ENSTROM 480B OPERATOR'S MANUAL

AND

FAA APPROVED

ROTORCRAFT FLIGHT MANUAL

SUPPLEMENT

MD200 SERIES CDI

* * * * *

REPORT NO. 28-AC-079

HELICOPTER SERIAL NO._____

HELICOPTER REGISTRATION NO._____

* * * * *

THIS SUPPLEMENT MUST BE CARRIED IN THE HELICOPTER AT ALL TIMES IF EQUIPPED WITH THE MD200 SERIES CDI INSTALLATION. CHAPTERS 1, 2, 3, AND 4 ARE FAA APPROVED.

FAA APPROVED_____

for: MANAGER, SOUTHWEST FLIGHT TEST SECTION, AIR-713
FEDERAL AVIATION ADMINISTRATION
FT. WORTH, TX

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LOG OF REVISIONS

Rev. No.	Date	FAA Approved
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Approved by the Manager,
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Ft. Worth, TX

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ROTORCRAFT FLIGHT MANUAL SUPPLEMENT

MD200 SERIES CDI

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INTRODUCTION

Intro-1. General

This supplement contains the operating instructions, procedures, and limitations for the MD200 Series CDI Installation. Approved models include MD200-306 and MD200-706. Differences between the variants are explained, where applicable.

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 MD200 Series CDI is installed.

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

Abbreviations noted in this supplement are listed in Table Intro-1.

Table Intro-1. List of Abbreviations

BC	Backcourse
CDI	Course Deviation Indicator
FAA	Federal Aviation Administration
GPS	Global Positioning System
GS	Glideslope
NAV	Navigation
OBS	Omni Bearing Selector
RFM	Rotorcraft Flight Manual
VHF	Very High Frequency
VOR	VHF Omni-Directional Range

CHAPTER 1. OPERATING LIMITATIONS

1-1. General

Refer to the basic RFM.

CHAPTER 2. NORMAL PROCEDURES

2-1. General

Refer to the basic RFM.

CHAPTER 3. EMERGENCY PROCEDURES

3-1. Electrical System Failure

Refer to the basic RFM.

CHAPTER 4. PERFORMANCE DATA

4-1. General

Refer to the basic RFM.

CHAPTER 6. WEIGHT/BALANCE AND LOADING

6-1. General

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

CHAPTER 7. SYSTEM DESCRIPTION AND OPERATION

7-1. System Description

The MD200 Series CDI is designed to interface to a NAV or GPS/NAV receiver to display VOR, localizer, and glideslope information. The system interface is shown in Figure 7-1.

The MD200 unit is located in the instrument panel. Power to the MD200 unit is provided via the **NAV** or **NAV/GPS** circuit breaker located on the left side of the center pedestal (2 Amp or 5 Amp (typical)).

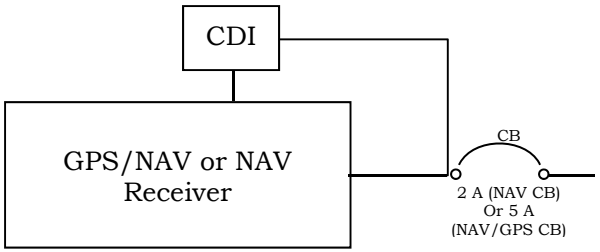

Figure 7-1. MD200 Series CDI System Block Diagram

7-2. Power-Up

The MD200 Series CDI is powered on when the avionics master switch (**AVI MSTR**) is turned on.

7-3. MD200-306 Operation with a NAV Receiver (e.g. Garmin 255A, SL30, or equivalent)

The modes of operation are as follows: (Refer to Figure 7-2)

NOTE

Ensure the NAV annunciator on the CDI is illuminated. If not illuminated, ensure power is applied to the applicable NAV source.

1. VOR Operation:

   a. Tune the NAV receiver to the desired VOR frequency. Observe that the NAV warning flag is out of view.

   b. Rotate the OBS dial to fly inbound/outbound to/from a VOR station.

