



EMB145 - EMB135

AIRCRAFT  
MAINTENANCE MANUAL

LIGHTNING SENSOR SYSTEM - ADJUSTMENT/TEST

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to do the operational test of the lightning sensor system (LSS).
- 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
34-44-00-700-801-A	LIGHTNING SENSOR SYSTEM (LSS) - OPERATIONAL TEST	AIRCRAFT WITH LSS



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MAINTENANCE MANUAL

TASK 34-44-00-700-801-A

EFFECTIVITY: AIRCRAFT WITH LSS

2. LIGHTNING SENSOR SYSTEM (LSS) - OPERATIONAL TEST

A. General

- (1) This task gives the procedures to do the operational test of the lightning sensor system (LSS).

B. References

REFERENCE	DESIGNATION
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
S.B.145-34-0057	-

C. Zones and Accesses

Not Applicable

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) Energize the aircraft with the External DC Power Supply ( [AMM TASK 20-40-01-860-801-A/200](#)).
- (2) On the circuit breaker panel, make sure that the LSS circuit breaker is closed.
- (3) On the main instrument panel, make sure that at least one MFD is turned on and operational.
- (4) On the reversionary panel, make sure that the MFD rotary switch is in the NORMAL position.

J. Lightning Sensor System - Test Procedures

SUBTASK 720-002-A

- (1) Do the operational test of the lightning sensor system as follows:
  - (a) On the weather radar controller, set the LSS select key to the CLR/TST position.  
Result:
    - 1 After 3 to 4 seconds, a rate 3 symbol is shown at 25 NM and 45 degrees right. This cell will build up in approximately 5 to 7 seconds.  

NOTE: This Time will be extended by approximately 15 seconds if TEST is set immediately from OFF, due to the processor initialization. The symbol range can change by as much as 5 NM if there is a strong local interference. The test symbol will degrade and vanish after approximately 2 minutes.
    - 2 An ALERT symbol is shown at the maximum select range, at 45 degrees right. This will stay for 3 - 7 seconds. Some indicators do not give information at 45 degrees at the maximum selected range.
  - (b) (POST-MOD [S.B.145-34-0057](#)). On the weather radar controller, set the LSS switch to the OFF position.  
Result:
    - 1 A green LX/OFF annunciation is shown on the bottom left corner of the MFD.
  - (c) Rotate the LSS switch to STBY.  
Result:
    - 1 A green STBY annunciation is displayed on the MFD.  

NOTE: An LX/C (green) tells that the system is in the self-calibration mode. This will revert to the select mode approximately 10 seconds after the power starts.
  - (d) Turn the LSS switch to LX.  
Result:
    - 1 In normal operation, a green LX is shown on the MFD. An amber LX is the indication of LSS interface failure.  

NOTE: An LX/F (amber) tells that the system self-test detected a failure.
  - (e) On the circuit breaker panel, open the following circuit breakers:
    - (Aircraft with Dual IRS) IRS 1 and IRS 2.
    - (Aircraft with AHRS) AHRS1 and AHRS 2.

On the backup relay box, open the following circuit breakers:

    - (Aircraft with Dual IRS) IRS 1 and IRS 2.
    - (Aircraft with AHRS) AHRS 1 and AHRS 2.
  - (f) Turn the LSS switch to CLR/TST.

Result:

- 1 An LX/CL (green) tells that the system is in the clear mode. This occurs for approximately 3 seconds after the CLR/TST mode was selected. After this time, the mode annunciation changes to LX/T (green).
- (g) (Aircraft with HF system) On the Pilot's or on the Copilot's Digital Audio Panel, push the HF switch, then on the Pilot or Copilot control wheel, push the PTT switch.

Result:

- 1 An LX/I (green) tells that the receiver is inhibited during the HF communication transmissions.

