



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

VOICE RECORDING - ADJUSTMENT/TEST

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to do the operational check of the Cockpit Voice Recorder (CVR) and the test of the Voice Recording 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
23-71-00-700-801-A ♦	VOICE RECORDING - OPERATIONAL CHECK	ALL
23-71-00-700-802-A	VOICE RECORDING SYSTEM - OPERATIONAL TEST	ALL



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TASK 23-71-00-700-801-A

EFFECTIVITY: ALL

2. VOICE RECORDING - OPERATIONAL CHECK

A. General

- (1) This task is an Operational Check of:
- Four-channel Voice Recorder.
 - Remote area microphone.

B. References

REFERENCE	DESIGNATION
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 23-71-00-700-802-A/500	VOICE RECORDING SYSTEM - OPERATIONAL TEST

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
225		Cockpit

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Headset (600 Ω)	To monitor the recording	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

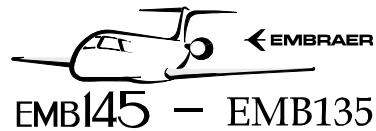
H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Cockpit

I. Preparation

SUBTASK 841-002-A

- (1) Supply external DC power ([AMM TASK 20-40-01-860-801-A/200](#)).
- (2) Connect the headset to the HEADPHONE (HEADSET) jack of the COCKPIT VOICE RECORDER MICROPHONE MONITOR panel.



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- (3) Do the Voice Recording System Test ([AMM TASK 23-71-00-700-802-A/500](#)).
- (4) Make sure that the pilot, copilot, and observer microphone switches are set to the OFF position.

J. Operationally Check 4-Channel Voice Recorder and Area Microphone ([Figure 501](#)) ([Figure 502](#)) ([Figure 503](#))

SUBTASK 710-002-A

- (1) Do the operational check on the pilot's digital audio panel as follows:
 - (a) On the pilot's digital audio panel:
 - Push the BOOM/MASK pushbutton to set it to the BOOM position.
 - Push the ST pushbutton to set it to the OFF position.
 - Push the INPH pushbutton to release it.
 - Set the HDPH volume control to the middle position.
 - Push the PAX button.
 - (b) On the pilot control yoke, set the MIC switch to the HOT position.
 - (c) Speak into the pilot boom or hand microphone.
Result:
1 A good-quality voice audio signal is sent to the headset.
 - (d) On the pilot's control yoke, set the MIC switch to the OFF position.
- (2) Do the operational check on the copilot's digital audio panel as follows:
 - (a) On the copilot's digital audio panel:
 - Push the BOOM/MASK pushbutton to set it to the BOOM position.
 - Push the ST pushbutton to set it to the OFF position.
 - Push the INPH pushbutton to release it.
 - Set the HDPH volume control to the middle position.
 - Push the PAX button.
 - (b) On the copilot control yoke, set the MIC switch to the HOT position.
 - (c) Speak into the copilot's boom or hand microphone.
Result:
1 A good-quality voice audio signal is sent to the headset.
 - (d) On the copilot control yoke, set the MIC switch to the OFF position.
- (3) Do the operational check on the observer's digital audio panel as follows:
 - (a) On the observer's digital audio panel:
 - Push the BOOM/MASK pushbutton to set it to the BOOM position.
 - Push the ST pushbutton to set it to the OFF position.

