



AIRCRAFT MAINTENANCE MANUAL

AHRS COMPUTER - ADJUSTMENT/TEST

EFFECTIVITY: AIRCRAFT WITH AHRS AH-800

1. General

- A. This section gives the procedures to configure the AHRS Computer.
- B. The procedures in this section are given in the sequence below. The tasks identified with (♦) are part of the Scheduled Maintenance Requirements Document (SMRD).

TASK NUMBER	DESCRIPTION	EFFECTIVITY
34-21-01-860-801-A	AHRS COMPUTER - CONFIGURATION	AIRCRAFT WITH AHRS AH-800



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TASK 34-21-01-860-801-A

EFFECTIVITY: AIRCRAFT WITH AHRS AH-800

2. AHRS COMPUTER - CONFIGURATION

A. General

- (1) This task gives the procedures to configure the AHRS Computer.

NOTE: This task must be done only if:

- The Memory Module is replaced.
- The AH-800 Mounting tray is removed or replaced.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-03/100	- COMPONENT LOCATION
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 34-21-00-700-805-A/500	AHRS ATTITUDE INDICATION CHECK

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
223	223LZ - Maintenance panel	Cockpit

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 305	AHRS Configuration Software version 1.8 (DOS version)	To configure the computer	
GSE 528	AHRS Configuration Software (Windows version)	To configure the computer	
GSE 130	Laptop Computer	To run the software to configure the computer	
GSE 135	Interface Test Box, Maintenance Panel/PC	To interface the PC and the AHRS through the maintenance panel	

E. Auxiliary Items

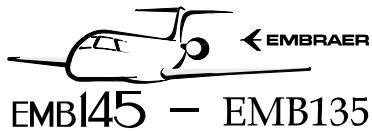
Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable



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H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Beside the aircraft

I. Preparation

SUBTASK 841-002-A

- (1) Make sure that the aircraft is in the on-the-ground condition.
- (2) Open access door 223LZ ([AMM MPP 06-41-03/100](#)).
- (3) Use the cable (AGE 00646) to connect the interface box (GSE 135) to the maintenance panel.
- (4) Use the cable (AGE 00647) to connect the PC comm port to the AHRS section connector at the interface box.
- (5) Energize the aircraft ([AMM TASK 20-40-01-860-801-A/200](#)).
- (6) On the circuit breaker panel, open the AHRS 1 (Location tip: ESSENTIAL DC BUS 1/NAV/AHRS 1) or AHRS 2 (Location tip: DC BUS 2/NAV/AHRS 2) circuit breaker.
- (7) On the ELECTRICAL panel, on the overhead panel, push the BACKUP pushbutton (striped bar comes on).

J. Configuration ([Figure 501](#))

SUBTASK 860-002-A

- (1) On GSE 135, set the rotary selector to the position related to the AHRS to be configured (AHRS 1 or AHRS 2).
- (2) On GSE 135, turn the memory access switch of the related AHRS to the ON position (ground).
- (3) On the circuit breaker panel, close the AHRS 1 (Location tip: ESSENTIAL DC BUS 1/NAV/AHRS 1) or AHRS 2 (Location tip: DC BUS 2/NAV/AHRS 2) circuit breaker.
- (4) Energize the PC.

NOTE: (AHRS Configuration Software DOS version) The MS-DOS mode is necessary for the AHRS Configuration Software DOS version to operate. Select: "Restart the computer in the MS-DOS mode" (do not use the MS-DOS prompt icon of the Windows Desktop).

- (5) Wait for the AHRS to complete the alignment procedure.
- (6) Start the AHRS Configuration Software.
 - (a) (AHRS Configuration Software DOS version) Go to the directory where the AHRS Configuration Software is installed. Type "MA CFSMO" and then push the ENTER key to run the AHRS installation procedure on the PC.

NOTE: If the program is installed in the "C:\AHRS" directory, type "cd C:\AHRS" to go to this directory.

- (b) (AHRS Configuration Software Windows version) Click on the link to the AHRS Configuration Software.

NOTE: Typically the name of the software link is "pcma_config" on the Start menu.

