FMS (HONEYWELL) - ADJUSTMENT/TEST

EFFECTIVITY: AIRCRAFT WITH FMS HONEYWELL

1.   General

    A.   This section gives the procedures to do the test of the flight management system.

    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
34-61-00-700-801-A	FLIGHT MANAGEMENT SYSTEM (FMS) - OPERATIONAL TEST	AIRCRAFT WITH FMS HONEYWELL

TASK 34-61-00-700-801-A
EFFECTIVITY: AIRCRAFT WITH FMS HONEYWELL

2.   FLIGHT MANAGEMENT SYSTEM (FMS) - OPERATIONAL TEST

    A.   General

        (1)   This task gives the procedure to do the operational test of the flight management system (FMS).

        (2)   It is possible that you cannot read the Liquid Crystal Display at temperatures of less than -20°C. If necessary, preheat the cockpit as given in TASK 21-00-00-860-804-A.

    B.   References

REFERENCE	DESIGNATION
AMM 34-56-00/1	-
AMM SDS 23-81-00/1	
AMM SDS 32-30-00/1	
AMM SDS 34-15-00/1	
AMM SDS 34-21-00/1	
AMM SDS 34-22-00/1	
AMM SDS 34-27-00/1	
AMM SDS 34-32-00/1	
AMM SDS 34-41-00/1	
AMM SDS 34-43-00/1	
AMM SDS 34-51-00/1	
AMM SDS 34-52-00/1	
AMM SDS 34-53-00/1	
AMM SDS 34-61-00/1	
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 34-61-00-470-801-A/200	NAVIGATION DATA BASE - LOADING

    C.   Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
223		Cockpit
224		Cockpit

    D.   Tools and Equipment
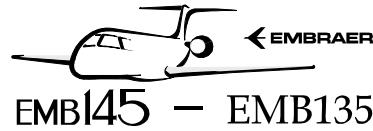
        Not Applicable

    E.   Auxiliary Items

        Not Applicable

    F.   Consumable Materials

        Not Applicable

G.   Expandable Parts

Not Applicable

H.   Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Cockpit

I.   Preparation

SUBTASK 841-002-A

(1)   Put the aircraft in the ground configuration (AMM SDS 32-30-00/1).

(2)   Energize the aircraft with the External DC Power Supply (AMM TASK 20-40-01-860-801-A/200).

(3)   Make sure that the Systems below are serviceable and on:

–   Radio Management System (AMM SDS 23-81-00/1).

–   ADC System (AMM SDS 34-15-00/1).

–   AHRS (AMM SDS 34-21-00/1) or IRS (AMM SDS 34-27-00/1).

–   EFIS (AMM SDS 34-22-00/1).

–   VOR/ILS/GS/MB (AMM SDS 34-32-00/1).

–   GPWS/Windshear (AMM SDS 34-41-00/1).

–   TCAS (AMM SDS 34-43-00/1).

–   DME System (AMM SDS 34-51-00/1).

–   Transponder System (AMM SDS 34-52-00/1).

–   ADF System (AMM SDS 34-53-00/1).

–   GPS (AMM 34-56-00/1).

–   FMS (AMM SDS 34-61-00/1).

J.   FMS Test Procedures (Figure 501) (Figure 502) (Figure 503)

SUBTASK 710-002-A

(1)   Do the check of the NAV IDENTIFICATION, on the control display unit (CDU), as follows:

(a)   Push the NAV mode key.

(b)   Push the NEXT function key.

(c)   Push the IDENT (2L) left line select key.

(d)   The NAV IDENT 1/1 page, that is shown when power is first applied, shows these indications:
Result:

<u>1</u>   The computer software identifier NZ4.8 or NZ5.2 (Pentium processor).

2   The correct date and time.

3   The active navigation data base (NDB) and its cycle.

NOTE: If the aircraft data base is not valid, load the Navigation data base
(AMM TASK 34-61-00-470-801-A/200).

4   The version, size, and region of the navigation data base.

(e)   Make sure that the scratchpad shows no message.