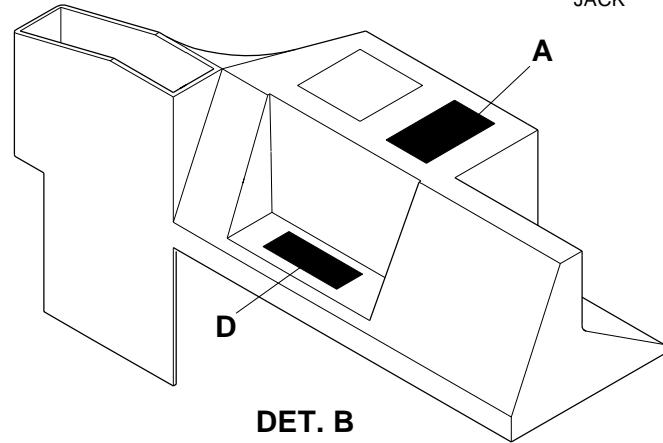
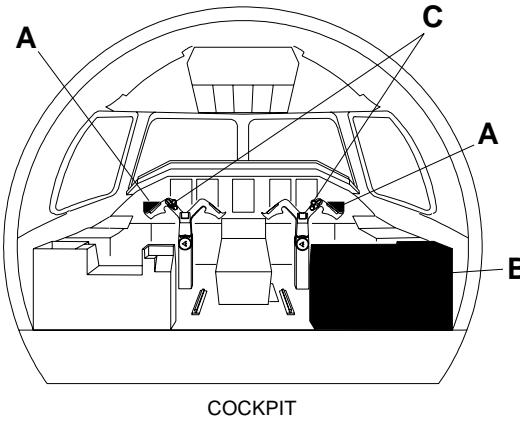
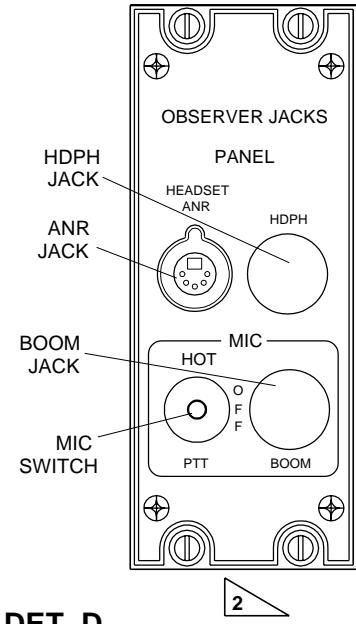
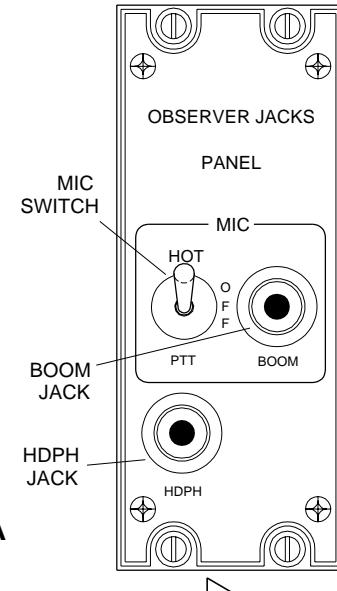
- Push the INPH pushbutton to release it.
 - Set the HDPH volume control to the middle position.
 - Push the PAX button.
- (b) On the observer's jacks panel, set the MIC switch to the HOT position.
- (c) Speak into the observer's boom or hand microphone.
Result:
1 A good-quality voice audio signal is sent to the headset.
- (d) On the observer's jacks panel, set the MIC switch to the OFF position.
- (4) Do the operational check on the remote area microphone as follows:
- (a) Speak into the remote area microphone.
Result:
1 A good-quality voice audio signal is sent to the headset.

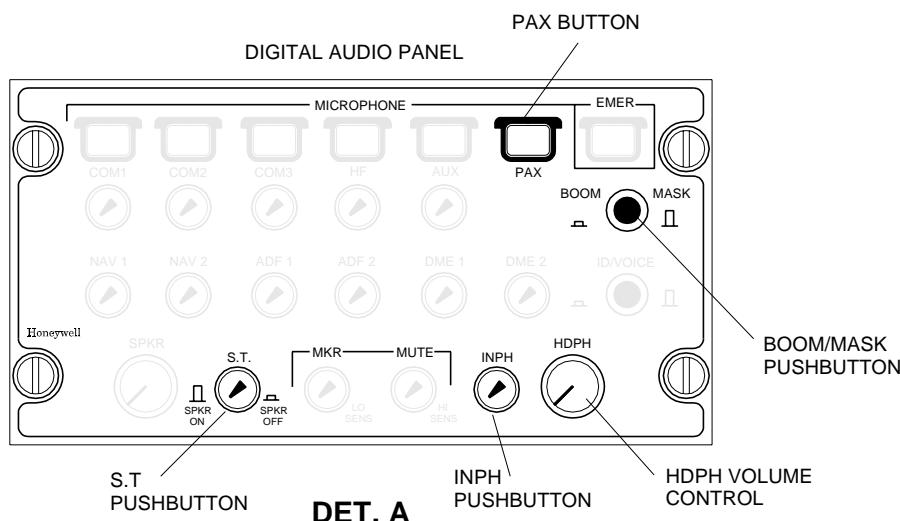
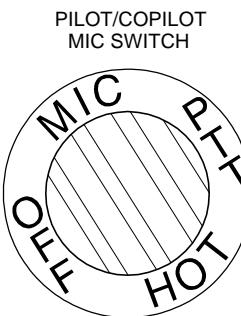
K. Follow-on

SUBTASK 842-002-A

- (1) Disconnect the headset from the HEADPHONE (HEADSET) jack of the CVR MICROPHONE MONITOR panel.
- (2) Deenergize the aircraft ([AMM TASK 20-40-01-860-801-A/200](#)).

