrated by the following worked-out example, which is tied in with the other sample materials in this Annex. You will recall that a previous example was given of a daily training plan (for the first exercise involving the combined arms team as well as a cavalry platoon). It was noted also in that section that the training manager should develop such a plan for every exercise. The example which follows involves a performance analysis, on Form A, of the actions of both platoons on the *second* exercise of the platoon phase of training. The training plan for that day is not shown, but it involved Movement to Contact and Zone Reconnaissance missions for the two cavalry units, with a focus on basic formations and planning procedures. (The objectives are shown on the summary sheets.) Third Platoon showed major deficiencies in terrain appreciation, primarily in effectiveness of overwatching fields of fire. The casualty record and AAR discussion brought out that overwatching M551s should have destroyed four enemy vehicles, but due to poor placement they were only able to take one APC under effective fire. Therefore, the next day's plan will be modified to increase emphasis on overwatching fires, and a remedial terrain ride will be conducted in the interim.

The Performance Summary for First Platoon shows some deficiencies in communication of battlefield information, but these are not deemed to be serious enough to warrant modification of the plan. However, remedial counseling of leaders on planning and reporting is given in the evening prior to the next exercise.

The *original* plan for the following day (Day 3) is shown next, followed by an illustration of how the troop commander would modify and adjust that plan based on the Form A record from Day 2. In this case, no real major changes were required, but some minor adjustments were made to the exercise control process, to sharpen its relevance to unit training needs. Similar uses would be made of each day's performance records.

FORM A

DAILY TRAINING MANAGEMENT PERFORMANCE SUMMARY

Exercise No. \_\_\_\_\_ of \_\_\_\_\_

Date: \_\_\_\_\_

(check one) ☐ Green Force: Composition: \_\_\_\_\_ Mission: \_\_\_\_\_  
☐ Brown Force: Composition: \_\_\_\_\_ Mission: \_\_\_\_\_

List each exercise objective below. (Use back if necessary.) Note pertinent aspects of performance for each objective, as you or others observed them, or as they were recorded and discussed in the AAR.

Training Objective 1: \_\_\_\_\_

Performance Description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Training Objective 2: \_\_\_\_\_

Performance Description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Training Objective 3: \_\_\_\_\_

Performance Description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Summary of Major Deficiencies: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Program Action Recommendation (check one)

- ☐ Continue program unchanged  
☐ Continue program with the following modifications

Immediate remedial training actions or recommendations: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Other Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Prepared by: \_\_\_\_\_ Reviewed by: \_\_\_\_\_



FORM A

DAILY TRAINING MANAGEMENT PERFORMANCE SUMMARY

Exercise No. 2 of 6

Date: Mon - 7 August

(check one) ☐ Green Force: Composition: \_\_\_\_\_ Mission: \_\_\_\_\_  
☒ Brown Force: Composition: 3rd Platoon Mission: Zone Recon

List each exercise objective below. (Use back if necessary.) Note pertinent aspects of performance for each objective, as you or others observed them, or as they were recorded and discussed in the AAR.

Training Objective 1: Use bounding overwatch effectively

Performance Description: Overwatch functions had good fields of fire for covering planned routes. Overwatch effective in only 1 of 4 encounters, where an enemy APC was knocked out.

Training Objective 2: Translate OPORD into good, clear plan

Performance Description: All done! Situation well described, clearly described to sub, follow up questions. Good use of checkpoint reference system.

Training Objective 3: Conduct recon IAW OPORD, planning + coord.

Performance Description: Recon. thorough recon, most items that should have been were reported. SSG Early made 3 map reading errors in 5 reports, all of more than 200 meters.

Summary of Major Deficiencies: Poor terrain appreciation in overwatch with collection. SSG Early! map reading.

Program Action Recommendation (check one)

- ☐ Continue program unchanged  
☒ Continue program with the following modifications

Immediate remedial training actions or recommendations: Took terrain ride w/ LT Higgins and NCOs to point out poor overwatch sites. Stress overwatch tomorrow.

Other Comments: This is not typical performance for SSG Early. Says he doesn't feeling well, but OK now. Watch him tomorrow.