- (7) The PC will show the P/N of the software and information about copyright.
- (8) Go to the main menu.
- (9) (AHRS Configuration Software DOS version) If the AHRS Memory Module installed is blank, do the steps that follow:
- From the main menu, select the MEMORY READ/WRITE option with the arrow keys and, then push the ENTER key.
 - Select the FORMAT field with the arrow keys and, then push the ENTER key.
 - In the FORMAT sub-menu, select 8-bit Words and then push the ENTER key.
 - Push the ESC key to go out from the FORMAT sub-menu.
 - Select the EDIT field with the arrow keys and, after that, push the ENTER key.
 - Put the cursor in the ADDRESS field with the arrow keys and type 00X00700020.
 - In the LENGTH field, type 025 and then push the ENTER key.
 - Put the cursor in the last four digits of the last line, type ff ff and, after that, push CTRL and ENTER at the same time.
 - Select the CONTINUE option with the arrow keys and, after that, push the ENTER key.
 - Push the ESC key as many times as necessary until you go back to the main menu.
- (10) In the main menu, choose MEMORY ACCESS TESTS option.
- (11) In the MEMORY ACCESS TESTS, choose the INTERFACE TEST option.
- Make sure that the tests for memory access writing and reading passed.
- (12) Go back to the main menu.
- (13) From the main menu, choose the CONFIGURATION option.
- (14) In CONFIGURATION, choose the EDIT CONFIGURATION option.
- (15) (AHRS Configuration Software Windows version) A warning message will be displayed. Click on the "Yes" button.
- (16) (AHRS Configuration Software DOS version) Configure the AHRS as follows ([Figure 502](#)):
- On the EDIT CONFIGURATION page, push the ENTER key.

WARNING: INCORRECT CHOICE IN THIS STEP CAN CAUSE INVERSION IN THE AHRS ORIENTATION.

- (b) To configure AHRU#1, choose SDI parameter AHRS#1 and to configure AHRU#2, choose SDI parameter AHRS#2.

NOTE: AHRU#1 is the AHRS computer that is installed on the left side of the forward electronic compartment (flight direction reference). Handle Right means AHRU#1 handle pointing to the right.

AHRU#2 is the AHRS computer that is installed on the right side of the forward electronic compartment (flight direction reference). Handle Left means AHRU#2 handle pointing to the left.

- (c) On the EDIT CONFIGURATION page, push the F1 key to write the configuration on the Memory Module. The program tells that the memory module configuration will be erased and rewritten.
(d) Choose the option to continue the procedure.

- (17) (AHRS Configuration Software Windows version) Configure the AHRS as follows:

WARNING: INCORRECT CHOICE IN THIS STEP CAN CAUSE INVERSION IN THE AHRS ORIENTATION.

- (a) To configure AHRU#1, choose AHRS#1 from the drop down menu and, to configure AHRU#2, choose AHRS#2 from the drop down menu.

NOTE: AHRU#1 is the AHRS computer that is installed on the left side of the forward electronic compartment (flight direction reference). Handle Right means AHRU#1 handle pointing to the right.

AHRU#2 is the AHRS computer that is installed on the right side of the forward electronic compartment (flight direction reference). Handle Left means AHRU#2 handle pointing to the left.

- (b) Click on the "Write" button.

- (c) A warning message will be displayed. Click on the "Yes" button.

- (18) If the PC shows that the configuration was not done, make sure that the memory module on the mounting tray is correctly attached or change the memory module and do the AHRU configuration again.

- (19) If the PC shows that the configuration was correctly written in the memory, get access to the main menu.

- (20) In the main menu, choose QUIT option.

- (21) Turn off the PC.

- (22) On GSE 135, put the related memory access switch to the OFF position.

- (23) On GSE 135, set the rotary switch to the OFF position.

- (24) Disconnect the interface box from the maintenance panel and from the PC.



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- (25) On the circuit breaker panel, open the AHRS 1 (Location tip: ESSENTIAL DC BUS 1/NAV/AHRS 1) or AHRS 2 (Location tip: DC BUS 2/NAV/AHRS 2) circuit breaker.
- (26) On the circuit breaker panel, close the AHRS 1 or AHRS 2 circuit breaker.
- (27) On the ELECTRICAL panel, on the overhead panel, push the BACKUP pushbutton (striped bar comes off).