2. Localizer Operation:

   a. Tune the NAV receiver to the desired localizer frequency. Observe that the localizer warning flag is concealed.

   b. Rotate the OBS dial so the localizer heading is under the lubber line. This is for reference only; it will not affect the pointer movement.

3. Glideslope Operation – The glideslope pointer provides the pilot with vertical steering information during approaches.

   a. Tune the NAV receiver to the desired localizer frequency. Observe that the glideslope (GS) warning flag is concealed.

NOTES

Illumination of the NAV annunciator on the display indicates input source from the receiver.

Illumination of the BC annunciation on the display indicates input from a NAV receiver when back course mode is enabled. Not all NAV receivers are equipped with a back course mode.

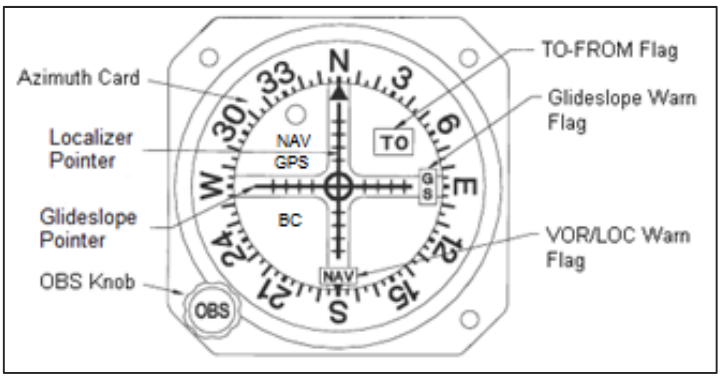

Figure 7-2. MD200-306 Display and Controls

7-4. MD200-306 Operation with a NAV/GPS Receiver (e.g. Garmin GTN Series, GNS Series, or equivalent)

1. For the modes of operation listed in steps 2-4, toggle the navigation source on the NAV/GPS receiver from GPS to VLOC. Typically, this is accomplished by pressing a CDI key on the NAV/GPS receiver. (Refer to the pilot's guide for the specific NAV/GPS receiver.) Ensure the VLOC annunciator on the CDI is illuminated (Refer to Figure 7-3).

2. VOR Operation:

   a. Tune the NAV/GPS receiver to the desired VOR frequency. Observe that the NAV warning flag is out of view.

   b. Rotate the OBS dial to fly inbound/outbound to/from a VOR station.

3. Localizer Operation:

   a. Tune the NAV/GPS receiver to the desired localizer frequency. Observe that the localizer warning flag is concealed.

   b. Rotate the OBS dial so the localizer heading is under the lubber line. This is for reference only; it will not affect the pointer movement.

4. Glideslope Operation – The glideslope pointer provides the pilot with vertical steering information during approaches.

   a. Tune the NAV/GPS receiver to the desired localizer frequency. Observe that the glideslope (GS) warning flag is concealed.

5. GPS Operation:

   a. Select GPS as the navigation source on the interfaced navigation receiver. (For example, for interface with the GTN 650, go to the default navigation page and press the **CDI** key to toggle the navigation source from VLOC to GPS, as required.) (Refer to the pilot's guide for the specific NAV/GPS receiver.)

1. The GPS annunciator on the MD200 display will illuminate.

b. Enter a flight plan in the GPS navigation receiver.

c. Rotate the OBS dial to put the course under the lubber line (for reference).

d. Left or right guidance indications are provided by the localizer pointer position relative to the lubber line.

NOTES

Illumination of the NAV annunciator on the display indicates VLOC input source from the NAV/GPS receiver.

Illumination of the GPS annunciator on the display indicates GPS input source from the NAV/GPS receiver.

7-5. MD200-706 Operation with a NAV Receiver (e.g. Garmin GNC 255A, SL30 or equivalent)

The modes of operation are as follows (Refer to Figure 7-3)

NOTE

Ensure the NAV annunciator on the CDI is illuminated. If not illuminated, ensure power is applied to the applicable NAV source.

1. VOR Operation:

a. Tune the NAV receiver to the desired VOR frequency. Observe that the NAV/VOR pointer is in the viewing area of the dial.

b. Rotate the OBS dial to fly inbound/outbound to/from a VOR station.

