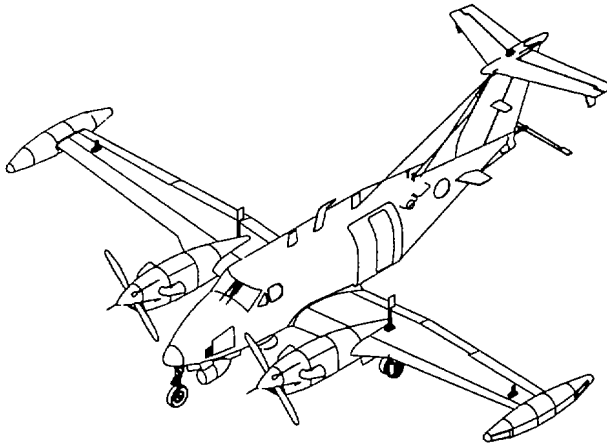


TECHNICAL MANUAL
OPERATOR'S MANUAL
FOR
ARMY RC-12K AIRCRAFT

NSN 1510-01-235-5839



DISTRIBUTION STATEMENT A. Approved
for public release; distribution is unlimited.

This copy is a reprint which includes
current pages from Changes 1 and 2.

HEADQUARTERS, DEPARTMENT
OF THE ARMY
30 June 1992

WARNING DATA

TABLE OF CONTENTS

INTRODUCTION

DESCRIPTION AND
OPERATION

AVIONICS

MISSION EQUIPMENT

OPERATING LIMITS AND '
RESTRICTIONS

WEIGHT/BALANCE AND
LOADING

PERFORMANCE DATA

NORMAL PROCEDURES

EMERGENCY
PROCEDURES

REFERENCES

ABBREVIATIONS AND
TERMS

ALPHABETICAL INDEX

TECHNICAL MANUAL

No. 55-1510-222-10

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., 30 June 1992

Operator's Manual
ARMY MODELS RC-12K

REPORTING OR ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of any way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual directly to: Commander, U.S. Army Aviation and Missile Command, ATTN: AMSAM-MMC-LS-LP, Redstone Arsenal, AL 35898-5230. A reply will be furnished directly to you. You may also send in your comments electronically to our E-mail address at <ls-lp@redstone.army.mil>. or by fax at (205) 842-6546 or DSN 788-6546. Instructions for sending an Electronic DA Form 2028 may be found at the back of this manual immediately preceding the hard copy DA Forms 2028.

TABLE OF CONTENTS

CHAPTER 1	INTRODUCTION	1-1
Section I.	General	1-1
CHAPTER 2	AIRCRAFT AND SYSTEMS DESCRIPTION AND OPERATION	2-1
Section I.	Aircraft	2-1
Section II.	Emergency Equipment	2-19
Section III.	Engines and Related Systems	2-20
Section IV.	Fuel System	2-32
Section V.	Flight Controls	2-39
Section VI.	Propellers	2-42
Section VII.	Utility Systems	2-45
Section VIII.	Heating, Ventilation, Cooling, and Environmental Control System	2-56
Section IX.	Electrical Power Supply and Distribution System	2-62
Section X.	Lighting	2-72
Section XI.	Flight Instruments	2-75
Section XII.	Servicing, Parking, and Mooring	2-81
CHAPTER 3	AVIONICS	3-1
Section I.	General	3-1
Section II.	Communications	3-2
Section III.	Navigation	3-18
Section IV.	Radar and Transponder	3-74
CHAPTER 4	MISSION EQUIPMENT	4-1
Section I.	Mission Avionics	4-1
Section II.	Aircraft Survivability Equipment	4-1
CHAPTER 5	OPERATING LIMITS AND RESTRICTIONS	5-1
Section I.	General	5-1
Section II.	System Limits	5-1
Section III.	Power Limits	5-6
Section IV.	Loading Limits	5-8
Section V.	Airspeed Limits, Maximum and Minimum	5-8
Section VI.	Maneuvering Limits	5-10

