

---

---

**FM 3-52 (FM 100-103)**

**Army Airspace  
Command and Control  
in a Combat Zone**

**AUGUST 2002**

**HEADQUARTERS, DEPARTMENT OF THE ARMY**

---

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

---

## Figures

Figure	Page
1-1. Theater Air-Ground System (Notional).....	1-8
1-2. Air Force Theater Air Control System .....	1-9
1-3. Navy Composite Warfare Commander Concept.....	1-10
1-4. Amphibious Tactical Air Control System .....	1-11
1-5. Marine Air Command and Control System.....	1-13
1-6. Army Air-Ground System.....	1-15
3-1. Corps A2C2 Element.....	3-5
3-2. Division A2C2 Element.....	3-6
4-1. Coordinating Altitude .....	4-3
4-2. Minimum-Risk Route .....	4-4
4-3. Restricted Operations Area .....	4-4
4-4. High-Density Airspace Control Zone .....	4-5
4-5. Standard Use Army Aircraft Flight Routes .....	4-6
4-6. Air Corridor and Axis of Advance .....	4-7
4-7. Base Defense Zone.....	4-8
4-8. Weapons Free Zone.....	4-9
4-9. Formal Airspace Coordination Area .....	4-11

## Tables

Table	Page
A-1. ABCS Message and Report Matrix, Part 1 .....	A-3
A-1. ABCS Message and Report Matrix, Part 2 .....	A-5
A-2. Army Battle Command System Overlays .....	A-13
A-3. Army Battle Command System Data List .....	A-15
B-1. Staff Tasks for A2C2 .....	B-1
B-2. BCD Vertical Information Networking .....	B-6
B-3. Corps A2C2 Element Lateral Information Networking.....	B-7
B-4. Corps A2C2 Element Vertical Information Networking.....	B-9
B-5. Division A2C2 Element Lateral Information Networking.....	B-11
B-6. Division A2C2 Element Vertical Information Networking.....	B-12
B-7. Brigade Staff Lateral Information Networking.....	B-15
B-8. Brigade Staff Vertical Information Networking.....	B-16
B-9. Battalion Staff Vertical Information Networking .....	B-18
C-1. Communication Links .....	C-14
C-2. Messages Used by TAIS .....	C-16
C-3. USMTF and VMF Titles.....	C-17

## Preface

Information age developments coupled with a revolution in military technology have profoundly influenced the depth, breadth, and height of the battlespace. In today's operational environment, capabilities of friendly and enemy forces to acquire and dominate each other by fires and maneuver are maximized by effectively using the electromagnetic spectrum. Exponential improvements of targeting capabilities occur almost daily in our technological age. Although extending the battlespace has evolved throughout the history of warfare, space and airborne platforms have improved the commander's capabilities to visualize the battlespace, target the enemy, and process and distribute information beyond any twentieth century expectations. Twenty-first century technologies have placed increasing demands on using airspace. Airspace has become a crucial resource that the combat commander must manage efficiently with increasing numbers and types of airspace users.

***Army airspace command and control (A2C2) is the Army's application of airspace control to coordinate airspace users for concurrent employment in the accomplishment of assigned missions.*** It provides the necessary command and control structure for the effective use of airspace. This field manual describes the doctrinal principles and fundamentals for organizing, planning, and using airspace. Beginning with the fundamentals of airspace management at the joint level and working through A2C2 management at each echelon of command, this manual is both a primer for airspace users and a primary reference for A2C2 staff planners. This manual provides the guidance to integrate, coordinate, synchronize, and regulate the Army's use of airspace. It focuses on how the Army uses airspace in planning and executing the commander's intent.

Coordinating and integrating the use of the airspace is a force multiplier; it ensures that all battlefield operating systems are available to positively impact the course of the battle. Additionally, effective airspace management and control enhances force protection measures, minimizes the risk of fratricide to airspace users and ground combat units, and increases overall force effectiveness.

The proponent for this publication is Headquarters, US Army Training and Doctrine Command (HQ, TRADOC). Submit changes for improvements on DA Form 2028 directly to the Commander, U.S. Army Combined Arms Center (CAC), ATTN: ATZL-SWW, Fort Leavenworth, KS 66027-6900.

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

Cross-references use the new field manual numbering system. The bibliography lists field manuals by new number followed by old number.

All references to the joint air operations center (JAOC) apply to the integrated combined air operations center or the combined air operations center.

Specific terms apply to A2C2. This publication uses the joint definition of battlespace. Common tactical picture (CTP) is a term used by material developers. CTP as used in this publication refers to the common operational picture. Combat zone as used in this publication applies to the broadest interpretation of areas where combat

forces are required to conduct operations, including military operations other than war. The Army Battle Command System (ABCS) software packages are evolving. The capabilities described in this manual may not reflect actual capabilities available on the user's system.

The glossary lists most terms used in FM 3-52 that have joint or Army definitions. Terms for which FM 3-52 will become the proponent manual (the authority) when it is published are indicated with an asterisk. Definitions for which FM 3-52 will be the proponent manual are printed in boldface in the text. Other definitions are not printed in boldface. See JP 1-02 for complete joint definitions and FM 1-02 for complete Army definitions.

The glossary contains definitions for acronyms and terms not defined in JP 1-02 or FM 1-02. It does not list acronyms and abbreviations that are included only for clarity or appear only in a figure and are listed in the legend for that figure. Some common abbreviations and acronyms are not spelled out; refer to the glossary.

