

HEADQUARTERS  
DEPARTMENT OF THE ARMY

**FM 44-100**



**US ARMY AIR AND MISSILE  
DEFENSE OPERATIONS**



**Distribution Restriction:** Approved for public release; distribution is unlimited

# US Army

## Air and Missile Defense Operations

### Contents

	Page
<b>Preface</b> .....	iv
<b>Chapter 1 INTRODUCTION</b> .....	1-1
Air and Missile Defense in the Three Dimensional Battle.....	1-1
Air Defense Artillery Mission.....	1-2
National Missile Defense Operations.....	1-2
Air Defense in Relation to Army Tenets.....	1-3
Air Defense in Force Protection.....	1-4
Air Defense Combat Function.....	1-5
Relationship of Theater Air Defense and Theater Missile Defense.....	1-5
Historical Perspective .....	1-6
<b>Chapter 2 THREAT</b> .....	2-1
The Evolving Threat.....	2-1
Electronic Warfare .....	2-8
Weapons of Mass Destruction.....	2-9
Summary.....	2-9
<b>Chapter 3 JOINT THEATER AIR AND MISSILE DEFENSE DOCTRINE</b> .....	3-1
JTAMD Operations Doctrine.....	3-1
Airspace Control and Air Defense Integration .....	3-4
Rules of Engagement .....	3-5
Command Responsibilities .....	3-5

**Distribution Restriction:** Approved for public release; distribution is unlimited.

---

\* This publication supersedes FM 44-100, 15 June 1995

<b>Chapter 3</b>	Command, Control, Communications, Computers and Intelligence .....	3-7
<b>(Continued)</b>	Defensive Operations .....	3-12
	Offensive Operations.....	3-18
	Multinational TAMD Operations Considerations .....	3-20
<b>Chapter 4</b>	<b>FUNDAMENTALS OF ARMY AIR AND MISSILE DEFENSE OPERATIONS .....</b>	<b>4-1</b>
	Joint, Multinational, and Interagency Operations .....	4-1
	Integration of Army Air Defense Capabilities .....	4-1
	Levels of War.....	4-4
	Planning Considerations .....	4-5
	Operational Framework and Battlefield Organization .....	4-8
	Theater Combat Operations .....	4-10
	Apportionment .....	4-13
	Force Projection Considerations .....	4-13
	Force Projection Operations.....	4-16
<b>Chapter 5</b>	<b>ARMY AIR DEFENSE ARTILLERY BATTLE COMMAND.....</b>	<b>5-1</b>
	Battle Command Concept .....	5-1
	Commander’s Responsibilities .....	5-5
	Battle Command Organizations .....	5-12
	Command and Support Relationships.....	5-13
	Coordination and Liaison.....	5-16
	Integrated Combat Airspace Command and Control .....	5-18
	Engagement Operations Principles.....	5-20
	Engagement Operations Procedures .....	5-21
<b>Chapter 6</b>	<b>PLANNING AND CONDUCTING AIR AND MISSILE DEFENSE OPERATIONS... 6-1</b>	
	Air and Missile Defense in Theater Operations.....	6-1
	Air and Missile Defense Objectives.....	6-2
	Air Defense Artillery Roles and Functions.....	6-5
	Air and Missile Defense Planning.....	6-9
	Theater Strategic Planning.....	6-11
	Theater Missile Defense.....	6-25
<b>Chapter 7</b>	<b>COMBAT SERVICE SUPPORT .....</b>	<b>7-1</b>
	Combat Service Support Fundamentals .....	7-1
	Combat Service Support Planning Considerations .....	7-6
	Combat Service Support Operations.....	7-10
	Reconstitution Operations .....	7-16
	Self Defense Measures .....	7-17

