

NATIONAL TRANSPORTATION SAFETY BOARD
Vehicle Recorder Division
Washington, D.C. 20594

August 6, 2014

Attachment 1 to Cockpit Voice Recorder Factual Report

**This attachment contains an excerpt of Embraer 145 Task 23-71-00-700-801-A
and an excerpt from Trans States Flight Crew Checklists related to CVR testing.**

VOICE RECORDING – ADJUSTMENT/TEST

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).

<i>AMTOSS No.</i>	<i>SUBJECT</i>
– TASK 23-71-00-700-801-A	Voice Recording - Operational Check
SUBTASK 23-71-00-841-001-A00	Preparation
SUBTASK 23-71-00-710-001-A00 ♦	Operationally Check 4-Channel Voice Recorder and Area Microphone
SUBTASK 23-71-00-842-001-A00	Follow-on
– TASK 23-71-00-700-802-A	Voice Recording System - Operational Test
SUBTASK 23-71-00-841-002-A00	Preparation
SUBTASK 23-71-00-740-002-A00	Voice Recording System - Test Procedures
SUBTASK 23-71-00-842-002-A00	Follow-on

EFFECTIVITY: ALL

23-71-00

General
Page 501
Aug 22/01
2

DCA14FA058

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

2. Voice Recording - Operational Check

A. General

(1) This task is an Operational Check of:

- Four-channel Voice Recorder.
- Remote area microphone.

B. References

- AMM 23-71-00/501
- Figure 501
- Figure 502
- Figure 503
- TASK 20-40-01-860-801-A
- TASK 23-71-00-700-802-A

C. Access

ZONE	PANEL/DOOR	LOCATION
225		Cockpit

D. Tools and Equipment

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

E. Auxiliary Items

Not applicable.

F. Consumable Materials

Not applicable.

G. Expendable Parts

Not applicable.

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Cockpit

EFFECTIVITY: ALL

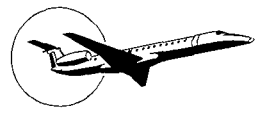
23-71-00

700-801-A

Page 502

Nov 30/05

DCA14FA058



I. Preparation

SUBTASK 23-71-00-841-001-A00

- (1) Supply external DC power (TASK 20-40-01-860-801-A).
- (2) Connect the headset to the HEADPHONE (HEADSET) jack of the COCKPIT VOICE RECORDER MICROPHONE MONITOR panel.
- (3) Do the Voice Recording System Test (TASK 23-71-00-700-802-A).
- (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 23-71-00-710-001-A00

- (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.
 - 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.

EFFECTIVITY: ALL

DCA14FA058

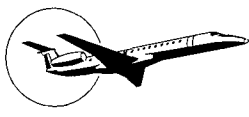
23-71-00

700-801-A

Page 503

Nov 30/05

4

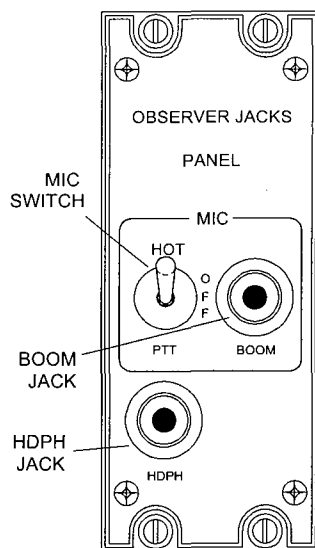
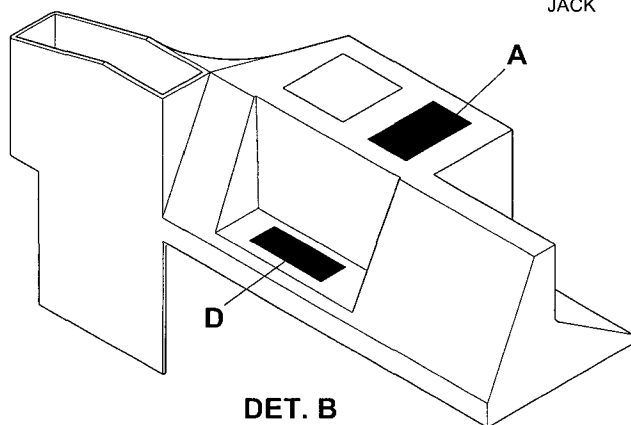
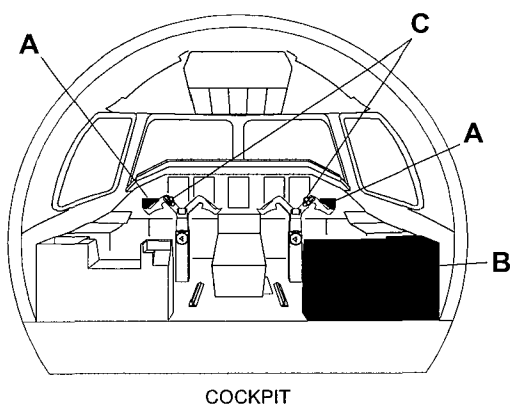
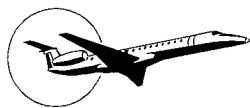