(2)   Do the Radio Configuration Setup, on the Control Display Unit (CDU), as follows:

(a)   Push the NAV mode key.

(b)   Push the NEXT function key.
Result:
1   The CDU shows the NAV INDEX 2/2 page.

(c)   Push the MAINTENANCE (2R) right line select key.

(d)   Push the NEXT function key.
Result:
1   The CDU shows the MAINTENANCE 2/3 page.

(e)   Push the SETUP (4L) left line select key.
Result:
1   The CDU shows the FMS SETUP page.

(f)   Push the RADIO (1L) left line select key.
Result:
1   The CDU shows the RADIO CONFIG page.

(g)   Push the TYPE (2L) left line select key to choose the radios.

(h)   Push the NO (3L) left line select key to choose the numbers of the radios.

(i)   Push the NEXT function key to choose the next radio:

•   Choose ADF1, ADF2, COM1, COM2, NAV1, NAV2, XPDR1 and, if
applicable, XPDR2.

(j)   Push the SAVE (1L) left line select key.

(k)   Push the NAV mode key.

(l)   Push the POS SENSOR (4L) left line select key.

(m)   On RMU 1/2, choose the local frequency for VOR/DME 1.

(n)   On the Control Display Unit (CDU), push the VOR/DME (4L) left line select key.
Result:
1   The CDU shows the VOR/DME 1/2 page.
2   The CDU shows the same frequency as RMU 1/2.

(o)   On the Control Display Unit (CDU), push the NEXT function key.

(p)   Do the steps (m) and (n) above again for VOR/DME 2.

(q)   On the Control Display Unit (CDU), push the NAV mode key.

(r)   Push the POS SENSOR (4L) left line select key.

(s)   Push the NAV mode key.

(t)   Push the TUNE (4R) right line select key.

(u)   On the scratchpad, enter the information as follows:

   •   Choose the local frequency for NAV, COM, and ADF.

   •   Choose a code for XPDR.

   Result:

   <u>1</u>   RMU 1/2 shows the same information as that chosen in step (u).

<u>NOTE:</u> The automatic tune function can turn through the FMS Enabled/Disabled key in the memory NAV page, at the RMU. If the system is disabled, the RMU does not transfer the tune function to the FMS. The message "UNABLE TUNE REQUEST" is shown if a person tries to tune a new frequency through the CDU.

(3)   Do the Position Sensor Failure test as follows:

(a)   On the Control Display Unit (CDU), push the NAV mode key.

(b)   Push the NEXT function key.

(c)   Push the MAINTENANCE (2R) right line select key.

(d)   Push the NEXT function key.
   Result:

   <u>1</u>   The CDU shows the MAINTENANCE FAILED SENSORS page.

(e)   On the circuit breaker panel, open these circuit breakers:

   •   AHRS 1/2 or IRS 1/2 as applicable

   •   GPS 1

   •   DME 1/2

   •   ADC 1/2

   •   VOR 1/2

   Result:

   <u>1</u>   On the CDU, the MAINTENANCE FAILED SENSORS page shows all the failed sensors.

(f)   Close the circuit breakers opened in step (e).
   Result:

   <u>1</u>   On the CDU, the MAINTENANCE FAILED SENSORS page does not show failed sensors.

(g)   On the Control Display Unit (CDU), push the NEXT function key.
   Result:

   <u>1</u>   The CDU shows the ACTIVE HDG MOD in the MAG position.

      <u>NOTE:</u> If the ACTIVE HDG MOD is not in the MAG position, push the MAG (2R) right line select key.

(4)   Do the Performance test as follows:

(a)   On the Control Display Unit (CDU), push the PERF mode key.
Result:

   1   The CDU shows the PERF INDEX page.

(b)   On the CDU, push the PERF INIT (1L) left line select key.
Result:

   1   The CDU shows the PERFORMANCE INIT 1/5 page.

   2   The CDU shows the correct aircraft tail number.

(5)   Do the Joystick test as follows:

(a)   Create a Flight Plan as follows:

- On CDU, push the FPL key.

