

FM 3-21.38

Pathfinder Operations



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Pathfinder Operations

Contents

	Page
PREFACE	viii
Chapter 1 INTRODUCTION	1-1
Employment	1-1
Capabilities	1-2
Limitations	1-2
Equipment	1-2
Communications Security	1-5
Training	1-5
Chapter 2 PLANS, ORGANIZATION, CONDUCT, AND THREAT	2-1
Section I. PLANS	2-1
Warning Order	2-1
Initial Preparations.....	2-1
Coordination	2-2
Linkup with Supported Unit	2-4
Final Preparations	2-4
Section II. ORGANIZATION FOR COMBAT	2-4
Insertion.....	2-4
Overland Movement.....	2-5
Stay-Behind Operation	2-6
Section III. CONDUCT OF OPERATIONS	2-6
Daylight Assault.....	2-6
Night Assault	2-6
Extraction	2-6
Staging Areas	2-7
Artillery Displacement	2-7
Support of Ground Operations	2-7
Support of Air Force	2-7
Mixed Operations	2-7
Radio Communications	2-8

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	Terminal Guidance by Supported Units.....	2-9
	Section IV. HIGH-THREAT ENVIRONMENT	2-9
	Control and Navigation	2-9
	Tactical Instrument Flights.....	2-9
	Air Routes	2-10
Chapter 3	AIR TRAFFIC CONTROL.....	3-1
	Section I. PATHFINDER AIR TRAFFIC	3-1
	Safety	3-1
	Voice Control	3-1
	Formats.....	3-2
	Numbers	3-3
	Phrases and Terms	3-4
	Section II. LANDINGS	3-6
	Traffic Patterns.....	3-6
	Methods of Entry.....	3-6
	Traffic Pattern Legs	3-8
	Advisory Service	3-8
	Spacing Techniques	3-9
	Final Landing Instructions.....	3-10
	Taxiing Aircraft.....	3-10
	Minimum Aircraft Separation Requirements.....	3-11
	Section III. GROUND-TO-AIR COMMUNICATIONS	3-12
	Electronic Warfare Environment.....	3-12
	Ground-to-Air Transmissions.....	3-13
Chapter 4	HELICOPTER LANDING ZONES	4-1
	Section I. SELECTION OF LANDING SITES	4-1
	Considerations.....	4-1
	Alternate Sites.....	4-10
	Section II. ORGANIZATION AND DUTIES	4-10
	Control Center	4-10
	Landing Site Party	4-12
	Section III. LANDING SITE OPERATIONS.....	4-13
	Communications	4-13
	Flight Formations	4-14
	Landing Zone and Obstacle Markings.....	4-14
	Air Assaults	4-14
	Intercept Headings.....	4-23
	Section IV. LANDING ZONE OPERATIONS	4-23
	Communications Checkpoint.....	4-23
	Air Control Points	4-25
	Section V. NIGHT OPERATIONS.....	4-25
	Tactical Landing Lights.....	4-26
	External Loads	4-28
	Multihelicopter Operations.....	4-28
	Night Vision Goggles	4-28

	Section VI. ENVIRONMENTAL CONSIDERATIONS.....	4-29
	Pilot Input	4-29
	Cold Weather	4-29
	Jungle	4-32
	Desert.....	4-33
	Mountains	4-34
	Section VII. APPROACH PATH CONSIDERATIONS.....	4-35
	Vertical Air Currents	4-36
	Escape Routes	4-36
	Terrain Contour and Obstacles	4-36
	Position of the Sun	4-36
Chapter 5	EXTERNAL LOADS.....	5-1
	Landing Points.....	5-1
	Types of Loads.....	5-1
	Unit Responsibilities	5-2
	Equipment	5-2
	Service Life of Aerial-Delivery Slings	5-10
	Aircraft Load Limitations.....	5-15
	Standard Weights.....	5-18
	Air Items Required For Common Standard Loads.....	5-19
	Slingload Theory	5-20
	Hookup and Release Procedures	5-21
	Slingload Inspection Record	5-29
Chapter 6	DROP ZONES.....	6-1
	Section I. SELECTION FACTORS	6-1
	Airdrop Airspeeds.....	6-1
	Drop Altitude.....	6-2
	Type of Load	6-3
	Methods of Delivery.....	6-4
	Obstacles	6-6
	Access.....	6-8
	Size	6-9
	Approach and Departure Routes	6-18
	Section II. DROP ZONE SUPPORT TEAM	6-18
	Organization	6-18
	Missions	6-18
	Equipment Familiarization.....	6-18
	Coordination	6-24
	Support Requirements	6-25
	Duties of the Leader.....	6-27
	Control Center	6-29
	Signals.....	6-29
	Determination of Release Point Location.....	6-31
	Ground-Marked Release System.....	6-32
	Army Verbally Initiated Release System.....	6-37
	Air Force Verbally Initiated Release System.....	6-40