EFFECTIVITY: ALL

 Voice Recording Operational - Check
 Figure 501

DET. B
 RIGHT AFT CONSOLE

DET. D
 1 AIRCRAFT WITHOUT ACTIVE-NOISE-REDUCTION HEADSET

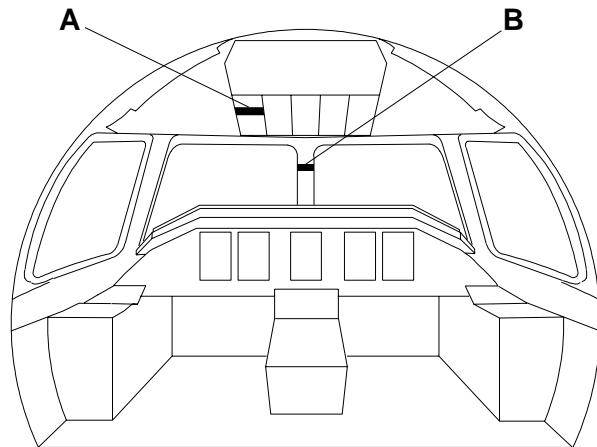
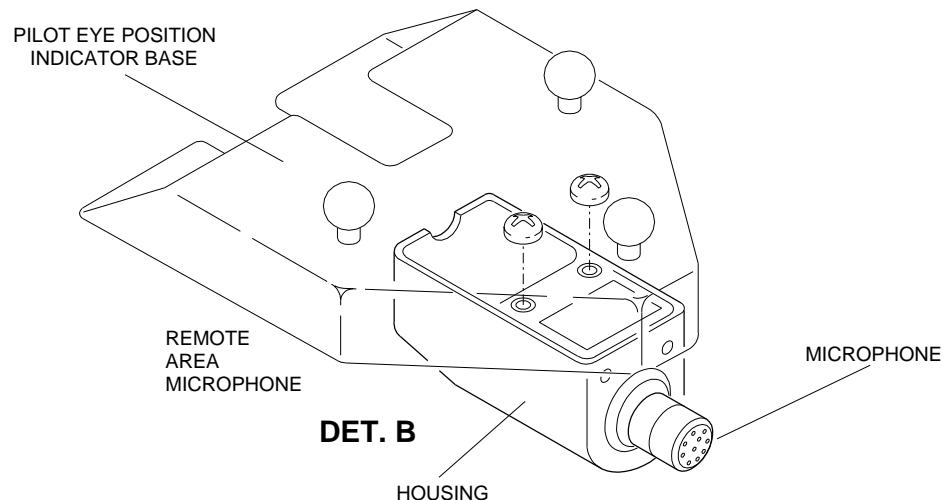
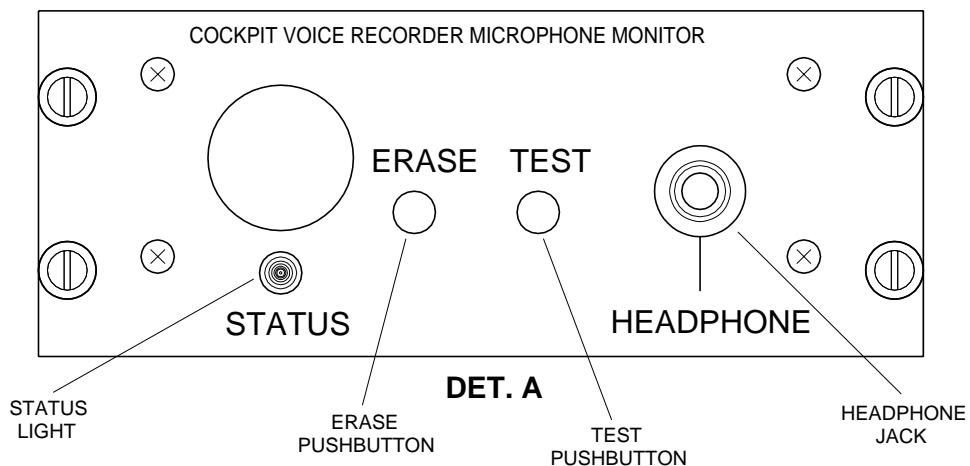
 2 AIRCRAFT WITH ACTIVE-NOISE-REDUCTION HEADSET

