

Change 1

Headquarters
Department of the Army
Washington, DC, 14 September 2006

MK 19, 40-mm GRENADE MACHINE GUN, MOD 3

1. Change FM 3-22.27, 28 November 2003 as follows:

Remove old pages:

Contents
5-39 through 5-40
Glossary

References
Index

Insert new pages:

Contents
5-39 through 5-40
Glossary
New Appendix J: J-1 through J-18
References
Index
Insert behind DA forms:
MK 19, 40-mm Advanced Crew
Gunnery; DA Form 7580-R
through DA Form 7587-R
(Gunnery Tables 1-8)

2. A star (*) marks new or changed material.
3. File this transmittal sheet in front of the publication.

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By Order of the Secretary of the Army:
Official:



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FIELD MANUAL
NO. 3-22.27

HEADQUARTERS
DEPARTMENTS OF THE ARMY
WASHINGTON, DC, 14 September 2006

MK 19, 40-mm GRENADE MACHINE GUN, MOD 3

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*This publication supersedes FM 23-27, 27 December 1988.

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PREFACE

This manual discusses how to train the unit to use the MK 19, 40-mm grenade machine gun, model (MOD) 3, referred to in this manual as the MK 19. This manual highlights mechanical training, weapon capabilities, and gunnery principles, methods, techniques, and standards that apply to the MOD 3. It also includes preliminary gunnery, a gunnery skills test, gunnery tables, and qualification tables. If this information conflicts with an applicable technical manual (TM), revised TM, or TM update, the crew will follow the guidance in the most recently published document.

The primary audiences for this manual are soldiers, trainers, and staff officers. Units can modify the gunnery program to meet local training restraints. Although the gunnery tables are intended for use with live fire, trainers can use the tactical engagement simulator system (TESS), a video disc trainer (VDT), a multipurpose arcade combat simulator (MACS), or other training device, except on qualification tables.

In all cases, units must evaluate their training to ensure that it follows the building-block principle and adheres to sound training policy. Only a crew that is trained and does well in preliminary gunnery exercises is likely to do well in live-fire exercises (LFX) and in combat situations.

*This publication applies to the Active Army, the Army National Guard (ARNG)/Army National Guard of the United States (ARNGUS), and the United States Army Reserve (USAR) unless otherwise stated.

The proponent for this publication is United States Army Training and Doctrine Command (TRADOC). Send comments and recommendations to the U.S. Army Infantry School doctrine@benning.army.mil or on a DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Commandant, U.S. Army Infantry School, ATTN: ATSH-ATD, Fort Benning, Georgia 31905-5593.

*Chemical, biological, radiological, and nuclear (CBRN) now replaces, nuclear, biological, chemical (NBC), throughout this manual.

Unless this manual states otherwise, masculine nouns and pronouns do not refer exclusively to men.

shadows and dispersion of light past this distance however, visibility is poor even with illumination.

b. The AN/TVS-5 can be mounted on the MK 19 and used effectively to spot and adjust rounds to targets out to ranges of 800 meters. Past this range, the elevation of the scope on the gun is too high to see the impact of the rounds, so it can be handheld by an observer who calls out adjustments to fire.

***5-15. FIRING IN A CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND NUCLEAR ENVIRONMENT**

Firing the MK 19 during chemical, biological, radiological, and nuclear (CBRN) conditions is no different than firing in normal conditions. Wearing the protective mask during firing does not change the way the gunner sights and aims the MK 19 to engage targets. The assistant gunner should take care to avoid catching his clothes or gloves while feeding ammunition. The gunner should also avoid contact with the hot barrel.

5-16. FIRING IN FOG OR SMOKE

Neither the degraded conditions of fog or smoke change the way the gunner fires the MK 19. The only limitations are observation of rounds and adjustment onto targets. The use of predetermined fires, trip flares, PEWS, or forward observers can cut down on these limitations.

Section V. PREDETERMINED FIRES

Predetermined fires are planned to cover target areas such as enemy avenues of approach, likely sites for enemy guns, and probable enemy assault routes. Laying the MK 19 on predetermined targets by either of the following methods may be verified by firing the MK 19 and adjusting it on target.

5-17. T&E MECHANISM METHOD

When the MK 19 is laid on target in the primary sector, the direction and elevation is taken from the traversing bar and the T&E mechanism. Both direction and elevation, as well as the range to each target, are recorded on the range card. Each target in the sector of fire must be numbered and laid on in sequence.

5-18. FIELD-EXPEDIENT METHOD OF LAYING THE MK 19

Another method for laying the MK 19 on predetermined targets is to use field expedients (Figure 5-29). Field expedients must be used in the secondary sector, and consist of aiming and base stakes. They can be used in the primary sector to aid the gunner.

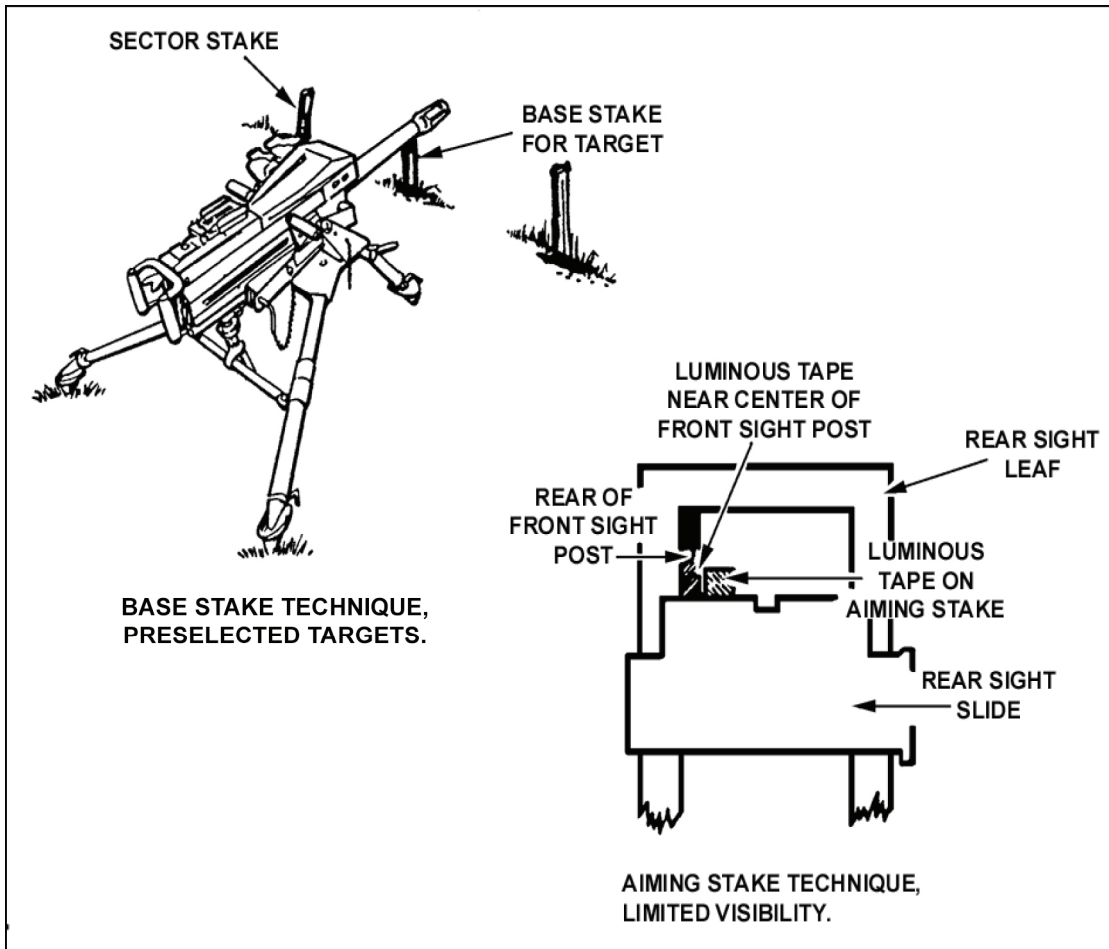


Figure 5-29. Techniques for laying the MK 19 using field-expedient method.