	Air Force Computed Air Release Point.....	6-40
	Assault Zone Availability Report.....	6-46
	AF IMT 3823, Drop Zone Survey.....	6-46
	AF IMT 4304, Drop Zone/Landing Zone Control Log.....	6-53
Appendix A	CLOSE AIR SUPPORT AND CLOSE COMBAT ATTACK.....	A-1
	Definitions	A-1
	Purpose.....	A-1
	Types of Aircraft.....	A-2
	Target Types.....	A-3
	Weapons Effects.....	A-3
	Aircraft Weapons Types	A-4
	Risk Estimated Distances	A-5
	Target to Weapons	A-5
Appendix B	OPERATIONAL FORMATS	B-1
	Planning Format	B-1
	Landing Zone and Drop Zone Control Records	B-2
	Troop-Leading Procedures.....	B-5
Appendix C	ARMY HELICOPTER SPECIFICATIONS.....	C-1
	Observation Helicopters	C-2
	Attack Helicopters.....	C-4
	Utility Helicopters	C-8
	Cargo Helicopters	C-12
Appendix D	DIGITIZATION SUPPLEMENT	D-1
	Definition	D-1
	Purpose, Advantages, and Capabilities.....	D-1
Appendix E	AIR FORCE INSTRUCTION.....	E-1
	Airdrop Airspeeds	E-1
	Drop Zone Size	E-2
	Ground Marked Release System	E-3
	Point of Impact.....	E-4
	GLOSSARY	Glossary-1
	REFERENCES.....	References-1
	INDEX	Index-1

Figures

Figure 2-1.	En route communication procedures with pathfinders in a landing zone.....	2-8
Figure 2-2.	Comparison of air routes with and without a high-threat environment.....	2-11
Figure 3-1.	Air traffic patterns.....	3-7
Figure 3-2.	360-degree turnout.....	3-9
Figure 3-3.	Traffic pattern extension.....	3-10
Figure 3-4.	Minimum separation requirements.....	3-11
Figure 4-1.	Landing point sizes.....	4-2
Figure 4-2.	Standard flight and landing formations.....	4-4
Figure 4-3.	Determination of ground slope.....	4-6
Figure 4-4.	Maximum angle of approach (daylight).....	4-7
Figure 4-5.	Maximum angle of approach (night).....	4-8
Figure 4-6.	Approach and exit path.....	4-8
Figure 4-7.	Example completed DA Form 7461-R.....	4-12
Figure 4-8.	Helicopter day landing site, staggered trail-right formation.....	4-16
Figure 4-9.	Helicopter day landing site, echelon right formation.....	4-17
Figure 4-10.	Day or night slingload operation site.....	4-18
Figure 4-11.	Day or night cargo landing site, "V" formation.....	4-19
Figure 4-12.	Night landing site with landing points for aircraft and slingloads.....	4-20
Figure 4-13.	Utility helicopter night landing site, diamond formations.....	4-21
Figure 4-14.	Lighted night landing symbols as the pilot would see them from different approach angles.....	4-22
Figure 4-15.	Intercept heading technique.....	4-23
Figure 4-16.	Terrain flight modes.....	4-24
Figure 4-17.	Placement of the inverted "Y" or NATO "T" at the number one touchdown point.....	4-26
Figure 4-18.	Placement of additional touchdown point markings for night use.....	4-26
Figure 4-19.	Placement of fifth light using inverted "Y," when coordinated.....	4-27
Figure 4-20.	Emergency night lighting by vehicle headlights.....	4-27
Figure 4-21.	Lessening the effects of loose snow on the ground.....	4-30
Figure 6-1.	Recommended safety zones for high-tension lines.....	6-8
Figure 6-2.	Example application of $D=RT$ formula.....	6-12
Figure 6-3.	Example application of $T=D/R$ formula.....	6-13
Figure 6-4.	Example application of $D=KAV$ formula.....	6-14
Figure 6-5.	Raised-angle marker.....	6-21
Figure 6-6.	Drop zone coordination checklist.....	6-24
Figure 6-7.	Drop zone cancellation and closing markers.....	6-30
Figure 6-8.	Release point location.....	6-31
Figure 6-9.	Panel emplacement.....	6-33
Figure 6-10.	Horizontal clearance and marker construction.....	6-36
Figure 6-11.	The 15-to-1 mask clearance ratio.....	6-37