**\*FM 3-52 (FM 100-103)**

Field Manual  
No. 3-52

Headquarters  
Department of the Army  
Washington, DC, 1 August 2002

# **Army Airspace Command and Control in a Combat Zone**

## **Contents**

	<b>Page</b>
<b>FIGURES .....</b>	iii
<b>TABLES .....</b>	iv
<b>PREFACE .....</b>	v
<b>Chapter 1</b>	
<b>Airspace Control and Airspace Control Systems and Organizations: An Overview .....</b>	1-1
Airspace Control in a Combat Zone .....	1-1
Considerations of Joint Airspace Control .....	1-2
Theater Air-Ground System .....	1-7
Key Component Liaisons Within TAGS .....	1-16
Key Positions and Responsibilities .....	1-17
Key Documents .....	1-19
<b>Chapter 2</b>	
<b>Army Airspace Command and Control Fundamentals .....</b>	2-1
A2C2 System Overview .....	2-1
A2C2 Functions .....	2-2
A2C2 Activities .....	2-3
A2C2 Functional Operations .....	2-4
Command and Control Organizations .....	2-7
<b>Chapter 3</b>	
<b>Army Airspace Command and Control Functional Elements .....</b>	3-1
Types and Levels .....	3-1
Liaisons .....	3-7
Staff Tasks .....	3-11
<b>Chapter 4</b>	
<b>Airspace Control Measures .....</b>	4-1
Methods of Airspace Control .....	4-1

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

---

\*This publication supersedes FM 100-103, dated 7 October 1987.

Procedural Airspace Control Measures.....	4-2
Fire Support Coordinating Measures.....	4-9
Deconfliction Methods .....	4-12
Special Airspace Users.....	4-13
<b>Chapter 5 Army Airspace Command and Control Connectivity.....</b>	<b>5-0</b>
A2C2 System.....	5-0
Digital Message Formats.....	5-1
Tactical Digital Information Links.....	5-1
Subsystems Descriptions .....	5-3
Connectivity at Echelons Above Corps .....	5-14
Connectivity at Corps.....	5-15
Connectivity at Division.....	5-15
Connectivity at Echelons Below Division.....	5-16
Interim Brigade Combat Team .....	5-16
<b>Appendix A Messages, Reports, and Overlays .....</b>	<b>A-1</b>
Digital Message Formats.....	A-1
USMTF A2C2 Voice Templates .....	A-2
USMTF and VMF Record Templates .....	A-3
Army Battle Command System Overlays .....	A-13
Army Battle Command System Data List .....	A-15
<b>Appendix B Army Airspace Command and Control Tasks .....</b>	<b>B-1</b>
Basic Staff Tasks .....	B-1
A2C2 Information Management.....	B-5
<b>Appendix C Tactical Airspace Integration System.....</b>	<b>C-0</b>
TAIS Objectives .....	C-0
System Description.....	C-1
TAIS Mission.....	C-2
TAIS Functions .....	C-4
TAIS Digital Network.....	C-13
TAIS Messaging .....	C-15
USMTF and VMF Titles .....	C-17
<b>GLOSSARY.....</b>	<b>Glossary-0</b>
<b>BIBLIOGRAPHY .....</b>	<b>Bibliography-1</b>
<b>INDEX .....</b>	<b>Index-0</b>

## Chapter 1

# Airspace Control and Airspace Control Systems and Organizations: An Overview

All Army commanders must have a fundamental understanding of joint airspace control in a combat zone, the Theater Air-Ground System, and the key personnel and documents pertaining to airspace control. This chapter introduces airspace control in a combat zone, discusses the considerations of joint airspace control, summarizes the command and control systems from each service that make up the Theater Air-Ground System (TAGS), discusses liaisons, identifies the key joint airspace control positions, and discusses key documents necessary for planning and executing airspace control in a combat zone.

Combat zone as used in this publication applies to the broadest interpretation of areas where combat forces are required to conduct operations, including operations other than war.

## AIRSPACE CONTROL IN A COMBAT ZONE

1-1.JP 3-52 defines *airspace control in a combat zone* as a process used to increase combat effectiveness by promoting the safe, efficient, and flexible use of airspace. Airspace control is provided in order to prevent fratricide, enhance air defense operations, and permit greater flexibility of operations. Airspace control does not infringe on the authority vested in commanders to approve, disapprove, or deny combat operations.

## CONTENTS

Airspace Control in a Combat Zone .....	1-1	Special Operations Liaison .....	1-17
Considerations of Joint Airspace Control..	1-2	Airspace Management Liaison	
Principles .....	1-2	Section.....	1-17
Fundamental Considerations.....	1-3	Air Mobility Element.....	1-17
Elements .....	1-4	Air Defense Liaison Section .....	1-17
Theater Air-Ground System .....	1-7	Key Positions and Responsibilities.....	1-17
Theater Air Control System.....	1-7	Joint Force Commander .....	1-18
Navy Tactical Air Control System.....	1-9	Joint Force Air Component	
Marine Air Command and Control		Commander.....	1-18
System.....	1-12	Airspace Control Authority.....	1-18
Army Air-Ground System .....	1-14	Area Air Defense Commander.....	1-19
Joint Air Operations Center .....	1-15	Key Documents .....	1-19
Key Component Liaisons Within TAGS ....	1-16	Airspace Control Plan .....	1-19
Navy Liaison .....	1-16	Airspace Control Order .....	1-19
Marine Liaison .....	1-16	Air Tasking Order .....	1-20
Air Force Liaison .....	1-16	Air Defense Plan .....	1-20
Army Liaison.....	1-17		