

* C1, FM 23-65

FIELD MANUAL
No. 23-65HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 19 June 1991**BROWNING MACHINE GUN
CALIBER .50 HB, M2****CONTENTS**

	Page
PREFACE	iv
* CHAPTER 1. INTRODUCTION	
1-1. Training Strategy	1-1
1-2. Description	1-5
1-3. Components	1-8
1-4. Ground Mounts	1-9
1-5. Accessories for Ground Mounts	1-12
1-6. Vehicular Mounts	1-14
1-7. Ammunition	1-17
* CHAPTER 2. MAINTENANCE	
2-1. Safety	2-1
2-2. General Disassembly	2-2
2-3. Cleaning, Inspection, and Lubrication	2-9
2-4. Maintenance Procedures	2-12
2-5. Maintenance Under NBC Conditions	2-12
2-6. General Assembly	2-12
2-7. Function Check	2-17
* CHAPTER 3. OPERATION AND FUNCTIONING	
3-1. Operation	3-1
3-2. Loading Procedures	3-1
3-3. Unloading Procedures	3-3
3-4. Cycle of Functioning	3-4
3-5. Left-hand Feed	3-11
3-6. Headspace and Timing	3-12

DISTRIBUTION RESTRICTION: Approved for public release; distribution is unlimited.

*This publication supersedes FM 23-65, 19 May 1972, and TC 23-65-1, 19 September 1984.

	Page
CHAPTER 4. PERFORMANCE PROBLEMS AND DESTRUCTION	
4-1. Malfunctions.....	4-1
4-2. Stoppages.....	4-1
4-3. Immediate Action	4-2
4-4. Remedial Action.....	4-3
4-5. Destruction Procedures	4-5
CHAPTER 5. MARKSMANSHIP TRAINING	
Section I. Planning	5-1
5-1. Objectives	5-1
5-2. Commander's Responsibilities.....	5-1
5-3. Phases of Training.....	5-2
5-4. Sustainment Training.....	5-2
5-5. Remedial Training.....	5-2
Section II. Fundamentals	5-3
5-6. Firing Positions	5-3
5-7. Dry Fire Training	5-6
5-8. Range Determination.....	5-12
5-9. Observation and Adjustment of Fire	5-16
5-10. Fire Commands	5-18
5-11. Crew Exercises.....	5-22
5-12. Machine Gun Fundamental Skills Test	5-36
Section III. Basic Marksmanship	5-36
5-13. Concept of Zeroing/Targeting	5-36
5-14. 10-Meter Firing Exercise.....	5-41
5-15. Transition Day Firing Exercise	5-41
5-16. NBC Firing	5-41
5-17. Night Fire Exercise	5-41
Section IV. Advanced Gunnery	5-41
5-18. Objectives	5-42
5-19. Tracking and Leading Exercises.....	5-42
5-20. Mounted Firing Exercise	5-45
5-21. Mounted NBC Firing Exercise	5-45
5-22. Predetermined Firing Exercise	5-45
CHAPTER 6. COMBAT TECHNIQUES OF FIRE	
Section I. Fundamentals	6-1
6-1. Characteristics of Fire.....	6-1
6-2. Classes of Fire	6-3
Section II. Fire Control	6-7
6-3. Methods of Fire Control	6-8
6-4. Targets and Their Engagement	6-8
6-5. Overhead Fire	6-14
6-6. Defilade Positions	6-18
6-7. Methods of Laying the Gun for Defilade Firing.....	6-20
6-8. Final Protective Fires	6-21
6-9. Application of Fire	6-22
6-10. Fire Adjustment.....	6-23
6-11. Antiaircraft Gunnery.....	6-25

	Page
Section III. Limited Visibility Conditions	6-26
6-12. Difficulties.....	6-26
6-13. Terminology	6-26
6-14. Target Engagement	6-27
6-15. Fire Control	6-28
6-16. Preplanned Fires.....	6-28
6-17. NBC Considerations.....	6-29
CHAPTER 7. TRAIN THE TRAINER PROGRAM	
7-1. Concept.....	7-1
7-2. Trainer Certification Program	7-2
7-3. Responsibilities and Duties of the Trainer.....	7-3
APPENDIX A. SAFETY	A-1
APPENDIX B. TRAINING AIDS AND DEVICES	B-1
* APPENDIX C. RANGES AND TRAINING EXERCISES	C-1
APPENDIX D. FIGHTING POSITIONS	D-1
APPENDIX E. RANGE CARDS	E-1
* APPENDIX F. AERIAL DEFENSE	F-1
* APPENDIX G NIGHT OPTICS	G-1
* GLOSSARY	Glossary-1
* REFERENCES	References-1
* INDEX	Index-1
* DA Forms	

* PREFACE

This manual provides technical information, training techniques, and guidance on the caliber .50 HB machine gun, M2. Unit leaders and designated gunners will use this information to successfully integrate the weapon into combat operations. They can instruct on the range or at concurrent training stations.

The material applies as is to both nuclear and conventional warfare.

Trainers must ensure that everyone observes safety procedures at all times. Commanders, trainers, and individual students must remember that safety is everyone's responsibility. Leaders will conduct all training as though each weapon were fully loaded. At no time during training will anyone allow the desire for speed or accuracy to override the requirement to follow safety procedures. Safe training is good training.

The proponent of this publication is US Army Infantry School. Send comments and recommendations on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to the Commandant, US Army Infantry School, ATTN: ATSH-INB-O, Fort Benning, GA 31905-5594 or lusanoh@benning.army.mil.

Unless otherwise stated, the masculine gender refers to both men and women.

CHAPTER 1

INTRODUCTION

The procedures and methods used in Army machine gun marksmanship are based on the concept that soldiers must be skilled gunners who can effectively apply their firing skills in combat. The basic firing skills and exercises outlined in this manual must be a part of every unit's machine gun training program. The soldiers' proficiency depends on proper training and application of basic gunnery fundamental, which are taught in a progressive program to prepare gunners for combat.

1-1. TRAINING STRATEGY

Training strategy is the overall concept for integrating resources into a program to train individual and collective skills needed to perform a unit's wartime mission.

a. Training strategies for marksmanship are implemented in TRADOC institutions (NCOES, basic and advanced officer's courses) and in units. The overall training strategy is multifaceted and is inclusive of the specific strategies used in institution and unit programs. Also included are the supporting strategies that use resources such as publications, ranges, ammunition, training aids, devices, simulators, and simulations. These strategies focus on developing critical soldier skills, and on leader skills that are required for the intended outcome.

b. Two primary components compose the training strategies: initial training and sustainment training. Both may include individual and collective skills. Initial training is critical because a task that is taught correctly and learned well is retained longer. Well-trained skills can be more quickly regained and sustained if an interim of nonuse occurs. The more difficult and complex the task, the harder it is to sustain the skill. Personnel turnover is a main factor in decay of collective skills, since the loss of critical team members requires retraining to regain proficiency. If a long period elapses between initial and sustainment training sessions or training doctrine is altered, retraining maybe required.

c. The training strategy for caliber .50 MG marksmanship begins in selected resident training and continues in the unit. An example of this overall process is illustrated in Figure 1-1 and provides a concept of the