DET. A

DET. C

EM145AMM230643A.DGN

EFFECTIVITY: AIRCRAFT WITH HONEYWELL CVR INSTALLED

Voice Recording Operational - Check

Figure 502

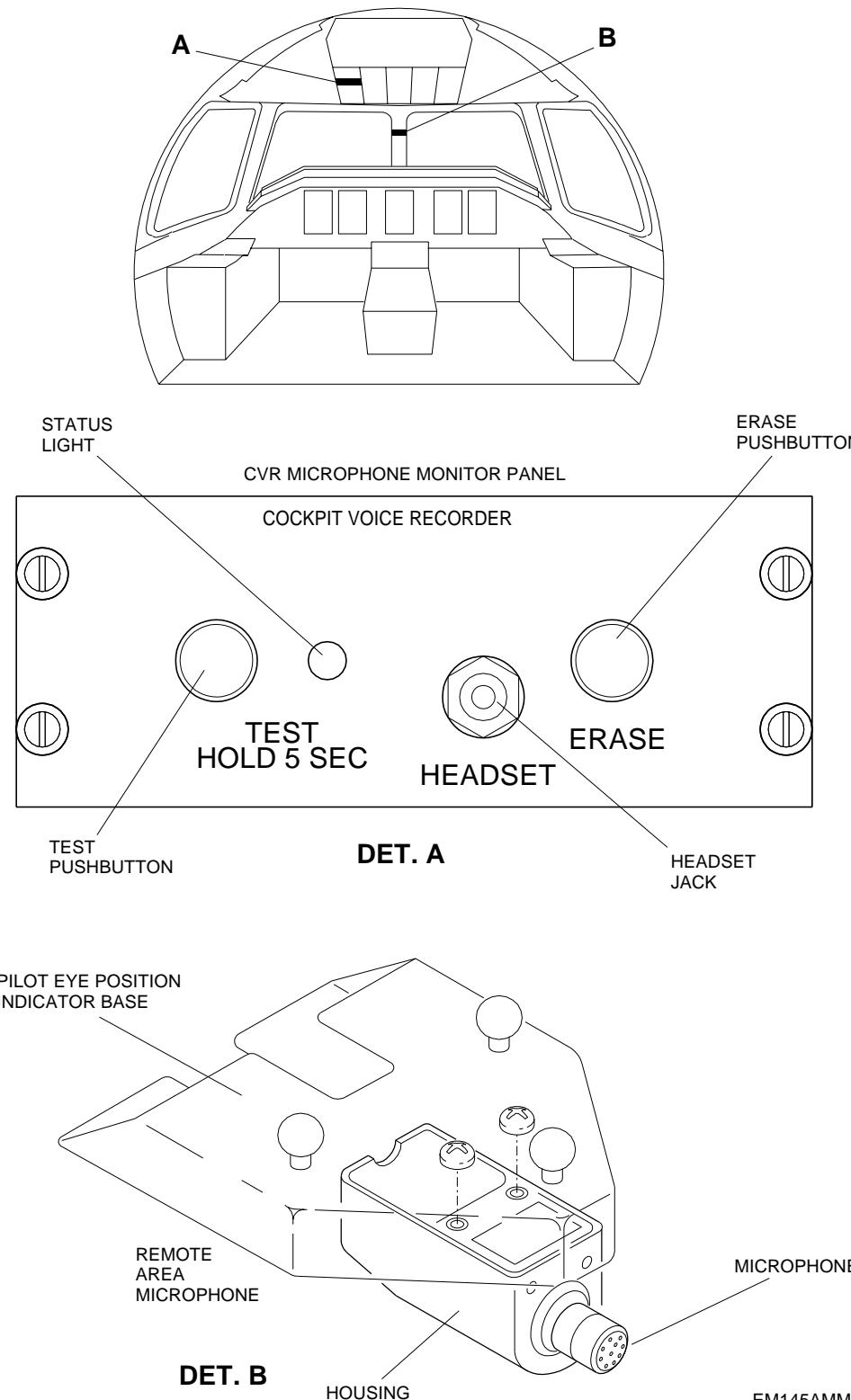

CVR MICROPHONE MONITOR PANEL


145AMM230071.MCE A

EFFECTIVITY: AIRCRAFT WITH L3 CVR INSTALLED

Voice Recording Operational - Check

Figure 503





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TASK 23-71-00-700-802-A

EFFECTIVITY: ALL

3. VOICE RECORDING SYSTEM - OPERATIONAL TEST

A. General

- (1) This task gives the procedures to do:
- The self-test of the system.
 - The erase function.