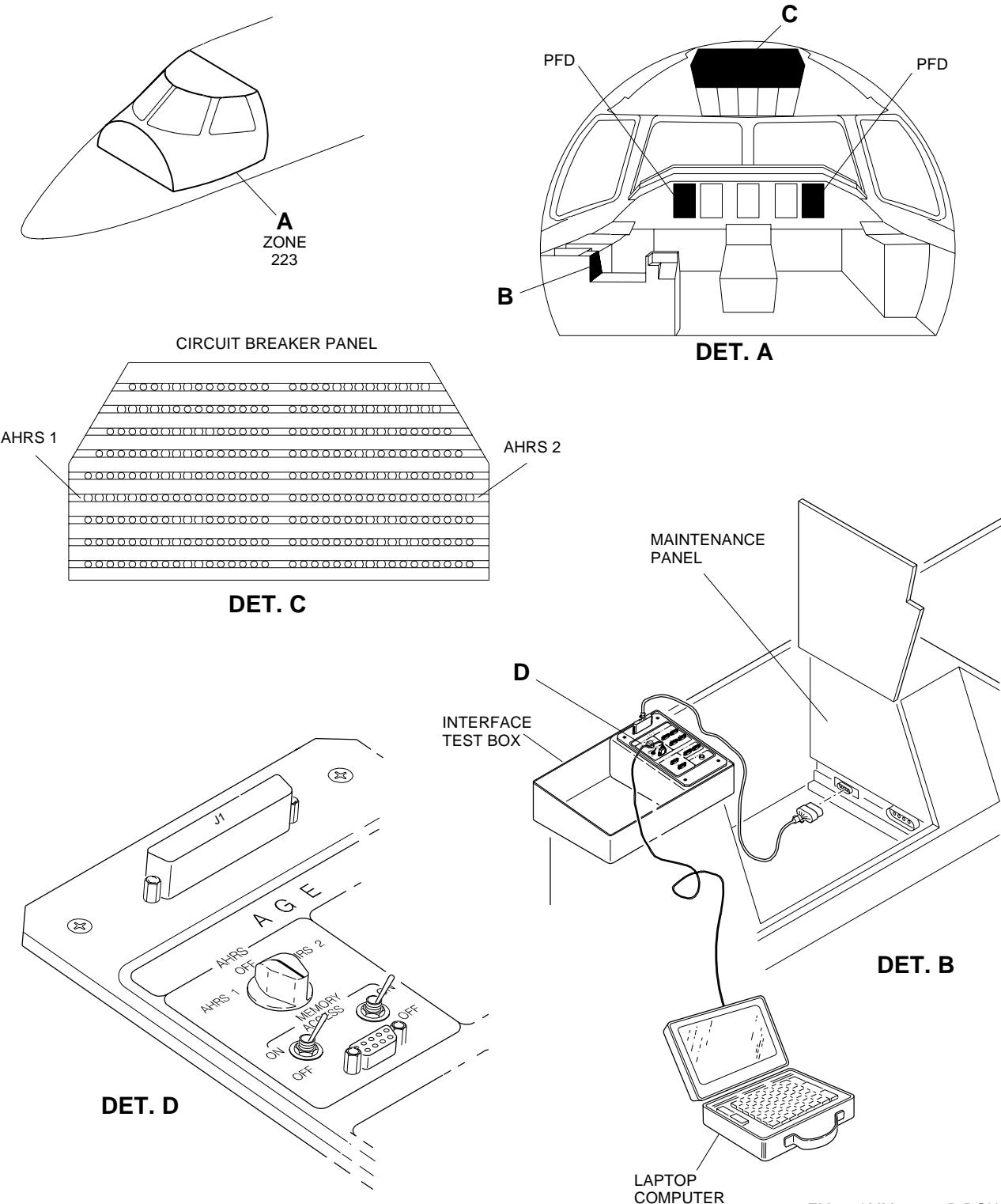
K. Follow-on

SUBTASK 842-002-A

WARNING: THIS STEP IS MANDATORY TO MAKE SURE THAT THE AHRS ORIENTATION IS NOT INVERTED.