Prepared by: H. Harris, 1LT, XO

Reviewed by: K. Starnes  
CPT, CDR



FORM A

DAILY TRAINING MANAGEMENT PERFORMANCE SUMMARY

Exercise No. 2 of 6

Date: Mon - 7 Aug

(check one) ☒ Green Force: Composition: 1st Platoon Mission: MTC  
☐ Brown Force: Composition: \_\_\_\_\_ Mission: \_\_\_\_\_

List each exercise objective below. (Use back if necessary.) Note pertinent aspects of performance for each objective, as you or others observed them, or as they were recorded and discussed in the AAR.

Training Objective 1: Use bounding overwatch effectively

Performance Description: 3 kills by overwatching elements out of 4 opportunities. Only 1 was hit when SGT Jones' scout section did not follow planned route.

Training Objective 2: Translate OPORD into good, clear, plan

Performance Description: LT Smith's plan well conceived but explanation was too brief. He didn't check to see if it was understood and SGT Jones didn't understand.

Training Objective 3: Conduct recon IAW OPORD planning & coord.

Performance Description: Reporting not given high enough priority - about half of reportable items not reported. Did not adjust search plan after SGT Jones' position was killed.

Summary of Major Deficiencies: Breakdown in communication between LT Smith and SGT Jones. Inadequate reporting.

Program Action Recommendation (check one)

☒ Continue program unchanged

☐ Continue program with the following modifications

Immediate remedial training actions or recommendations: LT Smith counseled on clearer presentation of orders, check for understanding. Review version of ops w/ all NCOs after supper on reporting requirements.

Other Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Prepared by: H. Harris, 1LT, XO Reviewed by: K. Spence  
CPT, CDR

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## **ORIGINAL EXERCISE PLAN**

### **Platoon Exercise Phase, Day 3, AM**

#### **1. Exercise Objectives**

- A. Platoons demonstrate ability to conduct a thorough reconnaissance in accordance with the OPORD.**
- B. Platoons demonstrate sound use of terrain, cover, concealment and search techniques to detect and avoid detection.**
- C. Platoons demonstrate accurate, complete reporting in accordance with unit SOP.**
- D. Platoons continue to demonstrate proper use of basic formations, particularly over-watch, and sound troop leading procedures.**

#### **2. Unit Task Organization: Two TO&E Armored Cavalry Platoons**

#### **3. Unit Missions**

- A. First Platoon—Area reconnaissance, as part of notional squadron reconnaissance mission. (Frag order attached.)**
- B. Third Platoon—Stationary flank screen as part of notional squadron mission to provide Division security. (Frag order attached.)**

#### **4. Fixed Control Conditions**

Exercise area boundaries as shown on overlay (Range Map A; 1:50,000). Platoons RON in assembly areas as shown. Third Platoon leader is given order for stationary flank screen one hour before BMNT, screening to be effective ½ hour after BMNT. Screening sector and phase lines shown on overlay. First Platoon leader is given order at BMNT for area reconnaissance (area identical to that containing screen), reconnaissance to commence one hour after



BMNT, reconnaissance to be completed by 1200. Checkpoints and phase lines established as means of control. A troop TOC is established to serve as higher headquarters to both platoons.

**5. Variable Control Conditions**

- A. Each platoon leader will be given an intelligence report of air surveillance one hour after BMNT.
  - (1) First Platoon will be told of Third Platoon's movement into exercise area and up to screen position.
  - (2) Third Platoon will be told of enemy mechanized and armor at First Platoon's location.
- B. Senior controllers will, after first contact, arrange for a "defector" (intelligence specialist from Squadron S-2 section) to surrender to the other side with documents and information of urgent but very limited time value.

**6. Senior controllers will focus attention on unit performance capability in the following areas:**

- A. Thorough reconnaissance—Do the elements of the platoon have plans and coordination to insure that entire area is covered without redundancy or confusion? Is this accomplished?
- B. Use of terrain, cover, concealment and search techniques. Is the screening force situated to detect the enemy early, avoid detection and do responsibilities and methods of search provide complete, efficient non-overlapping coverage of the area?
- C. Is required information reported in a timely manner, in complete, correct format? In particular, what information was reported as a result of the defector?
- D. Do the platoons use formations and tactics suitable to the mission, terrain and threat? In particular, what use was made of the reported locations of the opposing force?