- On scratchpad, enter a name for the flight plan and push the RECALL OR CREATE select key.

- The CDU shows the FPL 1/1 page.

- On scratchpad, enter a valid waypoint and push the ORIGIN select key.

- On scratchpad, enter a valid waypoint and push the DEST select key.

- The CDU shows the information of origin and destination.

- On scratchpad, enter a valid waypoint and push the VIA-TO select key.

- The CDU shows the added waypoint in the flight plan.

- On CDU, push the NAV key and then push the FPL LIST select key.

- The CDU shows the FLIGHT PLAN LIST 1/1 page.

- Push the select key corresponding to the just created flight plan.

- The flight plan name is shown on the scratchpad.

- Push the FPL SEL select key.

- The CDU shows the FLIGHT PLAN SELECT 1/1 page.

- Push the FPL PLAN select key and then push the ACTIVATE select key.

- The flight plan is shown on MFD1.

(b)   On MFD1, select the MFD function and then the JSTK function.

(c)   Move the FMS Joystick located on the control pedestal.
Result:

   1   On MFD1, the designator moves if the MAP format is selected.

   2   On MFD1, the flight plan moves if the FLT PLAN is selected.

(6)   (Aircraft with Dual FMS) Do steps (1),(2),(3), and (4) for the other FMS.

(7)   (Aircraft with Dual FMS) Check the FMS dual operating mode as follows:

NOTE: For the FMS operation in the Dual mode, it is necessary that:

- The software versions of the FMS navigation computers are identical.

- Navigation data base and cycle are identical.

- Custom data bases are identical.

- FMS positions are within 10 NM.

- There is an identical configuration in the installation modules.

(a) On the CDUs, push the NAV mode key and NEXT function key.
Result:
1   The CDUs show the NAV INDEX 1/2 page.

(b) On the CDUs, push the IDENT (2L) left line select key.
Result:
1   The CDUs show the NAV IDENT 1/1 page.

(c) On the CDUs, push the MAINTENANCE (4L) right line select key.
Result:
1   The CDUs show the MAINTENANCE 1/3 page.

(d) Make sure that the ACTIVE MODE and the SELECT MODE are set to DUAL.

(e) On the CDUs, push the PERF mode key.
Result:
1   The CDUs show the PERFORMANCE INIT 1/5 page (FULL PERF Mode) or 1/4 page (SPD/FF Mode).

(f) On the CDUs, push the PREV function key.
Result:
1   The CDUs show the last PERFORMANCE INIT page.

(g) On CDU1, on the scratchpad, type a new value for PASS WT (Passenger weight).

(h) On CDU1, push the PASS WT right line select key (2R) to save the new value.
Result:
1   On CDU 2, the PASS WT value is the same as on CDU 1.

(i) On CDU2, on the scratchpad, type a new value for PASS WT (Passenger weight).

(j) On CDU2, push the PASS WT right line select key (2R) to save the new value.
Result:
1   On CDU 1, the PASS WT value is the same as on CDU 2.
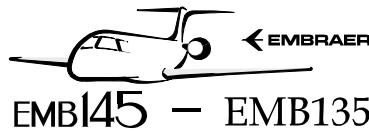
K.   Follow-on