Contents

Figure 6-12. Example Army VIRS offset.....	6-38
Figure 6-13. Wind streamer vector count.....	6-39
Figure 6-14. Example USAF VIRS transmission.....	6-40
Figure 6-15. Drop zone placement (day).....	6-41
Figure 6-16. Code letters.....	6-42
Figure 6-17. Drop zone placement (night).....	6-43
Figure 6-18. Area drop zone.....	6-44
Figure 6-19. Computation of circular drop zone.....	6-45
Figure 6-20A. Example completed AF IMT 3823 (front).....	6-51
Figure 6-20B. Example completed AF IMT 3823 (back).....	6-52
Figure 6-21. Example completed AF IMT 4304.....	6-56
Figure C-1. OH-58D Kiowa.....	C-3
Figure C-2. AH 64A Apache.....	C-5
Figure C-3. AH 64D Apache.....	C-7
Figure C-4. UH-1H Iroquois.....	C-9
Figure C-5. UH-60A/L Blackhawk.....	C-11

Tables

Table 2-1.	Air liaison officer's and ground unit commander's coordination of air movement table.	2-2
Table 3-1.	Numbers transmitted by units or digits.	3-3
Table 3-2.	Phrases.	3-4
Table 3-3.	Terms.	3-5
Table 3-4.	Traffic pattern legs.	3-8
Table 3-5.	A 360-degree turnout.	3-9
Table 3-6.	Light signals on or near a landing zone.	3-13
Table 3-7.	Information included in advisories.	3-15
Table 4-1.	Landing point uses.	4-3
Table 4-2.	Length of minimum width area.	4-9
Table 5-1.	Aerial delivery specifications for the Type XXVI sling.	5-3
Table 5-2.	Safe working loads (lift capacities) of polyester roundslings.	5-9
Table 5-3.	Large-capacity sling sets.	5-12
Table 5-4.	POL for external loads only.	5-18
Table 5-5.	Standard vehicle weights.	5-19
Table 5-6.	Standard artillery weights.	5-19
Table 6-1.	Airspeeds for rotary-wing aircraft.	6-1
Table 6-2.	Airspeeds for fixed-wing aircraft.	6-2
Table 6-3.	Example calculation of drop altitude in feet indicated.	6-2
Table 6-4.	Airdrop altitudes for rotary- and fixed-wing aircraft.	6-3
Table 6-5.	Minimum aerial delivery altitudes.	6-4
Table 6-6.	Size criteria for tactical airlift drop zones, personnel, and heavy equipment.	6-9
Table 6-7.	Size criteria for tactical airlift drop zones, Container Delivery System.	6-10
Table 6-8A.	Conversion chart for 10-gram helium (pilot) balloons.	6-16
Table 6-8B.	Conversion chart for 30-gram helium (pilot) balloons.	6-17
Table 6-9.	Forward throw distances for fixed-wing aircraft.	6-17
Table 6-10.	Surface wind limits for airdrops.	6-28
Table 6-11.	Favorable conditions for airdrops on tactically assessed DZs.	6-47
Table A-1.	CAS theater aircraft.	A-2
Table A-2.	Risk estimated distances.	A-5
Table A-3.	Target to weapons.	A-5
Table C-1.	Specifications for the OH-58D Kiowa.	C-2
Table C-2.	Specifications for the AH 64A Apache.	C-4
Table C-3.	Specifications for the AH 64D Apache.	C-6
Table C-4.	Specifications for the UH-1H Iroquois.	C-8
Table C-5.	Specifications for the UH-60A Blackhawk.	C-10
Table C-6.	Specifications for the CH-47 D Chinook.	C-12

Contents

Table E-1. Airdrop airspeeds. E-1
Table E-2. Standard drop zone size criteria. E-2
Table E-3. Ground marked release system load drift constants (K)..... E-3
Table E-4. Ground marked release system forward throw distance. E-4
Table E-5. Standard point-of-impact placement. E-4

Preface

This publication provides a foundation for training and employing pathfinder and terminal guidance personnel. The tactics, techniques, and procedures that describe the conduct of the various missions are guides. The pathfinder leader can modify them to suit the particular air assault operation.

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

The manual includes an extensive glossary of acronyms and terminology peculiar to air assault operations, pathfinder operations, and Army-Air Force air traffic control. Using this glossary will help the reader understand the text.

This publication prescribes DA Form 7461-R, *Internal Net Record*, and implements the following international agreements:

- QSTAG 585, *Marshaling Helicopters in Multinational Land Operations*, 23 Apr 81
(see Chapter 4).
- STANAG 2863, *Navigational and Communication Capabilities for Helicopters in Multinational Land Operations*, 26 Sep 88
(see Chapters 2 and 3).
- STANAG 3117, *Aircraft Marshaling Signals*, 17 Oct 85
(see Chapters 1 and 2).
- STANAG 3281, *Personnel Locator Beacons*, 3 Apr 78
(see Chapters 1, 3, and 4).
- STANAG 3570, *Drop Zones and Extraction Zones--Criteria and Markings*, 26 Mar 86
(see Chapters 2 and 6).
- STANAG 3619, *Helipad Marking*, 10 Jul 80
(see Chapter 4).