**Information and Fragmentary Order to be Given to  
First Platoon Leader at 0542 (½ Hour Before BMNT), Day 3, AM**

**1. Situation**

a. **Background:** Twenty-ninth Division, to which the squadron is attached, has moved into Boondock to assist in protecting the country's border after revolution in a neighboring country and formation there of an aggressive Peoples' Republic of Ruritania. A task force, which includes C Troop, has been directed to determine what overt Ruritanian presence may exist in the border province of Outer Wayback, where we are now located.

b. **Enemy:** The Ruritanian Army has major armor and mechanized forces located in its neighboring province of Over Dere which can cross the border into the largely unoccupied and completely undefended territory of Outer Wayback. These would be modern, well-trained forces, largely equipped with U.S. equipment and many of them trained in the U.S. We have hopes that some of them with that background may defect to our side when given the opportunity and could be very useful to us.

c. **Friendly:** C Troop has been directed to extend reconnaissance from the present limit of U.S. activity, PL Miller (which is the LD for this exercise) to the Ruritanian border, PL Bud, on the overlay. Third Brigade is occupying the area to the south of PL Bud and can reinforce in 24 hours, but other than that, there are no friendly units in the area. We are dependent on our organic indirect fire weapons.

**2. Mission:** First Platoon will conduct reconnaissance in zone.

**3. Execution**

a. **Concept of Operation:** Reconnaissance activity north of PL Miller will commence 0630 (stay out to avoid confusing aerial reconnaissance before that period). Second Platoon (notional) will be on right and Third Platoon (notional) on left. You should have extended your reconnaissance to the border (PL Bud) by 1200. On no account is anyone to cross PL Bud. Be prepared to set up surveillance operations along Bud. Emphasis is on information. While you may engage any Ruritanian forces in Boondock, you should seek to avoid detection and especially decisive engagement. Be sure your reconnaissance is thorough as any Ruritanian presence, however slight, is important.

A2

**b. Coordinating Instructions:**

- (1) Report passage of all phase lines
- (2) No fires are to be placed across PL Bud. Any indirect fires within 1,000 meters of PL Bud require brigade approval.
- (3) Current SOI and CEOI in effect.

**c. Essential Elements of Information:**

- (1) What enemy forces in the area?
- (2) What are their activities?

**4. Service/Support: Defectors/POWs to be evacuated through Troop CP, WY 012345.**



**Information and Fragmentary Order to be Given to  
Third Platoon Leader at 0512 (One Hour Before BMNT), Day 3, AM**

**1. Situation**

a. **Background:** You are a member of the Army of the Peoples' Republic of Ruritania, which aspires to overthrow the government of neighboring Federation of the Boondocks. The Boondockians have, however, gotten U.S. assistance, including a U.S. division to help protect their borders. A decision has been made to test this force with a take over of the remote and presently unoccupied province of Outer Wayback (whose border is shown as phase line Red on your overlay). This will be done with an attack scheduled to begin at dawn tomorrow, 25 hours from now and reconnaissance elements have been ordered to take up screening positions across the border on PL Purple to prevent observation of the movement to the border.

b. **Enemy:** There has been no U.S. presence as of yesterday in Outer Wayback, though they could move in at any time. The Boondockian constabulary and population has fled the border area. U.S. forces are dedicated, well-trained and equipped much as ourselves. We have sympathizers among the Boondockian elements who would accompany them and, therefore, should be alert to receive any such defectors.

c. **Friendly forces:** This troop is to screen the deployment of the Fifteenth Mechanized Rifle Division into attack formation along PL Red. They will pass through our lines at 0600 tomorrow morning. However, we can not expect any support from them in maintaining our screen. First Platoon (notional) on your left, Second Platoon (notional) on your right.