*APPENDIX J
*ADVANCED CREW GUNNERY

There are nine tables used to train MK 19 individual gunners and gun crews. Used for day or night practice and qualification, each table contains columns for tasks, conditions, standards, required time and ammunition, crew tasks, and scores. The T (trained), P (needs practice) U (untrained) rating system is used as table scoring standards. Commanders dictate the level of MOPP used during advance crew gunnery exercise. At a minimum, the mask and gloves will be worn.

J-1. GUNNERY TABLES

Gunnery tables are designed to develop and test the proficiency of individual, crew, section, and platoon gunnery techniques. The series of engagements and tasks in each table are intended to duplicate typical battlefield tasks under realistic firing conditions.

a. **Collective Training.** MK 19 40-mm grenade machine gun crew gunnery combines probable fighting scenarios against a likely array of targets for crews, sections, and platoons in one collective firing iteration. The tables test individual gunner skills, leader fire control, and driver/loader maneuverability. Skills are developed through a series of collective tasks that grade the coordinated performance of individuals as a team.

b. **Common Crew Tasks.** Common crew task training is the first level of collective training. These tasks hone the basic technical collective skills needed by the crew to accomplish the wartime mission.

c. **Battle Drills.** Critical tasks are called battle drills. Battle drills are mostly independent of METT-TC and require minimal leader actions to execute.

d. **Leader Tasks.** Leader tasks incorporate the combination of leader responsibilities pointed out in squad and platoon battle drills, Chapter 3 (para 3-1) of ARTEP 7-90 MTP, and in ARTEP 7-91 DRILL.

J-2. COLLECTIVE TASKS

Following are collective tasks that should be incorporated into MK 19 crew qualification tables according to individual unit METLs and SOPs.

- a. **Common Crew Tasks:**
 - Tactical movement.
 - Occupy battle position.
 - Load/reload MK19 MG.
- b. **Leader Tasks:**
 - Fire commands.
 - Fire control.
 - Situational reports/CBRN 1 reports.
- c. **Critical Crew Tasks:**
 - React to contact.
 - Break contact.
 - Vehicle mounted CBRN procedures.
 - Identify targets (enemy/friendly).

J-3. TRAINER/EVALUATOR GUIDELINES

Because the MK 19 40-mm crew qualification table is conducted on a multipurpose range complex (MPRC), marking firing positions may be necessary. Roads must be marked during night-firing exercises with luminous tape or chem lights. Commanders may use target signature devices such as the Hoffman device, LA06, LA07, and chem lights. No more than one device should be used for target signature purpose. Though commanders have the ultimate authority regarding alibis, target signature device failure does not qualify. The following support requirements are recommended when conducting the mounted crew qualification.

- a. Minimum evaluators (evaluators will not assist the gunner in finding or identifying targets).
 - One evaluator with stop watch per section and squad.
 - Two evaluators in the range tower with stop watch to record scores on engagements.
- b. Opposing forces: None.
- c. Support troops: None.
- d. Vehicles/communicators:
 - One AN/PRC-119 or ASIP radio per section and squad evaluator.
 - Two AN/PRC-119 or ASIP radios for the tower evaluators (one primary, one alternate).
 - Two frequencies (one for the tower and section evaluator, and one for the machine gun section, squad, or platoon).
- e. Maneuver area: Multipurpose range complex/MK 19 range.
- f. Firing area: Smoke may be used.
- g. Training aides, devices, and special equipment:
 - Mk 19.
 - Mk 19 bore detection device.
 - Mk 19 rounds extractor.
- h. Ammunition:
 - Mk 19.
 - Mk 19 TPT rounds 160 rounds per iteration.
 - 5.56 120 blank per iteration (for blank fires).
 - 5.56 120 ball per iteration (for live fires).
- i. Two artillery simulators per iteration.
- j. Night fire:
 - Chem lights for marking firing points.
 - NVGs for gunners, drivers, and section/SQD leaders.
 - AN/PEQ-2A mounted on the TWS mounting bracket.
 - AN/PAS-13 mounted on the TWS mounting bracket.
 - AN/TVS-5 upgraded with the 3d generation tube mounted on the TWS bracket.

J-4. ENGAGEMENT STANDARDS

Engagement standards consist of task and subtask standards. Crews must meet task standards to succeed in scenario engagements. Each task standard comprises a

combination of critical, leader, and noncritical subtask standards. Critical subtasks must be accomplished to meet engagement task standards. Leader and noncritical subtasks support the engagement task. The task standards apply to every engagement. Figure J-1 shows engagement evaluation criteria for crew gunnery.

T GO	On all task standards.
NO GO	No more than one NO GO on a noncritical subtask standard.
P GO	On all task standards. On all critical subtask standards.
NO GO	On one or more leader subtask standards. OR on two or more noncritical subtask standards.
U NO GO	On one or more task standards. OR on one or more critical subtask standards.

Figure J-1. Criteria for evaluating crew gunnery engagements.

a. **Targets.** All stationary targets should be mounted on pop-up mechanisms (see FM 17-12-7 to facilitate target acquisition and scoring). Moving targets should be presented at speeds between 24 and 32 kmph (15 to 20 mph). HMMWV gunnery tables incorporate various targets. Figure J-2 defines targets as PCs (BMP, BTR, BRDM), trucks, RPG teams, bunkers, and troops. Commanders and range-operation personnel must make sure targets are constructed to correct dimensions.

Target Type	Standard Target
Frontal BMP	M-1
Flank BMP	M-2
Frontal BRDM	M-5
Flank BRDM	M-6
Frontal BTR	M-11
Frontal truck	L-1
Flank truck	L-2
Troops	L-6, L-7, L-9

Figure J-2. Target definitions.

b. **Target Lift Mechanisms.** When target-lift mechanisms are used, a hit target may fail to fall. To prevent down-time when targets do not fall, the control officer or vehicle crew evaluator (VCE) should observe every round fired. To avoid wasting ammunition when this occurs, the control officer or VCE will announce a sensing of "KILL, KILL, KILL" over the control net. This is the only situation in which an Internet sensing should be announced by anyone other than the firing crew. Targets should be physically scored, patched, and (when feasible) repaired as quickly as possible if they fail to drop when hit.

c. **Target Malfunctions.** When a target malfunctions the crew will be alerted after the engagement. Based on the availability of targets, a replacement target may be represented immediately, or from another location at a later time. In either case, the target type and conditions for that target must be met. Alternate engagements may also be provided when a moving target fails.

J-5. TARGET TYPES

a. **Point targets.** An RPG team consists of three stationary Infantry targets (SIT) in the open with full and half silhouettes displayed in a tactical array using both width and depth. A vehicle target will appear as a flank or frontal silhouette. Stationary point targets should be mounted on separate target-lift mechanisms set on KNOCK DOWN mode of operation.

b. **Area targets.** Area targets will appear as 5 to 15 SITs in the open with full and half silhouettes displayed in a tactical array using both width and depth. The silhouettes will be placed no more than 5 meters apart or 10 meters in depth. Target areas will be defined as one target form up, down, left, or right of any target in the array.

c. **Civilians on the battlefield (COB)/friendly targets.** Noncombatant targets may consist of any number of silhouettes dispersed in a small group. These targets can be wrapped in civilian shirts painted with colors that depict civilian attire. Or they can be life-size digital photos affixed to plywood cutouts. All noncombatant/friendly targets will be placed within the range fans and capabilities of the weapon systems. Friendly forces will be marked in accordance with the firing unit's SOP. Identification methods can include VS-17 panels, thermal reflective tape, battlefield reference marking system (BRMS), and infrared (IR) strobe lights.

J-6. TARGET SIGNATURE DEVICES

a. The commander may use target signature devices (such as the Hoffman device, LA06, or LA07). However, no more than one device will be used for target signature purposes. When used, at least 5 seconds of target exposure time must elapse before the device is detonated or activated. Target signature device failure is not a valid alibi. The LA06 and LA07 should be used on targets that would mount a larger weapon type such as tanks, PCs, trucks, and bunkers. The allocation of the LA06 and LA07 in STRAC should match the amount of targets mentioned, but this may not always be the case. When this discrepancy occurs, the commander and master gunner will decide which targets will receive the devices.