2. Localizer Operation:

   a. Tune the NAV receiver to the desired localizer frequency. Observe that the vertical pointer is fully in view.

   b. Rotate the OBS dial so the localizer heading is under the lubber line. This is for reference only; it will not affect the pointer movement.

3. Glideslope Operation – The glideslope pointer provides the pilot with vertical steering information during approaches.

   a. Tune the NAV receiver to the desired localizer frequency. Observe that the glideslope pointer is in view.

NOTE

Illumination of the NAV annunciator on the display indicates input source from the NAV receiver.

7-6. MD200-706 with a NAV/GPS Receiver (e.g. Garmin GTN Series, GNS Series, or equivalent)

1. For the modes of operation listed in steps 2-4, toggle the navigation source on the NAV/GPS receiver from GPS to VLOC. Typically, this is accomplished by pressing a CDI key on the NAV/GPS receiver. (Refer to the pilot's guide for the specific NAV/GPS receiver.) Ensure the VLOC annunciator on the CDI is illuminated (Refer to Figure 7-3).

2. VOR Operation:

   a. Tune the NAV/GPS receiver to the desired VOR frequency. Observe that the NAV/VOR pointer is in the viewing area of the dial.

   b. Rotate the OBS dial to fly inbound/outbound to/from a VOR station.

3. Localizer Operation:

   a. Tune the NAV/GPS receiver to the desired localizer frequency. Observe that the vertical pointer is fully in view.

   b. Rotate the OBS dial so the localizer heading is under the lubber line. This is for reference only; it will not affect the pointer movement.

4. Glideslope Operation – The glideslope pointer provides the pilot with vertical steering information during approaches.

   a. Tune the NAV/GPS receiver to the desired localizer frequency. Observe that the glideslope pointer is in view.

5. GPS Operation:

   a. Select GPS as the navigation source on the interfaced navigation receiver. (For example, for interface with the GTN series, go to the default navigation page and press the **CDI** key to toggle the navigation source from VLOC to GPS, as required.) (Refer to the pilot's guide for the specific NAV/GPS receiver.)

      1. The GPS annunciator on the MD200 display will illuminate.

   b. Enter a flight plan in the GPS navigation receiver.

   c. Rotate the OBS dial to put the course under the lubber line (for reference).

   d. Left or right guidance indications are provided by the localizer pointer position relative to the lubber line.

NOTES

Illumination of the VLOC annunciator on the display indicates VLOC input source from the NAV/GPS receiver.

Illumination of the GPS annunciator on the display indicates GPS input source from the NAV/GPS receiver.

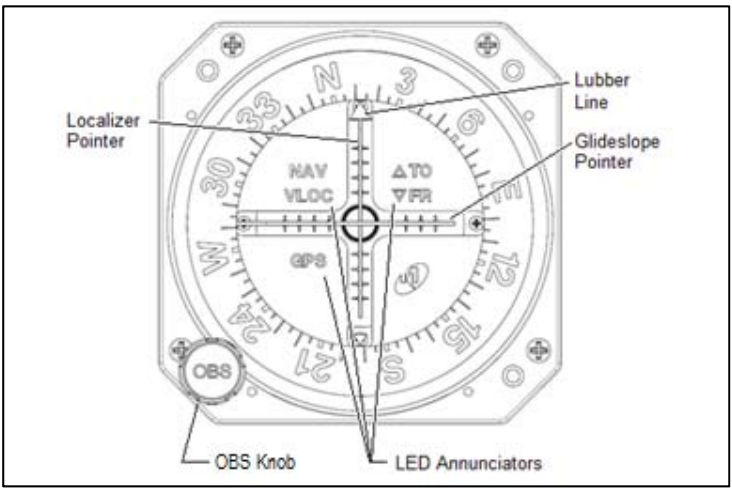

Figure 7-3. MD200-706 Display and Controls

7-7. Annunciator Dimming

For night operation, the display brightness can be adjusted with the **PNL INST** dimmer.