**2. Mission:** Establish screen on PL Purple NLT 0630. No enemy elements to be permitted to penetrate to PL Red.

**3. Execution**

a. **Concept of Operation:** Third Platoon will make maximum use of terrain, cover, concealment, long-range direct fires and organic indirect fires to disperse and destroy enemy reconnaissance forces ahead of PL Purple. Delay and alternate defense position will be established and used as necessary to prevent any enemy penetration to PL Red.

b. **Coordinating Instructions:**

(1) **Radio silence (listening watch) south of PL Red until first contact with U.S. elements.**



(2) Report any penetration of PL Purple.

(3) Current SOP and CEOI in effect.

c. **Essential Elements of Information:**

(1) What U.S. forces are in the area?

(2) What are their activities?

4. **Supplies and Services: Detainees and POWs to be evacuated to Troop CP at WY 012345.**

## EXERCISE PLAN WITH FIELD MODIFICATIONS FROM DAY OBSERVATIONS

### Platoon Exercise 3, Day 3, AM

#### 1. Exercise Objectives

- A. Platoons demonstrate ability to conduct a thorough reconnaissance in accordance with the OPORD.
- B. Platoons demonstrate sound use of terrain, cover, concealment and search techniques to detect and avoid detection.
- C. Platoons demonstrate accurate, complete reporting in accordance with unit SOP. *1st Platoon*
- D. Platoons continue to demonstrate proper use of basic formations, particularly overwatch, and sound troop leading procedures. *Overwatch in 3rd Platoon takes enemy under fire at maximum range,*

#### 2. Unit Task Organization: Two TO&E Armored Cavalry Platoons

#### 3. Unit Missions

- A. First Platoon—Area reconnaissance, as part of notional squadron reconnaissance mission. (Frag order attached.)
- B. Third Platoon—Stationary flank screen as part of notional squadron mission to provide Division security. (Frag order attached.)

#### 4. Fixed Control Conditions

Exercise area boundaries as shown on overlay (Range Map A; 1:50,000). Platoons RON in assembly areas as shown. Third Platoon leader is given order for stationary flank screen one hour before BMNT, screening to be effective ½ hour after BMNT. Screening sector and phase lines shown on overlay. First Platoon leader is given order at BMNT for area reconnaissance (area identical to that containing screen), reconnaissance to commence one hour after

*arrive how  
all they  
have out  
with dark.*

*Force LT Smith to  
formulate & communicate  
his plan on map room*



BMNT, reconnaissance to be completed by 1200. Checkpoints and phase lines established as means of control. A troop TOC is established to serve as higher headquarters to both platoons.

#### 5. Variable Control Conditions

*if 3rd plt breaks radio silence, place 1st plt & 2nd plt in offending radio location (unsubstantiated intercept)*  
Each platoon leader will be given an intelligence report of air surveillance one hour after BMNT.

- (1) First Platoon will be told of Third Platoon's movement into exercise area and up to screen position. *(General area only, include that they necessarily stopped there.)*
- (2) Third Platoon will be told of enemy mechanized and armor at First Platoon's location. *(On crossing PL Miller)*

B. Senior controllers will, after first contact, arrange for a "defector" (intelligence specialist from Squadron S-2 section) to surrender to the other side with documents and information of urgent but very limited time value.

C. *If 1st Platoon maneuver doesn't force it, direct 3rd plt to drop back to 1st delay positions at 1030.*

6. Senior controllers will focus attention on unit performance capability in the following areas:

*Note: Low level 3rd plt would be able to select and occupy positions in dark or near dark.*  
Thorough reconnaissance—Do the elements of the platoon have plans and coordination to insure that entire area is covered without redundancy or confusion? Is this accomplished? *Especially how well LT Smith organizes & explains division of recon tasks.*

B. Use of terrain, cover, concealment and search techniques. Is the screening force situated to detect the enemy early, avoid detection and do responsibilities and methods of search provide complete, efficient non-overlapping coverage of the area? *How close? when, how detected?*

C. Is required information reported in a timely manner, in complete, correct format? In particular, what information was reported as a result of the defector?

D. Do the platoons use formations and tactics suitable to the mission, terrain and threat? In particular, what use was made of the reported locations of the opposing force?