- The LA06 is a flash/bang device used to simulate a large caliber weapon being fired (replacing the Hoffman device).
- The LA07 is a star cluster-type device used to show target hits. This manual uses the LA07 as a target destruction signature device. The star cluster signature can be seen in both day and thermal sights, allowing the gunner to see when the prescribed amount of hits has been achieved.

J-7. CREW PROTECTION STATUS

All crew members should be in mission-oriented protective posture (MOPP) 4 when conducting CBRN engagements. The commander will decide if MOPP 4 is warranted due to environmental conditions.

J-8. TIMING PROCEDURES

The intent of scoring and timing is to cause crews to train as they would fight. Crews should be trained and rewarded for engaging targets rapidly, but not penalized when artificial maneuver constraints prevent them from continuing to engage the target. The VCE's judgment is critical in implementing this policy. Knowledge of the vehicle's capabilities and observation of firing conditions must be applied in order to maintain standards without penalizing the firing crew. VCEs must be in a position to observe the firing vehicle at all times. The commander or master gunner will determine implementing procedures for these basic policies on any gunnery range.

J-9. TARGET EXPOSURE TIME

Exposure time limits the time the target is exposed yet allows for situation-dependent contingencies beyond crew control. Target exposure time is listed for each target in Tables 3, 6, 7, and 9. Tasks are designed so—

- All stationary targets are exposed for 50 seconds while in a stationary position (defense), starting from the time the target is in the fully locked (up) position.
- All stationary targets are exposed for 30 seconds while on the move (offense). This time starts when the target is in the fully locked (up) position.
- Exposure time for all moving targets is 50 seconds. (Range constraints limit target exposure for targets moving 20 miles per hour or more.)
- Each target in a target array has its own exposure time.

J-10. TARGET KILL TIME

a. **Target Kill Time.** Target kill time is the time it takes a crew to engage and/or suppress a target. Target kill time will not exceed the maximum vehicle exposure time in order to receive a "T".

b. **Timing Device.** To score tables 3, 6, 7, and 9 you will need a minimum of two stopwatches to time a two-target engagement. The only time that needs to be tracked is the vehicle exposure time. Tower or target control personnel will track the target exposure time automatically. The best device for this is one timing unit that has multiple stopwatches with a common start button and independent stop button for each watch.

J-11. ALIBIS

Although commanders have the ultimate authority regarding alibis, they should be limited to two occurrences: **target/range malfunction**; and **weapon malfunction** (neither of which were correctable through immediate action or caused by the crew). Commanders should ensure that gunnery is as combat realistic as possible. This means that crews should train to fight *through* problems.

J-12. REMEDIAL TRAINING

Unit commanders and VCEs must make sure crews that fail tables or habitually fail specific tasks receive remedial training. Virtual trainers, or dry runs as a last resort, are the recommended techniques for remedial training. Once remedial training has been completed and the crews have been cleared by the VCEs to continue training, the failed engagements should be fired (if ammunition and time are available).

J-13. ALL WEATHER FIRING

As in combat, firing should continue under all weather conditions. The commander decides what constitutes effective training. His decision is based on many factors including, mission, and range availability. If the training can still be effective during reduced visibility, it should be consistent with the unit's mission requirement. Commanders should consider the following:

- Training effectiveness.
- Operational mission.
- Preparation and planning.
- Safety restrictions. (Combined with the other considerations, safety will determine when all-weather firing can be continued and when it must be stopped).

J-14. EVALUATING CREW-DUTY PENALTIES

a. The VCE is critical to the quality of training and AAR of the firing unit. He not only evaluates crews during the training event, but also leads them to an understanding of their engagement actions during the AAR. To ensure a quality AAR, the same VCE who observes the firing crew conducts it.

b. During the conduct of gunnery tables, VCEs monitor crew duties. There is no limit to the number of crew-duty penalty points that can be assessed for a task. However, crew-duty penalties may not be carried over from one task to another. After each phase, the crew receives an AAR. During this AAR, the VCE briefs the crew on crew duties such as fire commands, crew coordination, sectors of fire, target acquisition, method of engagements, and tactical reporting.

c. VCEs must have training to make sure they are proficient at the needed skills to properly evaluate the firing crew, and must continually practice their AAR techniques to make sure they are effective. Other range evaluation personnel and the unit's chain of command may assist the VCE.

d. **Crew Duty Penalties.** Crew duty penalties are implemented to ensure crews practice safe firing procedures. There are five categories of crew duty penalties:

- Immediate disqualification—extremely hazardous conduct.
- Blatant disregard for announced task, conditions, and standards.
- Failure to employ correct safety techniques.
- Failure to adhere to basic doctrinal and safety precepts.
- Failure to employ correct engagement techniques or respond properly to fire commands.

NOTE: The following list of crew duty penalties is not all-inclusive.

- e. **Immediate Disqualification—Extremely Hazardous Conduct.** Any crew found firing outside the range fan will receive an immediate disqualification for the table they are firing. Commanders will make decisions concerning what other violations constitute extremely hazardous conduct and what actions should be taken for crews caught cheating.

J-15. AUTOMATIC “U” PENALTY—BLATANT DISREGARD FOR ANNOUNCED TASK, CONDITIONS, AND STANDARDS

- a. Any crew found negligent for doing the following will receive a “U”:
- Not masked during a CBRN engagement.
 - Engaging friendly targets (if applicable).
 - Failure to employ correct safety techniques and exceeding vehicle exposure.
 - Leaving the gun armed or the gun select switch in the FIRE position during loading or between engagements (points will be deducted from previous engagement).
 - Firing into the berm (crews not ensuring the weapon was clear of the berm).
 - Target killed beyond maximum vehicle exposure time (only on multiple engagements and can be given only once per engagement).
 - Failure to adhere to basic doctrinal and safety precepts.
 - Failure to follow the instructions of the VCE, control officer, safety officer, or troop/squadron commander while negotiating the course.
 - Firing before receiving the command “FIRE” or announcing “ON THE WAY.”
 - Improper engagement technique (firing at the least dangerous target first during a multiple-target engagement, improper suppressive fire techniques, or not coming to a halt prior to firing during a moving engagement).
 - Improper fire command.
 - Failure to return to a turret-down position after completing a defensive engagement or between targets on a multiple-target engagement.
 - Failure to employ correct engagement techniques or respond properly to fire commands.
 - Incorrect response to an initial or subsequent fire command.
 - Improper reporting (not sending a SALT [size, activity, location, and time] and BDA [battle damage assessment] report after the engagement).
 - Incorrect driving techniques (driver not maintaining speed or steady platform [jerky starts and stops, too fast for maneuver box, goes off the course or road]).

NOTE: If a safety violation or combination of safety violations indicates it may be unsafe for a crew to continue the course, the safety officer will disqualify the crew and remove them from the range. (Crews should be informed of safety crew cuts to prevent accident or injury.)

NOTE: When conducting stationary engagements, digital-equipped units **must** use digital communications to report.

J-16. PREREQUISITES

Crew members must meet certain prerequisites before participating in advance crew gunnery. They must qualify day and night IAW the tables and standards listed in chapter 4 of FM 3-22.27. Active component, within the last six months. RC and NG within the last 12 months.

- (1) Day Requirements: Qualify on Day Qualification Table II.
- (2) Night Requirements: Qualify on Night Qualification Table IV with each of the following devices if assigned an AN/PEQ-2A and AN/PAAS-13 HTWS.

J-17. CONDUCT OF TASKS

a. **Trainer/ evaluator guidelines.** The firing exercise should be conducted on a multipurpose range complex (MPRC)/MK 19 range. Marking the firing positions may be necessary. At night, roads must be marked with luminous tape or chem lights. The crew develops teamwork while in an offensive and defensive posture. Figure J-3 shows an example of a firing exercise scenario.