**K. Follow-on**

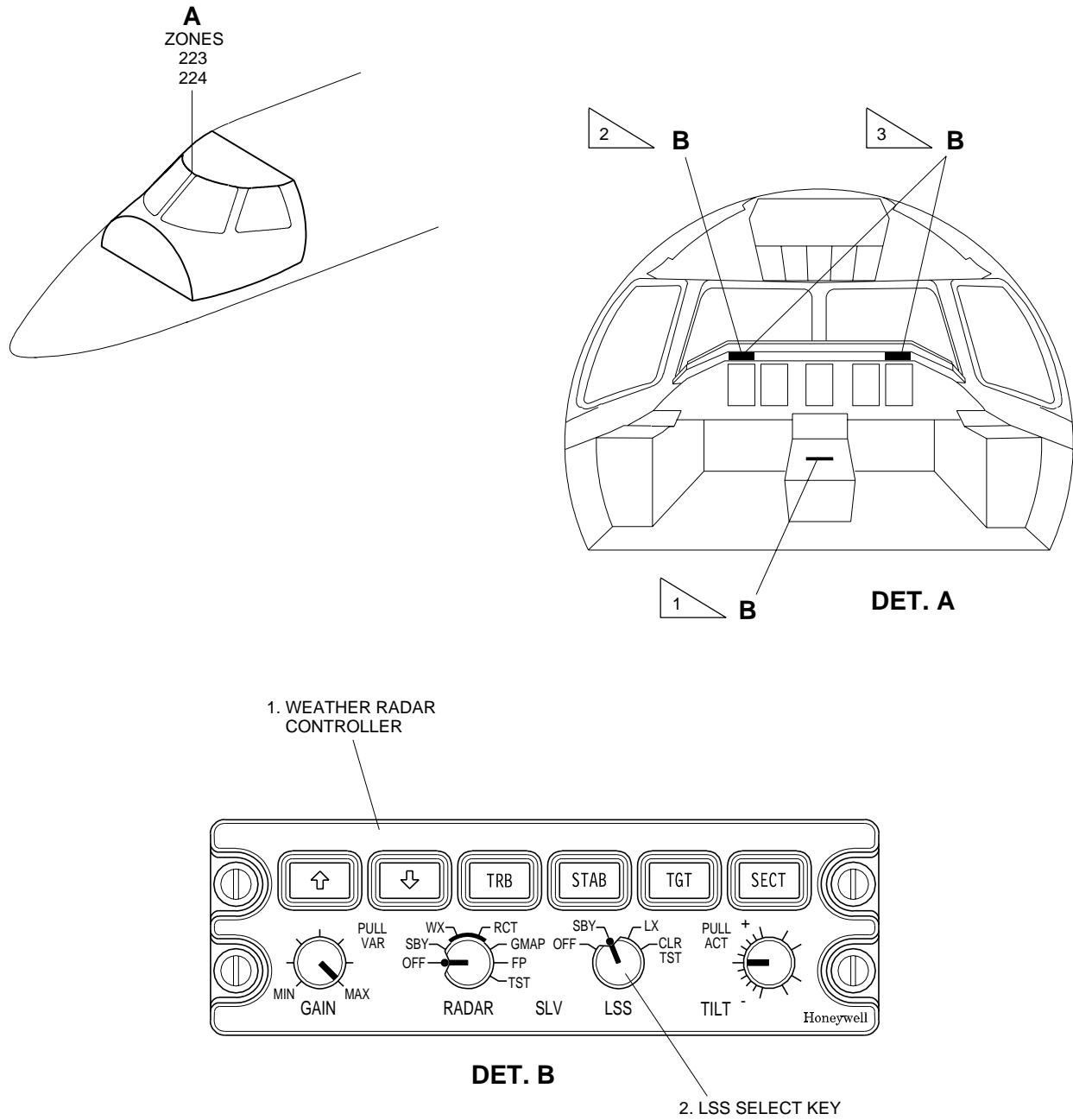
**SUBTASK 842-002-A**

- (1) On the circuit breaker panel, close the following circuit breakers:
  - (Aircraft with Dual IRS) IRS 1 and IRS 2.
  - (Aircraft with AHRS) AHRS1 and AHRS 2.
- (2) On the backup relay box, open the following circuit breakers:
  - (Aircraft with Dual IRS) IRS 1 and IRS 2.
  - (Aircraft with AHRS) AHRS 1 and AHRS 2.
- (3) Deenergize the aircraft ([AMM TASK 20-40-01-860-801-A/200](#)).

**EFFECTIVITY: AIRCRAFT WITH LSS**

Weather Radar Controller

Figure 501



1 AIRCRAFT WITH ONE RADAR CONTROLLER INSTALLED ON THE CONTROL PEDESTAL.

2 AIRCRAFT WITH ONE RADAR CONTROLLER INSTALLED ON THE GLARESHIELD.

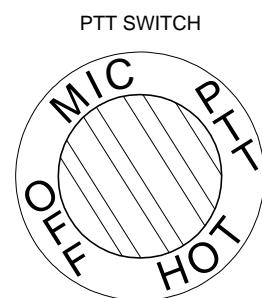
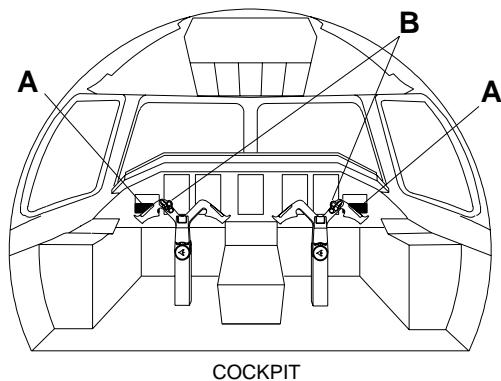
3 AIRCRAFT WITH TWO RADAR CONTROLLERS.

145AMM340275.MCE B

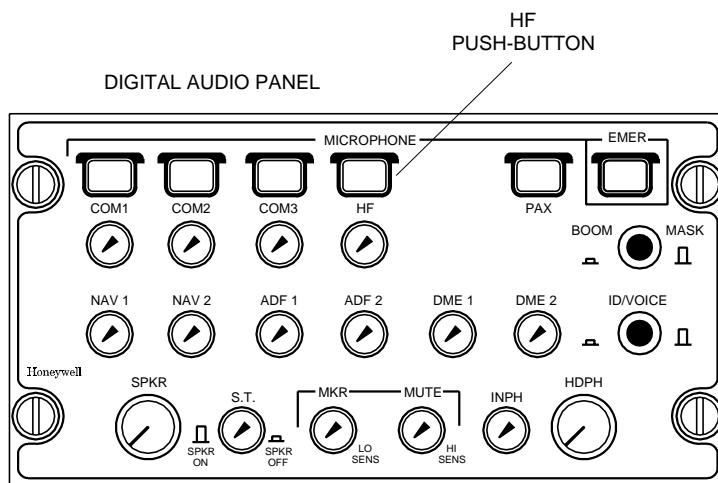
**EFFECTIVITY: AIRCRAFT WITH LSS**

Digital Audio Panel - PTT Switch

Figure 502



**DET. B**



**DET. A**

145AMM340284.MCE A