*Especially quality of overwatch when 3rd plt shifts to alternate or delay position.*



Information and Fragmentary Order to be Given to  
First Platoon Leader at 0542 (~~1/2~~ Hour Before (BMNT)), Day 3, AM  
0612

1. Situation

a. Background: Twenty-ninth Division, to which the squadron is attached, has moved into Boondock to assist in protecting the country's border after revolution in a neighboring country and formation there of an aggressive Peoples' Republic of Ruritania. A task force, which includes C Troop, has been directed to determine what overt Ruritanian presence may exist in the border province of Outer Wayback, where we are now located.

b. Enemy: The Ruritanian Army has major armor and mechanized forces located in its neighboring province of Over Dere which can cross the border into the largely unoccupied and completely undefended territory of Outer Wayback. These would be modern, well-trained forces, largely equipped with U.S. equipment and many of them trained in the U.S. We have hopes that some of them with that background may defect to our side when given the opportunity and could be very useful to us.

c. Friendly: C Troop has been directed to extend reconnaissance from the present limit of U.S. activity, PL Miller (which is the LD for this exercise) to the Ruritanian border, PL Bud, on the overlay. Third Brigade is occupying the area to the south of PL Bud and can reinforce in 24 hours, but other than that, there are no friendly units in the area. We are dependent on our organic indirect fire weapons.

2. Mission: First Platoon will conduct reconnaissance in zone.

3. Execution

a. Concept of Operation: Reconnaissance activity north of PL Miller will commence 0630 (stay out to avoid confusing aerial reconnaissance before that period). Second Platoon (notional) will be on right and Third Platoon (notional) on left. You should have extended your reconnaissance to the border (PL Bud) by 1200. On no account is anyone to cross PL Bud. Be prepared to set up surveillance operations along Bud. Emphasis is on information. While you may engage any Ruritanian forces in Boondock, you should seek to avoid detection and especially decisive engagement. Be sure your reconnaissance is thorough as any Ruritanian presence, however slight, is important.

*Be sure T Smith grasps that  
this means no recon only!*

*Some very  
important warnings  
in here. Did they get  
passed on? Ask 1-2  
element leaders before  
they mount up.*

b. Coordinating Instructions:

- are the  
passing on?*
- (1) Report passage of all phase lines
  - (2) No fires are to be placed across PL Bud. Any indirect fires within 1,000 meters of PL Bud require brigade approval.
  - (3) Current SOI and CEOI in effect.

c. Essential Elements of Information:

- (1) What enemy forces in the area?
- (2) What are their activities?

4. Service/Support: Defectors/POWs to be evacuated through Troop CP, WY 012345.

*Were troops alerted to  
this possibility?*



**Information and Fragmentary Order to be Given to  
Third Platoon Leader at 0512 (One Hour Before BMNT), Day 3, AM**

**1. Situation**

a. **Background:** You are a member of the Army of the Peoples' Republic of Ruritania, which aspires to overthrow the government of neighboring Federation of the Boondocks. The Boondockians have, however, gotten U.S. assistance, including a U.S. division to help protect their borders. A decision has been made to test this force with a take over of the remote and presently unoccupied province of Outer Wayback (whose border is shown as phase line Red on your overlay). This will be done with an attack scheduled to begin at dawn tomorrow, 25 hours from now and reconnaissance elements have been ordered to take up screening positions across the border on PL Purple to prevent observation of the movement to the border.

b. **Enemy:** There has been no U.S. presence as of yesterday in Outer Wayback, though they could move in at any time. The Boondockian constabulary and population has fled the border area. U.S. forces are dedicated, well-trained and equipped much as ourselves. We have sympathizers among the Boondockian elements who would accompany them and, therefore, should be alert to receive any such defectors.

c. **Friendly forces:** This troop is to screen the deployment of the Fifteenth Mechanized Rifle Division into attack formation along PL Red. They will pass through our lines at 0600 tomorrow morning. However, we can not expect any support from them in maintaining our screen. First Platoon (notional) on your left, Second Platoon (notional) on your right.