<b>Chapter 8</b>	<b>STABILITY AND SUPPORT OPERATIONS</b> .....	8-1
	Environment.....	8-1
	Principles .....	8-2
	Noncombatant Evacuation Operations .....	8-3
	Support to Domestic Civil Authorities .....	8-3
	Humanitarian Assistance and Disaster Relief .....	8-4
	Security Assistance.....	8-4
	Nation Assistance .....	8-5
	Support to Counter Drug Operations .....	8-5
	Combating Terrorism .....	8-6
	Peace Operations .....	8-6
	Show of Force.....	8-8
	Support for Insurgencies and counterinsurgencies .....	8-9
	Attacks and Raids .....	8-9
	Resource Allocation .....	8-10
<b>Appendix A</b>	<b>AIR INTELLIGENCE PREPARATION OF THE BATTLEFIELD</b> .....	A-1
<b>Appendix B</b>	<b>ARMY AIR DEFENSE PLANNING</b> .....	B-1
<b>Appendix C</b>	<b>SPACE SUPPORT</b> .....	C-1
<b>Appendix D</b>	<b>CLASSES OF SUPPLY</b> .....	D-1
	<b>GLOSSARY</b> .....	Glossary-1
	<b>BIBLIOGRAPHY</b> .....	Bibliography-1
	<b>INDEX</b> .....	Index-1

## Preface

FM 44-100 is the Army Air Defense Artillery (ADA) capstone doctrinal manual for the air defense combat function. It explains the Army ADA contributions to joint and multinational counterair and theater missile defense operations. It also addresses the range of offensive and defensive actions to counter the air threat. This manual provides the doctrinal basis for integrating the air defense combat function into the planning and conduct of strategic, operational, and tactical levels of operations. FM 44-100 conforms to the doctrinal principles of FM 100-5 and Joint Pubs 3-01 and 3-01.5. The contents of FM 44-100 apply to Army ADA units worldwide. Army ADA forces must adapt this doctrine to the specific requirements of each theater.

FM 44-100 provides doctrinal guidance for ADA commanders, trainers, and leaders at all levels and is the basis for Army ADA service school curricula development. This manual also provides the doctrinal basis for the implementation of air and missile defense measures in all Army units. The tactics, techniques, and procedures in the 44-series of field manuals complement FM 44-100.

This publication implements the following international agreement: STANAG 3805 Doctrine and Procedures for Aerospace Control in Times of Crisis and War (ATP-40 (B)). The proponent of this manual is Headquarters TRADOC. Send comments and recommendations on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Commandant, US Army Air Defense Artillery School ATTN: ATSA-DOT-D, Fort Bliss, Texas 79916-3802.

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

## Chapter 1

# Introduction

This chapter describes the air defense (AD) combat function, relates the tenets of Army operations to air and missile defense operations, and defines the mission of air defense artillery (ADA). It also provides vignettes of successful air and missile defense operations.

### **AIR AND MISSILE DEFENSE IN THE THREE-DIMENSIONAL BATTLE**

1-1. This field manual provides the doctrinal foundation for Army air and missile defense operations in joint and multinational operations. Air defense is one of the seven combat functions, which include intelligence, maneuver, fire support, mobility and survivability, combat service support, and command and control. Air and missile defense forces provide protection from enemy air and missile attack. They prevent the enemy from separating friendly forces while freeing the commander to fully synchronize maneuver and firepower.

1-2. The air defense combat function contributes to joint theater counterair operations and to joint theater missile defense. Theater counterair operations protect the force and critical assets from attack by fixed- and rotary-wing aircraft and unmanned aerial vehicles (UAVs). Theater missile defense protects the force and critical assets from attack by theater missiles, which include ballistic missiles, cruise missiles (CMs), and air-to-surface missiles (ASM). Air and missile defense includes both offensive and defensive actions.

1-3. The airspace of a theater is as important a dimension of joint operations as the terrain. Friendly forces use airspace for critical purposes including maneuver, delivery of fires, reconnaissance and surveillance, transportation, and battle command. Effective control and use of airspace directly influence the outcome of campaigns and battles. Commanders consider airspace and the apportionment of air power in planning and supporting their operations. They expect the enemy to contest their use of the airspace and must protect their forces from enemy observation and attack. Air and missile defense operations contribute to gaining and maintaining the desired degree of air superiority, provide force protection, and help win the information war.

1-4. Synchronization of ground operations with air operations is fundamental to the conduct of successful campaigns and battles. Friendly air forces, through such missions as counterair, air interdiction, and close air support, directly support the land campaign.

1-5. The Army's part in the theater campaign is diverse and requires a combined arms force. Air and missile defense forces protect the combined arms team, and other priority forces and assets by preventing enemy aircraft,