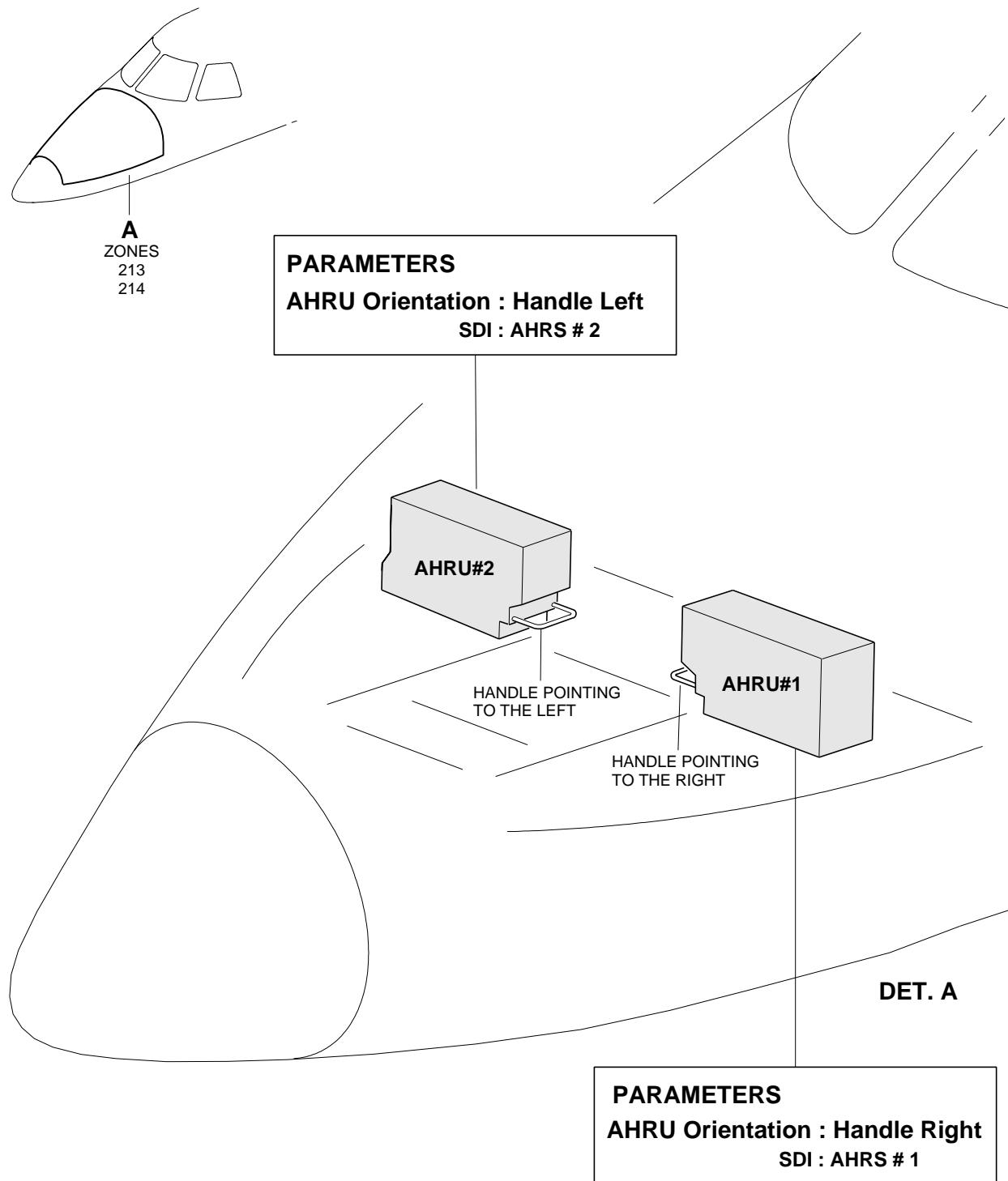
- (1) Do the AHRS Attitude Indication Check ([AMM TASK 34-21-00-700-805-A/500](#)).
- (2) Deenergize the aircraft ([AMM TASK 20-40-01-860-801-A/200](#)).
- (3) Close access door 223LZ ([AMM MPP 06-41-03/100](#)).

EFFECTIVITY: AIRCRAFT WITH AHRS AH-800
AHRS Computer - Configuration
Figure 501



EM145AMM340214D.DGN

EFFECTIVITY: AIRCRAFT WITH AHRS AH-800
Configuration of AHRU Orientation and SDI Parameters
Figure 502



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