

**ENSTROM 480B OPERATOR'S MANUAL
AND
FAA APPROVED
ROTORCRAFT FLIGHT MANUAL
SUPPLEMENT
SANDIA ALTITUDE DATA SYSTEM**

* * * * *

REPORT NO. 28-AC-035

HELICOPTER SERIAL NO. _____

HELICOPTER REGISTRATION NO. _____

* * * * *

THIS SUPPLEMENT MUST BE CARRIED IN THE HELICOPTER AT ALL TIMES IF EQUIPPED WITH THE SANDIA SAE5-35 (ALTITUDE DATA SYSTEM) INSTALLATION. CHAPTERS 1, 2, 3, AND 4 ARE FAA APPROVED.

FAA APPROVED BY: _____

for Joseph Smalley
CHARLES L. SMALLEY, MANAGER
CHICAGO AIRCRAFT CERTIFICATION OFFICE
CENTRAL REGION
FEDERAL AVIATION ADMINISTRATION

FAA APPROVAL DATE: FEBRUARY 16, 2010

THE ENSTROM HELICOPTER CORPORATION
2209 22ND STREET
MENOMINEE, MICHIGAN 49858-3515

Mar 9/09

INTENTIONALLY LEFT BLANK

LOG OF REVISIONS

Rev. No.	Date	FAA Approved
Original	2-16-2010	Joseph Miess

APPROVED FOR THE MANAGER
CHICAGO AIRCRAFT CERTIFICATION OFFICE
CENTRAL REGION
FEDERAL AVIATION ADMINISTRATION

INTENTIONALLY LEFT BLANK

**ROTORCRAFT FLIGHT MANUAL SUPPLEMENT
SANDIA SAE5-35 ALTITUDE DATA SYSTEM**

TABLE OF CONTENTS

<u>CHAPTER</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
	Supplement Cover Page	
	Log of Revisions	i
	Table of Contents	iii
	List of Effective Pages	v
	INTRODUCTION	INTRO-1
CHAPTER 1	OPERATING LIMITATIONS	1-1
	General.....	1-1
CHAPTER 2	NORMAL PROCEDURES	2-1
	General.....	2-1
CHAPTER 3	EMERGENCY PROCEDURES	3-1
	Electrical System Failure.....	3-1
CHAPTER 4	PERFORMANCE DATA	4-1
	General.....	4-1
CHAPTER 5	RESERVED.....	5-1
CHAPTER 6	WEIGHT/BALANCE AND LOADING.....	6-1
	General.....	6-1
CHAPTER 7	SYSTEM DESCRIPTION AND OPERATION.....	7-1
	System Description	7-1
	Operation – AIM Function	7-1

INTENTIONALLY LEFT BLANK

LIST OF EFFECTIVE PAGES

<u>PAGE</u>	<u>DATE</u>	<u>PAGE</u>	<u>DATE</u>
i	Mar 9/09		
ii	Mar 9/09		
iii	Mar 9/09		
iv	Mar 9/09		
v	Mar 9/09		
vi	Mar 9/09		
INTRO-1	Mar 9/09		
INTRO-2	Mar 9/09		
1-1	Mar 9/09		
1-2	Mar 9/09		
2-1	Mar 9/09		
2-2	Mar 9/09		
3-1	Mar 9/09		
3-2	Mar 9/09		
4-1	Mar 9/09		
4-2	Mar 9/09		
6-1	Mar 9/09		
6-2	Mar 9/09		
7-1	Mar 9/09		
7-2	Mar 9/09		

INTENTIONALLY LEFT BLANK

INTRODUCTION

Intro-1. General

This supplement contains the operating instructions, procedures, and limitations for the Sandia SAE5-35 Altitude Data System. The supplement is divided into two basic parts, the FAA approved RFM Supplement and Supplemental Data provided by the Enstrom Helicopter Corporation (Enstrom). Chapters 1, 2, 3, and 4 make up the FAA approved RFM Supplement. It is required by Federal Regulations that this supplement be carried in the helicopter at all times if the Sandia SAE5-35 Altitude Data System is installed.

For additional information regarding the supplement format and text emphasis, refer to the Basic Flight Manual.

INTENTIONALLY LEFT BLANK

CHAPTER 1. OPERATING LIMITATIONS

1-1. General.

1. Refer to the basic RFM.

INTENTIONALLY LEFT BLANK

CHAPTER 2. NORMAL PROCEDURES

2-1. General

1. Refer to the basic RFM.

INTENTIONALLY LEFT BLANK

CHAPTER 3. EMERGENCY PROCEDURES

3-1. Electrical System Failure

1. Refer to the basic RFM.

INTENTIONALLY LEFT BLANK

CHAPTER 4. PERFORMANCE DATA

4-1. General

1. Refer to the basic RFM.

INTENTIONALLY LEFT BLANK

CHAPTER 6. WEIGHT/BALANCE AND LOADING**6-1. General**

1. This installation is included in the basic aircraft weight. Refer to the basic RFM.

INTENTIONALLY LEFT BLANK

CHAPTER 7. SYSTEM DESCRIPTION AND OPERATION

7-1. System Description

1. The Sandia SAE5-35 is a solid state altitude data system (blind encoder) that converts pressure altitude into a digital output. The data output is referenced to 29.92 in Hg (1013 Millibars). The SAE5-35 outputs altitude data via Gillham Grey Code or two independent RS232 digital outputs to Mode C transponders.

2. The SAE5-35 encoder automatically provides altitude data to the transponder when the transponder is operating in Mode C.

3. Power to the SAE5-35 encoder is provided via the **ENC DR** circuit breaker (CB) (2 Amp) located on the lower left side of the center pedestal.

7-2. Operation – AIM Function

1. The SAE5-35 also has an “Altitude In-flight Monitoring” (AIM) function that informs the pilot if the aircraft deviates from a pilot’s selected altitude. This feature has no effect on and is independent of the pressure altitude data that is output to the transponder. The annunciator portion has two annunciators labeled **‘ALT’** and **‘SET’**.

2. To operate the AIM function, use the following procedure (as specified in the SAE5-35 Pilot’s Guide).

a. When you have arrived at your desired cruise altitude, press the AIM **‘SET’** pushbutton. The aircraft’s current altitude is stored in memory when the pushbutton is released. Both annunciators should illuminate for approximately one second when the button is released to test the annunciator bulbs. Do not use the AIM function if both bulbs do not briefly illuminate. After one second the **‘ALT’** annunciator will extinguish and **‘SET’** annunciator will stay illuminated, telling you that an altitude is set in the SAE5-35’s memory.

b. Should the aircraft deviate 100' or more from your selected altitude, the **'ALT'** annunciator will illuminate. Refer to your primary altimeter to determine if you are high or low and correct to the proper altitude. Correcting the aircraft's altitude will extinguish the **'ALT'** annunciator.

c. If the aircraft deviates 200 feet or more, the **'ALT'** annunciator will flash at a rate of approximately twice per second. Again, refer to the aircraft's primary altimeter and correct to the proper altitude.

d. If you change altitudes or barometric setting in your altimeter and readjust your aircraft's altitude, the AIM function will need to be reset. To reset the AIM, simply press the pushbutton once. This will turn the AIM function off. Then press it a second time to **'SET'** the new altitude.

e. To turn off the AIM function, simply press the **'SET'** pushbutton a second time. The **'SET'** annunciator will extinguish.