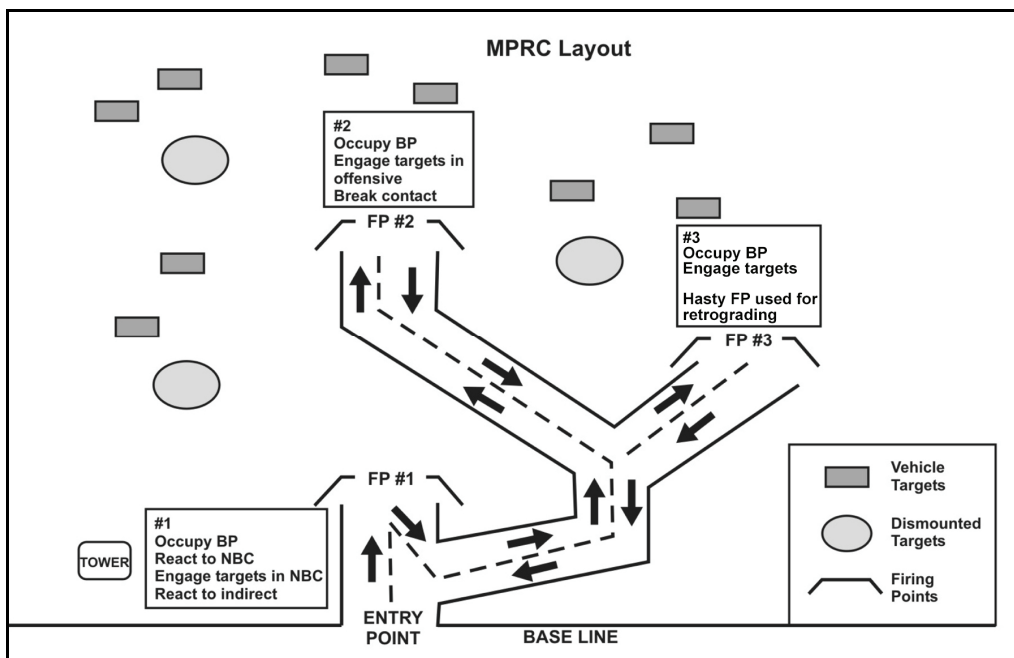


Figure J-3. Firing exercise scenario example.

b. **Execution.** Crew members will be briefed on the enemy situation and weapon capabilities prior to conducting each table.

c. **Scoring.** Each firing table has its own specific crew gunnery score card. The score card can be used for practice and qualification, day, and night. The T/P/U rating system rates crews for each task, (T) fully trained, (P) needs practice and (U) untrained.

d. Figure J-4 shows an example of the score card for crew penalty.

e. Figure J-5 shows an example of the score card for point system scoring.

MK 19, 40-mm GRENADE MACHINE GUN, MOD 3 ADVANCED CREW GUNNERY; TABLE 1, DAY AND NIGHT SCORE CARD For use of this form, see FM 3-22.27; the proponent agency is TRADOC.				
<input type="checkbox"/> PRACTICE <input checked="" type="checkbox"/> QUALIFICATION		<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT		
GUNNERY TABLE 1		UNIT / BUMPER NUMBER: B 2-29 INF B12		
	POINT SYSTEM SCORING	PERFORMANCE MEASURES	SCORING	
			GO	NO GO
TASK Occupy a battle position.	N / A	SEC/SQD leader dismounts and recons fighting position.	X	
CONDITIONS Given an M-996 HMMWV, MK 19 40-mm MG and organic carrier, MPRC, and a predetermined fighting position.		Gunner observes good fields of fire.	X	
STANDARDS Crew must occupy the fighting position tactically using good communication.		Driver maintains good hull defilade position once stationed.	X	
AMMUNITION REQUIRED None required for this task.		Leader gives SITREP to higher.	X	
EXPOSURE TIME N/A		Gunner guides driver into position.	X	
		Driver kicks out for security.		X
SCORER SIGNATURE: <div style="text-align: center; font-family: cursive; font-size: 1.2em;">SFC Mark Smith</div>		TOTAL GOs	5	
REMARKS:		OVERALL SCORE		
		GO ON 4 OUT OF 6 CREW DUTY	T	<input checked="" type="checkbox"/>
		GO ON 3 OUT OF 6 CREW DUTY	P	<input type="checkbox"/>
		GO ON 2 OUT OF 6 CREW DUTY	U	<input type="checkbox"/>
* NOTE: THE ONLY TIME THE POINT SYSTEM WILL NOT BE USED IS WHEN THE CREW IS OCCUPYING A BATTLE, FIGHTING, OR DEFENSIVE POSITION, UNLESS DIRECTED BY THE COMPANY COMMANDER OR INDIVIDUAL SOPs.				

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Figure J-4. Table 1: Occupy a battle position (scorecard, crew penalty scoring example).

MK 19, 40-mm GRENADE MACHINE GUN, MOD 3 ADVANCED CREW GUNNERY; TABLE 2, DAY AND NIGHT SCORE CARD For use of this form, see FM 3-22.27; the proponent agency is TRADOC.				
<input type="checkbox"/> PRACTICE <input checked="" type="checkbox"/> QUALIFICATION		<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT		
GUNNERY TABLE 2		UNIT / BUMPER NUMBER: B 2-29 INF B12		
TASK	POINT SYSTEM SCORING	PERFORMANCE MEASURES	SCORING	
			GO	NO GO
React to CBRN attack.	Each crew begins with 150 points. As crews negotiate tasks, points are deducted. Total points at the end of the tasks determine overall score. 130 - 150 points, crew is given a (T). 110 - 129 points, crew is given a (P). Crews that score 109 points or lower receive a (U) and must be retrained.	Crew members stop breathing once alarm is given.	X	
CONDITIONS Given an M-996 HMMWV, MK 19 MG and organic carrier, MPRC and SIM CBRN environment, and protective gear.		Crew dons masks within 9-second time standard.	X	
STANDARD All crew members must don masks, clear, and check for seal within 9 seconds. Crew must give alarm for GAS. Crew must assume MOPP 3 within 8 minutes. Crew must seek overhead cover within vehicle or use a poncho to protect against further contamination. Crew must close all vehicle hatches, windows, and doors. Crew must send CBRN 1 report.		Crew proceeds to MOPP level 3 within 8-minute time standard.	X	
AMMUNITION REQUIRED None required for this task.		CREW POINT DEDUCTIONS 20 POINT DEDUCTIONS Crew fails to close a hatch, window, or door.	X	
EXPOSURE TIME N/A		Crew fails to protect against further contamination.	X	
SCORER SIGNATURE: <i>SFC Mark Smith</i>		Crew fails to give alarm for gas: (say gas x 3 / hit metal x 3 / hand and arm signals).	X	
	10 POINT DEDUCTIONS Leader fails to send up CBRN 1 report correctly.		X	
		CREW POINTS	150	
		PENALTY POINTS	10	
		TOTAL SCORE	140	
REMARKS:	OVERALL SCORE			
	130 - 150 points	T	<input checked="" type="checkbox"/>	
	110 - 129 points	P	<input type="checkbox"/>	
	109 points or lower	U	<input type="checkbox"/>	

Figure J-5. Table 2: React to CBRN attack (scorecard, point system scoring example).

f. Upon completion of each exercise the VCE will conduct an AAR. To complete the exercise, gun crews must fire in sequence Advanced Crew Gunnery Tables 1 through 8 (DA Forms 7580-R through 7587-R). Sample filled-in Tables 1 and 2 are shown above in Figures J-4 and J-5. Completed samples of Tables 3 through 8 follow in Figures J-6 through J-11. These forms are available at the Army's electronic forms web site (<http://www.apd.army.mil/>).