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

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Chapter 1

Introduction

Army pathfinders mainly provide navigational aid and advisory services to military aircraft in areas designated by supported unit commanders. The pathfinders' secondary missions include providing advice and limited aid to units planning air assault or airdrop operations.

EMPLOYMENT

1-1. The pathfinders provide navigational aid and air traffic advisories for Army aircraft. This occurs at any phase of an air assault or ground operation that requires sustained support by Army aircraft. The commander employs pathfinders on a short-term basis for some missions. He can redeploy the pathfinders after they complete a major troop lift or airdrop.

PRIMARY

1-2. Ideally, the commander assigns a pathfinder team to each combat aviation battalion. This enhances the relationship between aviators and pathfinders, who have to work well together and understand each other to complete a mission successfully. Aviators and pathfinders must maintain a good working relationship, despite the limited number of pathfinder units and the assignment of pathfinder-coded positions to ground units.

1-3. Many units might have no trained pathfinder assets. In this case, higher headquarters must temporarily assign pathfinder assets from an external source to train supported unit personnel and oversee the conduct of pathfinder operations.

1-4. Non-pathfinder-qualified Soldiers receive training from the pathfinders and form a company-level pathfinder team. Once trained, the team provides navigational aid, air traffic advisories, and any other relevant information. Around the clock, the pathfinder team supports any type of air movement or resupply operation conducted by or for the ground unit and supported by an aviation unit.

1-5. Trained, equipped pathfinders select, mark, improve, and control landing sites. Engineers in direct support (DS) of lifted ground units may help pathfinders improve landing zones (LZs). In most situations, pathfinders perform two or more of these jobs at the same time. In each case, they start out by setting up ground-to-air radio communications. Combat lifesaver-qualified and emergency medical technician (EMT)-qualified pathfinders also supplement internal medical support.

SECONDARY

1-6. When not performing duties for supported units, pathfinders remain with their equipment, near and in communication with the supported ground unit command post (CP). While pathfinders await further missions, the parent or supported CP may task them to help control the aviation unit base airfield; to perform minor demolition work; or, in staff sections, to perform map and aerial photographic work. However, before the pathfinders perform secondary missions, they must train and perform routine maintenance on their equipment.

CAPABILITIES

- 1-7. Appropriately equipped and trained pathfinders—
- Reconnoiter areas selected by supported unit commanders.
 - Select helicopter land zones (HLZs) and drop zones (DZs).
 - Infiltrate areas of operation by foot, vehicle, watercraft, or air.
 - Rappel, fast rope, or parachute from aircraft.
 - Prepare HLZs and DZs.
 - Establish and operate visual and electronic navigation aids.
 - Remove minor obstacles.
 - Use ground-to-air (GTA) radio communications to guide pilots and advise them of air traffic within the area of operations (AO).
 - Coordinate directly with fire support units and keep pilots informed about friendly mortar and artillery fires.
 - Provide technical assistance in assembling supplies, equipment, and troops before loading the aircraft for deployment to HLZs and DZs.
 - Advise and provide limited physical assistance in preparing and positioning supplies, equipment, and troops for air movement.
 - Conduct limited chemical, biological, radiological, or nuclear (CBRN) monitoring and surveying of designated areas.
 - Provide limited weather observations, to include wind velocity and direction, cloud cover, visibility, and approximate cloud ceiling.
 - In the absence of a special tactics team (STT), by agreement with the United States Air Force (USAF), operate DZs and airfields for USAF aircraft.
 - Survey DZs for use by USAF and Army aircraft. In this situation, pathfinders might require USAF-compatible ultra high frequency (UHF) or very high frequency (VHF) radios. Aviators and pathfinders coordinate to make sure everyone knows the ground marking and radio procedures.

LIMITATIONS

- 1-8. Pathfinders require augmentation when they guide aircraft or perform other, related primary tasks such as the following:
- Provide security.
 - Remove major obstacles.
 - Recover and assemble equipment and supplies.
 - Operate additional radio nets and telephones.
 - Transport equipment.
 - Conduct detailed CBRN monitoring and surveying.

EQUIPMENT

- 1-9. Pathfinders use a variety of equipment. Though the aviation unit standing operating procedures (SOP) may specify the type of equipment pathfinders will use, the mission dictates what specific items of equipment the pathfinders will take on the operation.

NAVIGATION AIDS

- 1-10. Pathfinders use navigation aids to help aviators find and identify an exact area.