**2. Mission:** Establish screen on PL Purple NLT 0630. No enemy elements to be permitted to penetrate to PL Red.

**3. Execution**

a. **Concept of Operation:** Third Platoon will make maximum use of terrain, cover, concealment, long-range direct fires and organic indirect fires to disperse and destroy enemy reconnaissance forces ahead of PL Purple. Delay and alternate defense position will be established and used as necessary to prevent any enemy penetration to PL Red.

b. **Coordinating Instructions:**

(1) Radio silence (listening watch) south of PL Red until first contact with U.S. elements.

*Did this get  
passed on?  
How well  
disseminated?*



(2) Report any penetration of PL Purple.

(3) Current SOP and CEOI in effect.

c. **Essential Elements of Information:**

(1) What U.S. forces are in the area?

(2) What are their activities?

4. **Supplies and Services:** Detainees and POWs to be evacuated to Troop CP at WY 012345.

*↑ Were troops alerted to this possibility?*

##### **5. Program-Based Integration of Information to Assess Unit Training Status**

At the end of the two-week segment of programmed REALTRAIN exercises such as described here, the entire set of documents collected in the course of the program execution should be reviewed and integrated to provide a basis for planning individual and/or unit training in garrison, local training areas, and/or the next series of engagement simulation exercises at a platoon level. A suggested format for integrating several days' work of information for this purpose is given in the following Form B, which has been filled in by the troop commander for our example (a blank copy is also included for the reader's use). The highlights of all of the Daily Training Performance Summaries are collected and entered on this Program Summary. This is an extremely useful document for planning purposes, and the entries on the example are much too brief to do it justice. In actual practice, a training manager would probably list one or two pages of specific training requirements under each section heading. A combination of individual and collective training activities to meet these requirements would then be planned and scheduled.



FORM B  
PROGRAM-BASED TRAINING DIAGNOSTIC SUMMARY

Unit: Troop C 3/7 Cav

Date: 15 August

Prepared by: H. Harris, 1LT, XO

PLATOON LEVEL: MAJOR DEFICIENCIES AND PROPOSED ACTIONS

1st Platoon: Still deficient in use of meters while maneuvering. Reporting improved greatly in frequency, but not discipline.  
Training Recommendations: Conduct squad practice drills in garrison with command. Review need for timely info.

2nd Platoon: Probably a gap in control he details that the men generally had questions about them. Lines and discipline.  
Training Recommendations: Review use of flow, lines and other means of coordination in garrison. Make this objective in next REALTRAIN.

3rd Platoon: Disobedience on radio for controlling elements, especially Captain radio discipline.  
Training Recommendations: Review SOP with unit leaders. Drill on non-radio control in next REALTRAIN by simulating malfunction.

SQUAD/SECTION LEVEL: MAJOR DEFICIENCIES AND PROPOSED ACTIONS

(Identify specific squads/sections if appropriate)

1 PCT master squad - show day. Give drill. Ambush in 3rd PCT very weak in PT technique; should drill on these.

INDIVIDUAL/CREW LEVEL: MAJOR DEFICIENCIES AND PROPOSED ACTIONS

(Identify specific individuals or crews if appropriate)

Sgt Roberts TOC crew in 3rd PCT doesn't understand primary/alternate firing positions, and to shoot and report. Platoon leader as section leader should review, take them on lesson ride before next FEX.



**FORM B**  
**PROGRAM-BASED TRAINING DIAGNOSTIC SUMMARY**

Unit: \_\_\_\_\_

Date: \_\_\_\_\_

Prepared by: \_\_\_\_\_

**PLATOON LEVEL: MAJOR DEFICIENCIES AND PROPOSED ACTIONS**

1st Platoon: \_\_\_\_\_

Training Recommendations: \_\_\_\_\_

2nd Platoon: \_\_\_\_\_

Training Recommendations: \_\_\_\_\_

3rd Platoon: \_\_\_\_\_

Training Recommendations: \_\_\_\_\_

**SQUAD/SECTION LEVEL: MAJOR DEFICIENCIES AND PROPOSED ACTIONS**

(Identify specific squads/sections if appropriate)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**INDIVIDUAL/CREW LEVEL: MAJOR DEFICIENCIES AND PROPOSED ACTIONS**

(Identify specific individuals or crews if appropriate)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_