MK 19, 40-mm GRENADE MACHINE GUN, MOD 3 ADVANCED CREW GUNNERY; TABLE 3, DAY AND NIGHT SCORE CARD <small>For use of this form, see FM 3-22.27; the proponent agency is TRADOC.</small>					
<input type="checkbox"/> PRACTICE <input checked="" type="checkbox"/> QUALIFICATION		<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT			
GUNNERY TABLE 3		UNIT / BUMPER NUMBER: B 2-29 INF B12			
	POINT SYSTEM SCORING	PERFORMANCE MEASURES	SCORING		
			GO	NO GO	
TASK Engage multiple targets in CBRN environment.	Each crew begins with 150 points. As crews negotiate tasks, points are deducted. Total points at the end of the tasks determine overall score. 130 - 150 points, crew is given a (T). 110 - 129 points, crew is given a (P). Crews that score 109 points or lower receive a (U) and must be retrained.	Crew masks during CBRN engagement.	X		
CONDITIONS Given an M-996 HMMWV, MK 19 MG and organic carrier, MPRC and SIM CBRN environment, protective gear, and multiple engageable targets in MOPP level 3.		Crew identifies and engages correct targets.	X		
STANDARDS Crews must engage targets covering 70 percent of targets presented.		Weapon on safe before and after firing.	X		
AMMUNITION REQUIRED MK 19 rds - 40 mm TP : 32 M-4 / M 16 rds - 5.56 : 30 * Ball rounds for day fires. * Tracer for night fires.		CREW POINT DEDUCTIONS 20 POINT DEDUCTIONS	Leader fails to direct and control fires.	X	
EXPOSURE TIME 30 seconds for gunner. 15 seconds for driver.		Driver fails to engage dismounted targets.	X		
SCORER SIGNATURE: <div style="font-family: cursive; font-size: 1.2em; margin-left: 20px;">SFC Mark Smith</div>		10 POINT DEDUCTIONS		X	
		Improper response to fire commands.			
		Leader fails to send up correct SITREP.	X		
		Crews fail to maintain good communication throughout engagement.	X		
		CREW POINTS	150		
		PENALTY POINTS	10		
		TOTAL SCORE	140		
REMARKS:		OVERALL SCORE			
		130 - 150 points	T	<input checked="" type="checkbox"/>	
		110 - 129 points	P	<input type="checkbox"/>	
		109 points or lower	U	<input type="checkbox"/>	

Figure J-6. Table 3: Engage multiple targets in CBRN environment.

MK 19, 40-mm GRENADE MACHINE GUN, MOD 3 ADVANCED CREW GUNNERY; TABLE 4, DAY AND NIGHT SCORE CARD For use of this form, see FM 3-22.27; the proponent agency is TRADOC.					
<input type="checkbox"/> PRACTICE <input checked="" type="checkbox"/> QUALIFICATION		<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT			
GUNNERY TABLE 4		UNIT / BUMPER NUMBER: B 2-29 INF B12			
TASK	POINT SYSTEM SCORING	PERFORMANCE MEASURES	SCORING		
			GO	NO GO	
React to indirect fires.	Each crew begins with 150 points. As crews negotiate tasks, points are deducted. Total points at the end of the tasks determine overall score. 130 - 150 points, crew is given a (T). 110 - 129 points, crew is given a (P). Crews that score 109 points or lower receive a (U) and must be retrained.	No crew member gets left behind in impact zone.	X		
CONDITIONS Given an M-996 HMMWV, MK 19 MG and organic carrier, and MPRC.		Crew closes and secures all hatches and doors.	X		
STANDARDS Crews take evasive action by maneuvering out of the kill zone or impact area.		Gunner protects self from indirect fires.	X		
AMMUNITION REQUIRED Artillery simulators : 2		CREW POINT DEDUCTIONS 20 POINT DEDUCTIONS Crew fails to give the alert "INCOMING!" Leader fails to designate the direction and distance to move.	X		
EXPOSURE TIME 10 seconds between impact.			10 POINT DEDUCTIONS Driver fails to maneuver rapidly enough from impact area. Senior leader sends up faulty or incorrect SHELREP. Gunner fails to secure weapon system (lock system down).	X	
SCORER SIGNATURE: <i>SFC Mark Smith</i>				X	X
		CREW POINTS	150		
		PENALTY POINTS	10		
		TOTAL SCORE	140		
REMARKS:		OVERALL SCORE			
		130 - 150 points	T	<input checked="" type="checkbox"/>	
		110 - 129 points	P	<input type="checkbox"/>	
		109 points or lower	U	<input type="checkbox"/>	

Figure J-7. Table 4: React to indirect fires.

MK 19, 40-mm GRENADE MACHINE GUN, MOD 3 ADVANCED CREW GUNNERY; TABLE 5, DAY AND NIGHT SCORE CARD <small>For use of this form, see FM 3-22.27; the proponent agency is TRADOC.</small>					
<input type="checkbox"/> PRACTICE <input checked="" type="checkbox"/> QUALIFICATION		<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT			
GUNNERY TABLE 5		UNIT / BUMPER NUMBER: B 2-29 INF B12			
TASK	POINT SYSTEM SCORING	PERFORMANCE MEASURES	SCORING		
			GO	NO GO	
Engage multiple targets in the offense.	Each crew begins with 150 points. As crews negotiate tasks, points are deducted. Total points at the end of the tasks determine overall score. 130 - 150 points, crew is given a (T). 110 - 129 points, crew is given a (P). Crews that score 109 points or lower receive a (U) and must be retrained.	Gunner fires into authorized location.	X		
CONDITIONS Given an M-996 HMMWV, MK 19 MG and organic carrier, MPRC, and a predetermined hastily fighting position.		Weapon is maintained in up and down range or 45 degree down orientation during exercise.	X		
STANDARDS Crews must engage targets covering 70 percent of targets presented.		Weapon on safe before and after firing.	X		
AMMUNITION REQUIRED MK 19 rds - 40 mm TP : 32 M-4 / M 16 rds - 5.56 : 30 * Ball rounds for day fires. * Tracer for night fires.		CREW POINT DEDUCTIONS 20 POINT DEDUCTIONS	Driver fails to engage dismounted targets.		X
EXPOSURE TIME 30 seconds for gunner. 15 seconds for driver.		Leader fails to direct and control fires.	X		
		Gunner engages incorrect or friendly targets.	X		
		10 POINT DEDUCTIONS			
		Improper response to fire commands.	X		
		Leader fails to send up correct SITREP.	X		
		Crews fail to maintain good communication throughout engagement.	X		
SCORER SIGNATURE: <div style="font-family: cursive; font-size: 1.2em; margin-left: 20px;">SFC Mark Smith</div>		CREW POINTS	150		
		PENALTY POINTS	20		
		TOTAL SCORE	130		
REMARKS:		OVERALL SCORE			
		130 - 150 points	T	<input checked="" type="checkbox"/>	
		110 - 129 points	P	<input type="checkbox"/>	
		109 points or lower	U	<input type="checkbox"/>	

Figure J-8. Table 5: Engage multiple targets in the offense.

MK 19, 40-mm GRENADE MACHINE GUN, MOD 3 ADVANCED CREW GUNNERY; TABLE 6, DAY AND NIGHT SCORE CARD For use of this form, see FM 3-22.27; the proponent agency is TRADOC.				
<input type="checkbox"/> PRACTICE <input checked="" type="checkbox"/> QUALIFICATION		<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT		
GUNNERY TABLE 6		UNIT / BUMPER NUMBER: <i>B 2-29 INF B12</i>		
TASK	POINT SYSTEM SCORING	PERFORMANCE MEASURES	SCORING	
			GO	NO GO
TASK Break contact using tactical maneuver techniques.	Each crew begins with 150 points. As crews negotiate tasks, points are deducted. Total points at the end of the tasks determine overall score. 130 - 150 points, crew is given a (T). 110 - 129 points, crew is given a (P). Crews that score 109 points or lower receive a (U) and must be retrained.	Gunner fires at correct targets during vehicle movement.	X	
CONDITIONS Given an M-996 HMMWV, MK 19 MG and organic carrier, and MPRC.		Weapon maintains up and down range position during movement.	X	
STANDARDS Crews take evasive action by maneuvering out of the engagement area using bounding overwatch.		Gunner engages correct targets.	X	
AMMUNITION REQUIRED MK 19 rds - 40 mm TP : 64 Rds are used to engage targets while wing man is maneuvering.		CREW POINT DEDUCTIONS 20 POINT DEDUCTIONS Sections/crews fail to cover.	X	
EXPOSURE TIME 30 seconds for gunners per bound.		Leader fails to direct and control.	X	
SCORER SIGNATURE: <i>SFC Mark Smith</i>		Crews fail to maintain good communication throughout movement.	X	
		10 POINT DEDUCTIONS Leader fails to send up correct SITREP.	X	
		Driver fails to use correct movement techniques.	X	
		Improper response to commands.	X	
		CREW POINTS	150	
		PENALTY POINTS	0	
		TOTAL SCORE	150	
REMARKS:		OVERALL SCORE		
		130 - 150 points	T	<input checked="" type="checkbox"/>
		110 - 129 points	P	<input type="checkbox"/>
		109 points or lower	U	<input type="checkbox"/>

Figure J-9. Table 6: Break contact using tactical maneuver techniques.