SUBTASK 842-002-A

(1) Deenergize the aircraft (AMM TASK 20-40-01-860-801-A/200).
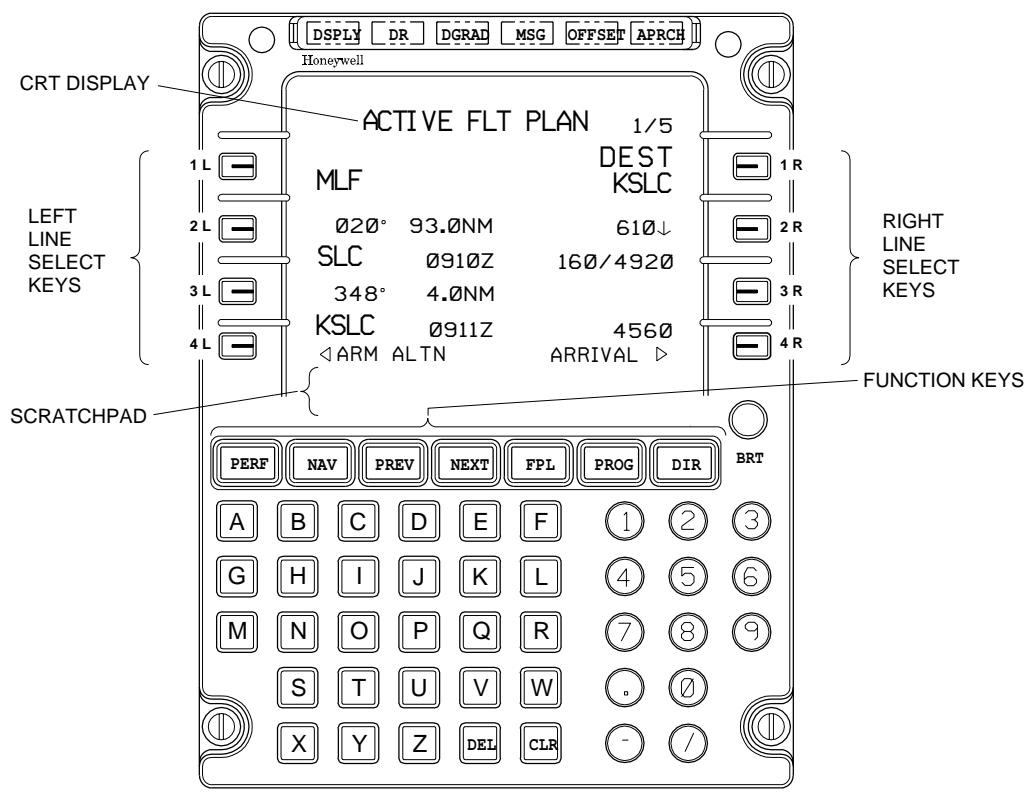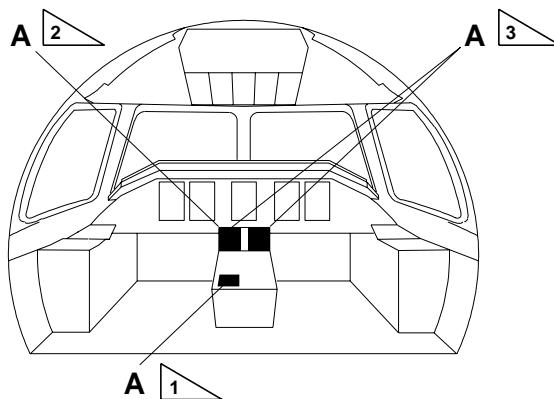
EFFECTIVITY: AIRCRAFT WITH CD-810 CONTROL DISPLAY UNIT
FMS - CDU Display
Figure 501