B. References

REFERENCE	DESIGNATION
AMM SDS 32-44-00/1	
AMM TASK 10-10-01-500-801-A/200	AIRCRAFT NORMAL PARKING
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 32-63-00-860-801-A/200	"FLIGHT"/"GROUND" CONDITION SIMULATION IN AIR/GROUND SYSTEM

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
225		Cockpit - Overhead panel

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Headset (600 Ω)	Monitor the recording and self-test indication	
GSE 012	Wheel chock	To chock the nose and main landing gear wheels	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

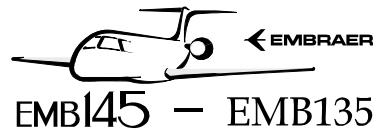
Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Cockpit



I. Preparation

SUBTASK 841-003-A

- (1) Supply external DC power ([AMM TASK 20-40-01-860-801-A/200](#)).
- (2) Connect the headset to the HEADPHONE (HEADSET) jack of the COCKPIT VOICE RECORDER MICROPHONE MONITOR panel.

J. Voice Recording System - Test Procedures (Figure 501) (Figure 502) (Figure 503)

SUBTASK 740-002-A

- (1) Do the self-test of the system as follows:

- (a) Push the TEST pushbutton switch on the CVR MICROPHONE MONITOR panel, for 2 seconds.

Result:

- 1 On the CVR MICROPHONE MONITOR panel, the STATUS light comes on for a second (GO indication).
 - 2 A tone (800 Hz) is heard in the headset (successful self-test indication).
 - 3 After a delay of 1 second (end of the self-test), the STATUS light goes off.
 - 4 After a delay of 2 seconds, the tone (800 Hz tone) stops.

NOTE: If the TEST pushbutton switch is kept pushed, a new self-test starts.

- 5 (AIRCRAFT WITH RECORDER INDEPENDENT POWER SUPPLY - RIPS)
If the test fails (the status light does not come on and there is no tone), the RIPS unit must be also considered as a probable cause, because it is part of the voice recorder system.

- (2) Do the ERASE function as follows:

- (a) Put the wheel chock (GSE 012) on the landing gear wheels ([AMM TASK 10-10-01-500-801-A/200](#)).

- (b) Set the parking brake to OFF ([AMM SDS 32-44-00/1](#)).

- (c) Set the WOW to the flight condition ([AMM TASK 32-63-00-860-801-A/200](#)).

- (d) Push the ERASE pushbutton on the CVR MICROPHONE MONITOR panel, for 2 seconds and release it.

Result:

- 1 There is no erase tone in the headset.

- (e) Set the WOW to the ground condition ([AMM TASK 32-63-00-860-801-A/200](#)).

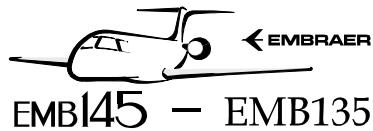
- (f) Push the ERASE pushbutton on the CVR MICROPHONE MONITOR panel, for 2 seconds and release it.

Result:

- 1 There is no erase tone in the headset.

- (g) Set the parking brake to ON ([AMM SDS 32-44-00/1](#)).

NOTE: Make sure that the parking brake pressure switch and the air/ground proximity switches show aircraft parked and aircraft on the ground.



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The BRAKE ON light, on the instrument panel, when on shows aircraft parked.

- (h) Push the ERASE pushbutton on the CVR MICROPHONE MONITOR panel, for 2 seconds and release it.

Result:

- 1 A 400 Hz tone is heard in the headset for 5 seconds (successful erase indication).

- (i) Set the parking brake to OFF.

- (j) Push the ERASE pushbutton on the CVR MICROPHONE MONITOR panel, for 2 seconds and release it.

Result:

- 1 There is no erase tone in the headset.

- (k) Set the WOW to the flight condition.

- (l) Push the ERASE pushbutton on the CVR MICROPHONE MONITOR panel, for 2 seconds and release it.

Result:

- 1 There is no erase tone in the headset.

K. Follow-on

SUBTASK 842-003-A

- (1) Disconnect the headset from the HEADPHONE (HEADSET) jack of the CVR MICROPHONE MONITOR panel.
- (2) Set the parking brake to ON.
- (3) If necessary, remove the wheel chock (GSE 012) from the landing gear wheels.
- (4) Set the WOW to the ground condition.
- (5) De-energize the aircraft ([AMM TASK 20-40-01-860-801-A/200](#)).