MK 19, 40-mm GRENADE MACHINE GUN, MOD 3 ADVANCED CREW GUNNERY; TABLE 7, DAY AND NIGHT SCORE CARD <small>For use of this form, see FM 3-22.27; the proponent agency is TRADOC.</small>				
<input type="checkbox"/> PRACTICE <input checked="" type="checkbox"/> QUALIFICATION		<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT		
GUNNERY TABLE 7		UNIT / BUMPER NUMBER: <i>B 2-29 INF B12</i>		
TASK	POINT SYSTEM SCORING	PERFORMANCE MEASURES	SCORING	
			GO	NO GO
Occupy a defensive battle position.	N / A	SEC/SQD leader dismounts and recons fighting position.	X	
CONDITIONS Given an M-996 HMMWV, MK 19 40-mm MG and organic carrier, MPRC, and a predetermined defensive fighting position.		Gunner observes good fields of fire.	X	
STANDARDS Crew must occupy the fighting position tactically using good communication.		Driver maintains good hull defilade position once in battle position.	X	
AMMUNITION REQUIRED None required for this task.		Leader gives SITREP to higher.	X	
EXPOSURE TIME N/A		Gunner guides driver into position.	X	
		Driver kicks out for security.	X	
SCORER SIGNATURE: <div style="font-family: cursive; font-size: 1.2em;">SFC Mark Smith</div>		TOTAL GOs	6	
REMARKS:		OVERALL SCORE		
		GO ON 4 OUT OF 6 CREW DUTY	T	<input checked="" type="checkbox"/>
		GO ON 3 OUT OF 6 CREW DUTY	P	<input type="checkbox"/>
		GO ON 2 OUT OF 6 CREW DUTY	U	<input type="checkbox"/>
<small>* NOTE: THE ONLY TIME THE POINT SYSTEM WILL NOT BE USED IS WHEN THE CREW IS OCCUPYING A BATTLE, FIGHTING, OR DEFENSIVE POSITION, UNLESS DIRECTED BY THE COMPANY COMMANDER OR INDIVIDUAL SOPs.</small>				

Figure J-10. Table 7: Occupy a defensive battle position.

MK 19, 40-mm GRENADE MACHINE GUN, MOD 3 ADVANCED CREW GUNNERY; TABLE 8, DAY AND NIGHT SCORE CARD For use of this form, see FM 3-22.27; the proponent agency is TRADOC.					
<input type="checkbox"/> PRACTICE <input checked="" type="checkbox"/> QUALIFICATION		<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT			
GUNNERY TABLE 8		UNIT / BUMPER NUMBER: <i>B 2-29 INF B12</i>			
TASK	POINT SYSTEM SCORING	PERFORMANCE MEASURES	SCORING		
			GO	NO GO	
Engage multiple targets in the defense.	Each crew begins with 150 points. As crews negotiate tasks, points are deducted. Total points at the end of the tasks determine overall score. 130 - 150 points, crew is given a (T). 110 - 129 points, crew is given a (P). Crews that score 109 points or lower receive a (U) and must be retrained.	Gunner fires into authorized location only.	X		
CONDITIONS Given an M-996 HMMWV, MK 19 MG and organic carrier, MPRC, and a predetermined defensive fighting position.		Weapon maintained in up and down range or 45 degree down orientation during exercise.	X		
STANDARDS Crews must engage targets covering 70 percent of targets presented.		Weapon on safe before and after firing.	X		
AMMUNITION REQUIRED MK 19 rds - 40 mm TP : 32 M-4 / M 16 rds - 5.56 : 30 * Ball rounds for day fires. * Tracer for night fires.		CREW POINT DEDUCTIONS 20 POINT DEDUCTIONS	Driver fails to engage dismounted targets.	X	
EXPOSURE TIME 30 seconds for gunner. 15 seconds for driver.		Leader fails to direct and control fires.	X		
		10 POINT DEDUCTIONS	Gunner engages incorrect or friendly targets.	X	
SCORER SIGNATURE: <div style="text-align: center; font-size: 1.2em; font-family: cursive;">SFC Mark Smith</div>		CREW POINTS	150		
		PENALTY POINTS	0		
		TOTAL SCORE	150		
REMARKS:		OVERALL SCORE			
		130 - 150 points	T	<input checked="" type="checkbox"/>	
		110 - 129 points	P	<input type="checkbox"/>	
		109 points or lower	U	<input type="checkbox"/>	

Figure J-11. Table 8: Engage multiple targets in the defense.

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GLOSSARY

ACRONYMS AND ABBREVIATIONS

AAR	after-action review
AE	angle of elevation
AI	assistant instructor
AIT	advanced individual training
APC	armored personnel carrier
AS	angle of sight
BMP	fighting vehicle manufactured by the former Soviet Union
BOD	bore obstruction detector
BRDM	Soviet Union vehicle
*BRMS	battlefield reference marking system
C4	composition four
CALFEX	combined arms live-fire exercise
*CBRN	chemical, biological, radiological, and nuclear
CLP	cleaner, lubricant, preservative
cm	centimeter
*COB	civilians on the battlefield
DA	Department of the Army
deg	degrees
DODIC	Department of Defense Identification Code
EA	engagement area
elev	elevation
EOD	explosive ordnance disposal
FM	field manual
FOV	field of view
fps	feet per second
ft	feet
FTX	field training exercise
GMD	grease, molybdenum disulfide
HE	high explosive
HEDP	high-explosive dual-purpose
HIMS	heavy interdiction missile system
HMMWV	high-mobility multipurpose wheeled vehicle
HWTS	heavy weapon thermal sight
IAW	in accordance with

IR	infrared
JP-4	jet propulsion fuel
LAW	lubricant, automatic weapons, arctic
LBE	load-bearing equipment
LED	light emitting diode
LFX	live-fire exercise
LH	left hand
LSA	lubricant oil, semifluid, automatic weapon
LSAT	lubricant oil, semifluid, automatic weapons, temperate
MACS	multipurpose arcade combat simulator
MGS	missile guidance system
min	minute
mm	millimeter
MOD	model
MOPP	mission-oriented protective posture
MPMG	multipurpose machine gun
MPRC	multipurpose range complex
MTP	mission training plan
MWTS	medium weapon thermal sight
NBC	nuclear, biological, chemical
NCO	noncommissioned officer
NCOES	noncommissioned officers education system
NFOV	narrow field of view
No.	number
NVD	night vision device
*(P)	needs practice
PEWS	platoon early warning system
PIBD	point initiating, base detonating
PMCS	preventive maintenance checks and services
QE	quadrant elevation
RBC	rifle bore cleaner
rds	rounds
RH	right hand
RP	reference point
RPG	rocket propelled grenade
sec	seconds
SOP	standing operating procedure
*SIT	stationary Infantry targets

STX	situational training exercise
*(T)	fully trained
T&E	traverse and elevating
TESS	tactical engagement simulator system
TM	technical manual
TOE	table of organization and equipment
TP	training practice
TPIAL	target pointer illuminator aiming light
TPT	training practice trainer
TRADOC	U.S. Army Training and Doctrine Command
TRP	target reference point
TVPC	TOW vehicle power cable
TWS	thermal weapon sight
*(U)	untrained
VDT	video disk trainer
*VCE	vehicle crew evaluator
W	width
WFOV	wide field of view

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**MK 19, 40-mm GRENADE MACHINE GUN, MOD 3
ADVANCED CREW GUNNERY; TABLE 1, DAY AND NIGHT SCORE CARD**

For use of this form, see FM 3-22.27; the proponent agency is TRADOC.