DET. A

AIRCRAFT WITH SINGLE FMS INSTALLED ON CONTROL PEDESTAL AFT PANEL

AIRCRAFT WITH SINGLE FMS INSTALLED ON CONTROL PEDESTAL FORWARD PANEL

AIRCRAFT WITH DUAL FMS

145AMM340217.MCE C
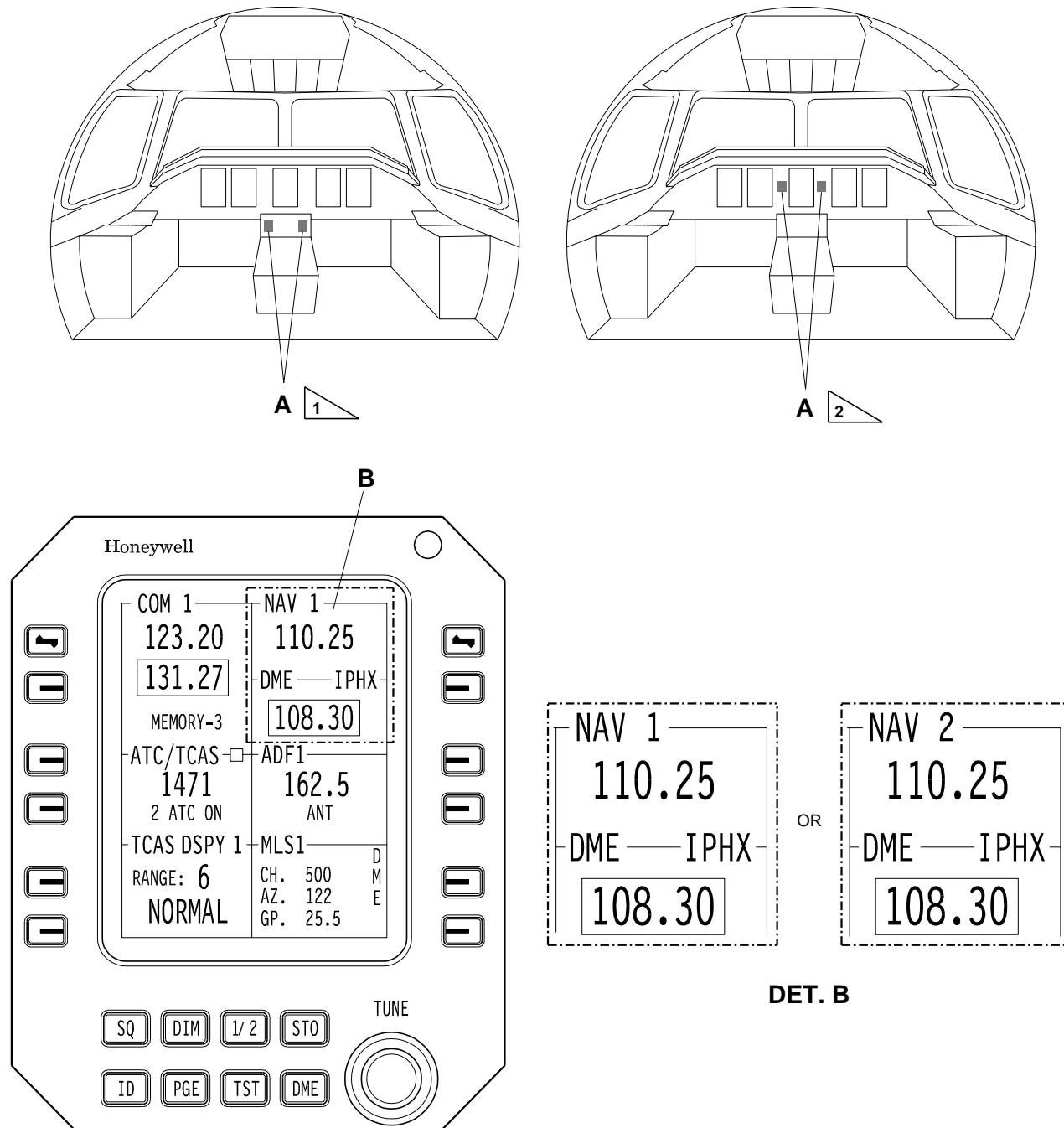
EFFECTIVITY: AIRCRAFT WITH CD-820 CONTROL DISPLAY UNIT
FMS - CDU Display
Figure 502

DET. A

1	AIRCRAFT WITH SINGLE FMS INSTALLED ON CONTROL PEDESTAL AFT PANEL
2	AIRCRAFT WITH SINGLE FMS INSTALLED ON CONTROL PEDESTAL FORWARD PANEL
3	AIRCRAFT WITH DUAL FMS

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EFFECTIVITY: AIRCRAFT WITH FMS HONEYWELL
FMS - RMU Display
Figure 503

DET. A

DET. B

| 1 | AIRCRAFT WITH RMU INSTALLED ON CONTROL PEDESTAL. |
| 2 | AIRCRAFT WITH RMU INSTALLED ON MAIN INSTRUMENT PANEL. |

145AMM340218.MCE A