Section VII. Environmental Restrictions	5-10
Section VIII. Other Limitations	5-11
Section IX. Required Equipment for Various Conditions of flight	5-11
CHAPTER 6 WEIGHT / BALANCE AND LOADING	6-1
Section I. General	6-1
Section II. Weight and Balance	6-1
Section III. Fuel/Oil	6-9
Section IV. Center of Gravity	6-9
Section V. Cargo Loading	6-9
Section VI. Survivability Equipment	6-11
CHAPTER 7 PERFORMANCE	7-1
CHAPTER 8 NORMAL PROCEDURES	8-1
Section I. Mission Planning	8-1
Section II. Operating Procedures and Maneuvers	8-2
Section III. Instrument Flight	8-19
Section IV. Flight Characteristics	8-19
Section V. Adverse Environmental Conditions	8-22
Section VI. Crew Duties	8-26.1
CHAPTER 9 EMERGENCY PROCEDURES	9-1
Section I. Aircraft Systems	9-1

CHAPTER 1 INTRODUCTION

Section I. GENERAL

1-1. GENERAL.

These instructions are for use by the operator(s). They apply to the RC-12K aircraft.

1-2. WARNINGS, CAUTIONS, AND NOTES.

Warnings, cautions, and notes are used to emphasize important and critical instructions. Explanatory examples are as follows:

WARNING

An operating procedure, practice, etc., which, if not correctly followed, could result in personal injury or loss of life.

CAUTION

An operating procedure, practice, etc., which, if not strictly observed, could result in damage to or destruction of equipment.

NOTE

An operating procedure, condition, etc., which is essential to highlight.

1-3. DESCRIPTION.

This manual contains the best operating instructions and procedures for the RC-12K aircraft under most circumstances. The observance of limitations, performance, and weight/balance data provided is mandatory. The observance of procedures is mandatory except when modification is required because of multiple emergencies, adverse weather, terrain, etc. Your flying experience is recognized, and therefore, basic flight principles are not included. **THIS MANUAL SHALL BE CARRIED IN THE AIRCRAFT AT ALL TIMES.**

1-4. APPENDIX A, REFERENCES.

Appendix A is a listing of official publications cited within the manual applicable to and available for flight crews.

1-5. APPENDIX B, ABBREVIATIONS AND TERMS.

Appendix B is a listing of abbreviations and terms used throughout the manual.

1-6. INDEX.

The index lists in alphabetical order, titled paragraphs, figures, and tables contained in this manual.

1-7. ARMY AVIATION SAFETY PROGRAM.

Reports necessary to comply with the safety program are prescribed in AR 385-40.

1-8. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE.

For information concerning destruction of Army materiel to prevent enemy use, refer to TM 750-2441-5.

1-9. FORMS AND RECORDS.

Army aviators flight record and aircraft maintenance records which are to be used by crew members are prescribed in DA PAM 738-751 and weight and balance manual TM 55-1500-342-23.

1-10. EXPLANATION OF CHANGE SYMBOLS.

Except as noted in this paragraph, changes to the text and tables, including new material on added pages, are indicated by a vertical line in the outer margin extending close to the entire area of the material affected. Exception: pages with emergency markings, which consist of black diagonal lines around three edges, may have the vertical line or change symbol placed along the inner margins. Symbols show current changes only. A miniature pointing hand symbol is used to denote a change to an illustration. However, a vertical line in the outer margin, rather than miniature pointing hands, is utilized when there have been extensive changes made to an illustration. Change symbols are not utilized to indicate changes in the following:

- a. Introductory material.
- b. Indexes and tabular data where the change cannot be identified.

c. Blank space resulting from the deletion of text, an illustration or a table.

d. Correction of minor inaccuracies, such as spelling, punctuation, relocation of material, etc., unless correction changes the meaning of instructive information and procedures.

1-11. AIRCRAFT DESIGNATION SYSTEM.

The designation system prescribed by AR 70-50 is used in aircraft designations as follows:

EXAMPLE RC-12K

R	-	Modified	mission	symbol
		(Reconnaissance)		
C	-	Basic mission and type	symbol	
		(Cargo)		
12	-	Design number		
K	-	Series symbol		

1-12. USE OF WORDS SHALL, WILL, SHOULD, AND MAY.

Within this technical manual the word "shall" is used to indicate a mandatory requirement. The word "should" is used to indicate a nonmandatory but preferred method of accomplishment. The word "may" is used to indicate an acceptable method of accomplishment. The word "will" is used to express a declaration of purpose and may also be used where simple futurity is required.

1-13. PLACARD ITEMS.

Where applicable, placarded items (switches, controls, etc.) are shown throughout this manual in capital letters.