PRACTICE

QUALIFICATION

DAY

NIGHT

GUNNERY TABLE 1

UNIT / BUMPER NUMBER:

	POINT SYSTEM SCORING	PERFORMANCE MEASURES	SCORING	
			GO	NO GO
TASK Occupy a battle position.	N / A	SEC/SQD leader dismounts and recons fighting position.		
CONDITIONS Given an M-996 HMMWV, MK 19 40-mm MG and organic carrier, MPRC, and a predetermined fighting position.		Gunner observes good fields of fire.		
STANDARDS Crew must occupy the fighting position tactically using good communication.		Driver maintains good hull defilade position once stationed.		
AMMUNITION REQUIRED None required for this task.		Leader gives SITREP to higher.		
EXPOSURE TIME N/A		Gunner guides driver into position.		
		Driver kicks out for security.		

SCORER SIGNATURE:	TOTAL GOs
--------------------------	-----------

REMARKS:	OVERALL SCORE		
	GO ON 4 OUT OF 6 CREW DUTY	T	<input type="checkbox"/>
	GO ON 3 OUT OF 6 CREW DUTY	P	<input type="checkbox"/>
	GO ON 2 OUT OF 6 CREW DUTY	U	<input type="checkbox"/>

* NOTE: THE ONLY TIME THE POINT SYSTEM WILL NOT BE USED IS WHEN THE CREW IS OCCUPYING A BATTLE, FIGHTING, OR DEFENSIVE POSITION, UNLESS DIRECTED BY THE COMPANY COMMANDER OR INDIVIDUAL SOPs.

**MK 19, 40-mm GRENADE MACHINE GUN, MOD 3
ADVANCED CREW GUNNERY; TABLE 2, DAY AND NIGHT SCORE CARD**

For use of this form, see FM 3-22.27; the proponent agency is TRADOC.

PRACTICE

QUALIFICATION

DAY

NIGHT

GUNNERY TABLE 2

UNIT / BUMPER NUMBER:

	POINT SYSTEM SCORING	PERFORMANCE MEASURES	SCORING	
			GO	NO GO
TASK React to CBRN attack.	Each crew begins with 150 points. As crews negotiate tasks, points are deducted. Total points at the end of the tasks determine overall score. 130 - 150 points, crew is given a (T). 110 - 129 points, crew is given a (P). Crews that score 109 points or lower receive a (U) and must be retrained.	Crew members stop breathing once alarm is given.		
CONDITIONS Given an M-996 HMMWV, MK 19 MG and organic carrier, MPRC and SIM CBRN environment, and protective gear.		Crew dons masks within 9-second time standard.		
STANDARD All crew members must don masks, clear, and check for seal within 9 seconds. Crew must give alarm for GAS. Crew must assume MOPP 3 within 8 minutes. Crew must seek overhead cover within vehicle or use a poncho to protect against further contamination. Crew must close all vehicle hatches, windows, and doors. Crew must send CBRN 1 report.		Crew proceeds to MOPP level 3 within 8-minute time standard.		
AMMUNITION REQUIRED None required for this task.		CREW POINT DEDUCTIONS 20 POINT DEDUCTIONS		
EXPOSURE TIME N/A		Crew fails to close a hatch, window, or door.		
SCORER SIGNATURE:		Crew fails to protect against further contamination.		
	10 POINT DEDUCTIONS	Crew fails to give alarm for gas: (say gas x 3 / hit metal x 3 / hand and arm signals).		
		Leader fails to send up CBRN 1 report correctly.		
		CREW POINTS	150	
		PENALTY POINTS		
		TOTAL SCORE		
REMARKS:	OVERALL SCORE			
	130 - 150 points	T	<input type="checkbox"/>	
	110 - 129 points	P	<input type="checkbox"/>	
	109 points or lower	U	<input type="checkbox"/>	

**MK 19, 40-mm GRENADE MACHINE GUN, MOD 3
ADVANCED CREW GUNNERY; TABLE 3, DAY AND NIGHT SCORE CARD**

For use of this form, see FM 3-22.27; the proponent agency is TRADOC.

PRACTICE

QUALIFICATION

DAY

NIGHT

GUNNERY TABLE 3

UNIT / BUMPER NUMBER:

	POINT SYSTEM SCORING	PERFORMANCE MEASURES	SCORING	
			GO	NO GO
TASK Engage multiple targets in CBRN environment.	Each crew begins with 150 points. As crews negotiate tasks, points are deducted. Total points at the end of the tasks determine overall score. 130 - 150 points, crew is given a (T). 110 - 129 points, crew is given a (P). Crews that score 109 points or lower receive a (U) and must be retrained.	Crew masks during CBRN engagement.		
CONDITIONS Given an M-996 HMMWV, MK 19 MG and organic carrier, MPRC and SIM CBRN environment, protective gear, and multiple engageable targets in MOPP level 3.		Crew identifies and engages correct targets.		
STANDARDS Crews must engage targets covering 70 percent of targets presented.		Weapon on safe before and after firing.		
AMMUNITION REQUIRED MK 19 rds - 40 mm TP : 32 M-4 / M 16 rds - 5.56 : 30 * Ball rounds for day fires. * Tracer for night fires.		CREW POINT DEDUCTIONS 20 POINT DEDUCTIONS Leader fails to direct and control fires.		
EXPOSURE TIME 30 seconds for gunner. 15 seconds for driver.		10 POINT DEDUCTIONS Improper response to fire commands. Leader fails to send up correct SITREP. Crews fail to maintain good communication throughout engagement.		
SCORER SIGNATURE:		CREW POINTS	150	
		PENALTY POINTS		
		TOTAL SCORE		
REMARKS:		OVERALL SCORE		
		130 - 150 points	T	<input type="checkbox"/>
		110 - 129 points	P	<input type="checkbox"/>
		109 points or lower	U	<input type="checkbox"/>

**MK 19, 40-mm GRENADE MACHINE GUN, MOD 3
ADVANCED CREW GUNNERY; TABLE 4, DAY AND NIGHT SCORE CARD**

For use of this form, see FM 3-22.27; the proponent agency is TRADOC.

PRACTICE

QUALIFICATION

DAY

NIGHT

GUNNERY TABLE 4

UNIT / BUMPER NUMBER:

	POINT SYSTEM SCORING	PERFORMANCE MEASURES	SCORING	
			GO	NO GO
TASK React to indirect fires.	Each crew begins with 150 points. As crews negotiate tasks, points are deducted. Total points at the end of the tasks determine overall score. 130 - 150 points, crew is given a (T). 110 - 129 points, crew is given a (P). Crews that score 109 points or lower receive a (U) and must be retrained.	No crew member gets left behind in impact zone. Crew closes and secures all hatches and doors. Gunner protects self from indirect fires.		
CONDITIONS Given an M-996 HMMWV, MK 19 MG and organic carrier, and MPRC.				
STANDARDS Crews take evasive action by maneuvering out of the kill zone or impact area.		CREW POINT DEDUCTIONS 20 POINT DEDUCTIONS Crew fails to give the alert "INCOMING!" Leader fails to designate the direction and distance to move.		
AMMUNITION REQUIRED Artillery simulators : 2				
EXPOSURE TIME 10 seconds between impact.				
SCORER SIGNATURE:		10 POINT DEDUCTIONS Driver fails to maneuver rapidly enough from impact area. Senior leader sends up faulty or incorrect SHELREP. Gunner fails to secure weapon system (lock system down).		
		CREW POINTS	150	
		PENALTY POINTS		
		TOTAL SCORE		
REMARKS:		OVERALL SCORE		
		130 - 150 points	T	<input type="checkbox"/>
		110 - 129 points	P	<input type="checkbox"/>
		109 points or lower	U	<input type="checkbox"/>

**MK 19, 40-mm GRENADE MACHINE GUN, MOD 3
ADVANCED CREW GUNNERY; TABLE 5, DAY AND NIGHT SCORE CARD**

For use of this form, see FM 3-22.27; the proponent agency is TRADOC.

