Tank Gunnery Training Devices and Usage Strategies



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

Headquarters, Department of the Army

TANK GUNNERY TRAINING DEVICES AND USAGE STRATEGIES Table of Contents

Preface		Page iii
Chapter 1.	Introduction	1-1
Chapter 2.	Assessing and Developing a Device-Based Gunnery Training Strategy	2-1
	Assessing the Unit's Training Level	
	Developing the Training Strategy	
Chapter 3.	Tank Weapon Gunnery Simulation System (TWGSS)	3-1
	TWGSS Components	3-1
	TWGSS Individual Components	3-1
	TWGSS Capabilities and Limitations	3-6
	TWGSS Training	3-6
	System Information	
Chapter 4.	Conduct-of-Fire Trainer (COFT)	4-1
	COFT Configurations	
	COFT Components	4-2
	MCOFT Components	
	Capabilities and Limitations	4-5
	COFT Training	
	Training with COFT	
	System Information	4-12
Chapter 5.	Advanced Gunnery Training System (AGTS)	5-1
	AGTS Components	
	Capabilities and Limitations	5-5
	AGTS Training	
	Training with AGTS	
	System Information.	

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

*This publication supersedes FM 17-12-7, 11 March 1992 and FKSM 17-12-7-1-COFT, November 1994.

		Page
Chapter 6.	Platoon Gunnery Trainer (PGT)	
	COFT PGT	
	AGTS PGT	
	PGT Training	
	System Information	6-4
Chapter 7.	Abrams Full-Crew Interactive Simulator Trainer (AFIST)	
	AFIST Configurations.	
	AFIST Components	
	AFIST Capabilities and Limitations	
	Training with AFIST	7-3
	System Information	7-5
Chapter 8.	Thru-Sight Video (TSV) System	8-1
	TSV Components	8-1
	TSV Capabilities and Limitations	8-3
	Training with the TSV	8-3
	System Information	8-3
Chapter 9.	Caliber .50 Inbore Device	9-1
	Training with the Caliber .50 Inbore Device	9-1
	System Information	9-1
Chapter 10.	Targets and Target Mechanisms	10-1
•	Full-Scale Targets	
	Target Mechanisms	
Chapter 11.	Boresighting and Calibration Devices	11-1
•	Boresight Devices	11-1
	Calibration Devices	11-4
Appendix.	Gunnery Event Device Suitability	Appendix-1
Glossary		Glossary-1
References		References-1
Index		Index-1

Preface

This manual presents an overview of current, doctrinally approved tank combat training devices. The intent is to familiarize the user with armor-related devices and how they can be used to train and test tank gunnery or tactical skills. This manual is designed for use with FM 17-12-series manuals and the technical manuals or other resource materials for each device.

FM 17-12-7 was developed as a ready reference for tank commanders, platoon sergeants, platoon leaders, master gunners, S3s, and the chain of command of armor units. From this manual, the user can select devices that will best support the type of planned gunnery/tactical training at home station.

The proponent of this publication is HQ TRADOC. Submit changes for improving this publication on DA Form 2028 (Recommended Changes to Publications and Blank Forms) and forward it to: Commander, United States Army Armor Center and Fort Knox, ATTN: ATZK-TDD-PG, Fort Knox, KY 40121-5200. E-mail: armordoctrine@ftknox5-emh3.army.mil.

Chapter 1

Introduction

Crew turbulence and the rising cost of tank main gun ammunition, fuel, and spare parts make it difficult to produce and maintain skilled tank crews, sections, and platoons. Moreover, units' time at range complexes grow shorter and shorter. Therefore, more gunnery sustainment training must be done at the home station using simulators and appended gunnery training devices.

Training devices help fill some of the void caused by lack of resources. They cannot, however, replace or duplicate main gun firing or other vital aspects of gunnery or tactical training. Their purpose is to enhance training. Devices allow the trainer to identify and correct procedural errors. They enable the trainer to spot tank crews or individuals who are having problems with a particular gunnery or tactical task.

This manual contains 11 chapters and 1 appendix. Chapters 3 through 11 cover the current inventory of tank gunnery training devices and usage strategies. The appendix, *Gunnery Event Device Suitability*, shows the devices described in Chapters 3 through 9 by type, with their suitability code for tank-table training.

FM 17-12-7 is like a catalog. Each device is illustrated and has a purpose statement, brief description, and usage strategy. From this information, the user can decide which device best suits his training needs, and refer to the matrix in the appendix to verify his choice. For more specific information on a device, the user should consult the proper technical manual listed in the References.

Some devices have been issued directly to tactical units. Others are available for loan from the local Training Support Center (TSC). Still others can be built from drawings in this manual or from drawings available at the TSC.

Some of the drawings at the TSC are identified as drawings for Army Training Aids (DATA). DATA items are low in cost and can be made by most TSCs. They are designated as DATA devices (DVC-D). Devices that have been centrally produced by the United States Army Training and Doctrine Command (TRADOC) are identified as TRADOC devices (DVC-T).

The TSC may have locally designed devices that are not available Armywide. It is also the source for graphic training aids (GTA) and for training devices produced by the United States Army Materiel Command (AMC). More information on these devices and GTAs can be found in the local TSC catalog, TRADOC Pamphlet 71-9, DA Pamphlet 350-9, and DA Pamphlet 310-32.

The TSC is the main support channel for training devices. It can provide information on what devices are available, how to procure them, and how long it will take to receive them. The TSC can usually offer suggestions for using a particular device in training. In short, the TSC is the main link between devices and a unit's training program.

Many of the devices described in this manual are currently under contract for upgrades and improvements. As these upgraded or reconfigured devices are fielded, this manual will be updated to ensure that the trainer has a publication with the most current information possible.