PRACTICE

QUALIFICATION

DAY

NIGHT

GUNNERY TABLE 5

UNIT / BUMPER NUMBER:

	POINT SYSTEM SCORING	PERFORMANCE MEASURES	SCORING	
			GO	NO GO
TASK Engage multiple targets in the offense.	Each crew begins with 150 points. As crews negotiate tasks, points are deducted. Total points at the end of the tasks determine overall score. 130 - 150 points, crew is given a (T). 110 - 129 points, crew is given a (P). Crews that score 109 points or lower receive a (U) and must be retrained.	Gunner fires into authorized location.		
CONDITIONS Given an M-996 HMMWV, MK 19 MG and organic carrier, MPRC, and a predetermined hastily fighting position.		Weapon is maintained in up and down range or 45 degree down orientation during exercise.		
STANDARDS Crews must engage targets covering 70 percent of targets presented.		Weapon on safe before and after firing.		
AMMUNITION REQUIRED MK 19 rds - 40 mm TP : 32 M-4 / M 16 rds - 5.56 : 30 * Ball rounds for day fires. * Tracer for night fires.		CREW POINT DEDUCTIONS 20 POINT DEDUCTIONS Driver fails to engage dismounted targets. Leader fails to direct and control fires. Gunner engages incorrect or friendly targets.		
EXPOSURE TIME 30 seconds for gunner. 15 seconds for driver.		10 POINT DEDUCTIONS Improper response to fire commands. Leader fails to send up correct SITREP. Crews fail to maintain good communication throughout engagement.		
SCORER SIGNATURE:		CREW POINTS	150	
		PENALTY POINTS		
		TOTAL SCORE		
REMARKS:		OVERALL SCORE		
		130 - 150 points	T	<input type="checkbox"/>
		110 - 129 points	P	<input type="checkbox"/>
		109 points or lower	U	<input type="checkbox"/>

**MK 19, 40-mm GRENADE MACHINE GUN, MOD 3
ADVANCED CREW GUNNERY; TABLE 6, DAY AND NIGHT SCORE CARD**

For use of this form, see FM 3-22.27; the proponent agency is TRADOC.

<input type="checkbox"/> PRACTICE <input type="checkbox"/> QUALIFICATION	<input type="checkbox"/> DAY <input type="checkbox"/> NIGHT
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GUNNERY TABLE 6	UNIT / BUMPER NUMBER:
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	POINT SYSTEM SCORING	PERFORMANCE MEASURES	SCORING	
			GO	NO GO
TASK Break contact using tactical maneuver techniques.	Each crew begins with 150 points. As crews negotiate tasks, points are deducted. Total points at the end of the tasks determine overall score. 130 - 150 points, crew is given a (T). 110 - 129 points, crew is given a (P). Crews that score 109 points or lower receive a (U) and must be retrained.	Gunner fires at correct targets during vehicle movement. Weapon maintains up and down range position during movement. Gunner engages correct targets.		
CONDITIONS Given an M-996 HMMWV, MK 19 MG and organic carrier, and MPRC.		CREW POINT DEDUCTIONS 20 POINT DEDUCTIONS Sections/crews fail to cover. Leader fails to direct and control. Crews fail to maintain good communication throughout movement.		
STANDARDS Crews take evasive action by maneuvering out of the engagement area using bounding overwatch.		10 POINT DEDUCTIONS Leader fails to send up correct SITREP. Driver fails to use correct movement techniques. Improper response to commands.		
AMMUNITION REQUIRED MK 19 rds - 40 mm TP : 64 Rds are used to engage targets while wing man is maneuvering.				
EXPOSURE TIME 30 seconds for gunners per bound.				

SCORER SIGNATURE:	CREW POINTS	150
	PENALTY POINTS	
	TOTAL SCORE	

REMARKS:	OVERALL SCORE 130 - 150 points T <input type="checkbox"/> 110 - 129 points P <input type="checkbox"/> 109 points or lower U <input type="checkbox"/>
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**MK 19, 40-mm GRENADE MACHINE GUN, MOD 3
ADVANCED CREW GUNNERY; TABLE 7, DAY AND NIGHT SCORE CARD**

For use of this form, see FM 3-22.27; the proponent agency is TRADOC.

PRACTICE

QUALIFICATION

DAY

NIGHT

GUNNERY TABLE 7

UNIT / BUMPER NUMBER:

	POINT SYSTEM SCORING	PERFORMANCE MEASURES	SCORING	
			GO	NO GO
TASK Occupy a defensive battle position.	N / A	SEC/SQD leader dismounts and recons fighting position.		
CONDITIONS Given an M-996 HMMWV, MK 19 40-mm MG and organic carrier, MPRC, and a predetermined defensive fighting position.		Gunner observes good fields of fire.		
STANDARDS Crew must occupy the fighting position tactically using good communication.		Driver maintains good hull defilade position once in battle position.		
AMMUNITION REQUIRED None required for this task.		Leader gives SITREP to higher.		
EXPOSURE TIME N/A		Gunner guides driver into position.		
		Driver kicks out for security.		
SCORER SIGNATURE:		TOTAL GOs		
REMARKS:		<p align="center">OVERALL SCORE</p> <p>GO ON 4 OUT OF 6 CREW DUTY T <input type="checkbox"/></p> <p>GO ON 3 OUT OF 6 CREW DUTY P <input type="checkbox"/></p> <p>GO ON 2 OUT OF 6 CREW DUTY U <input type="checkbox"/></p>		

* NOTE: THE ONLY TIME THE POINT SYSTEM WILL NOT BE USED IS WHEN THE CREW IS OCCUPYING A BATTLE, FIGHTING, OR DEFENSIVE POSITION, UNLESS DIRECTED BY THE COMPANY COMMANDER OR INDIVIDUAL SOPs.

**MK 19, 40-mm GRENADE MACHINE GUN, MOD 3
ADVANCED CREW GUNNERY; TABLE 8, DAY AND NIGHT SCORE CARD**

For use of this form, see FM 3-22.27; the proponent agency is TRADOC.

PRACTICE

QUALIFICATION

DAY

NIGHT

GUNNERY TABLE 8

UNIT / BUMPER NUMBER:

	POINT SYSTEM SCORING	PERFORMANCE MEASURES	SCORING		
			GO	NO GO	
TASK Engage multiple targets in the defense.	Each crew begins with 150 points. As crews negotiate tasks, points are deducted. Total points at the end of the tasks determine overall score. 130 - 150 points, crew is given a (T). 110 - 129 points, crew is given a (P). Crews that score 109 points or lower receive a (U) and must be retrained.	Gunner fires into authorized location only.			
CONDITIONS Given an M-996 HMMWV, MK 19 MG and organic carrier, MPRC, and a predetermined defensive fighting position.		Weapon maintained in up and down range or 45 degree down orientation during exercise.			
STANDARDS Crews must engage targets covering 70 percent of targets presented.		Weapon on safe before and after firing.			
AMMUNITION REQUIRED MK 19 rds - 40 mm TP : 32 M-4 / M 16 rds - 5.56 : 30 * Ball rounds for day fires. * Tracer for night fires.		CREW POINT DEDUCTIONS 20 POINT DEDUCTIONS	Driver fails to engage dismounted targets.		
EXPOSURE TIME 30 seconds for gunner. 15 seconds for driver.		Leader fails to direct and control fires.			
SCORER SIGNATURE:		Gunner engages incorrect or friendly targets.			
	10 POINT DEDUCTIONS	Improper response to fire commands.			
		Leader fails to send up correct SITREP.			
		Crews fail to maintain good communication throughout engagement.			
		CREW POINTS	150		
		PENALTY POINTS			
		TOTAL SCORE			
REMARKS:	OVERALL SCORE				
	130 - 150 points	T	<input type="checkbox"/>		
	110 - 129 points	P	<input type="checkbox"/>		
	109 points or lower	U	<input type="checkbox"/>		

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