- (c) Speak into the copilot's boom or hand microphone.
 - 1 A good-quality voice audio signal is sent to the headset.
- (d) On the copilot control yoke, set the MIC switch to the OFF position.
- (3) Do the operational check on the observer's digital audio panel as follows:
 - (a) On the observer's digital 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.
 - 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.
 - 1 A good-quality voice audio signal is sent to the headset.

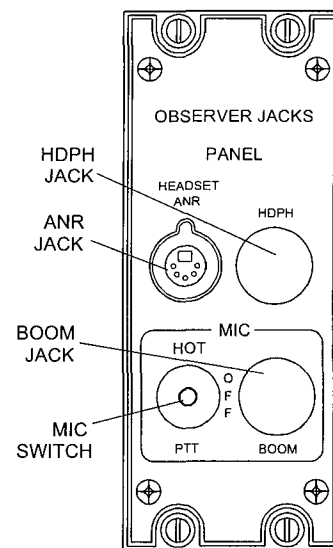
K. Follow-on

SUBTASK 23-71-00-842-001-A00

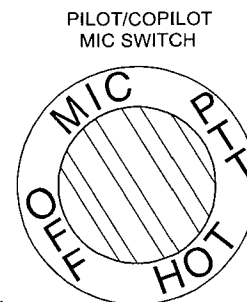
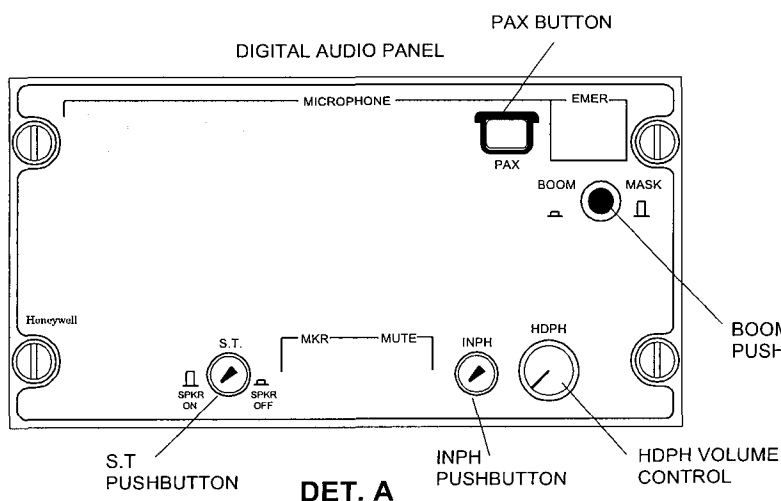
- (1) Disconnect the headset from the HEADPHONE (HEADSET) jack of the CVR MICROPHONE MONITOR panel.
- (2) Deenergize the aircraft (TASK 20-40-01-860-801-A).



DET. D



- 1 AIRCRAFT WITHOUT
ACTIVE-NOISE-REDUCTION HEADSET
- 2 AIRCRAFT WITH
ACTIVE-NOISE-REDUCTION HEADSET



DET. C

EM145AMM230643A.DGN

Voice Recording Operational - Check
Figure 501

EFFECTIVITY: ALL

DCA14FA058

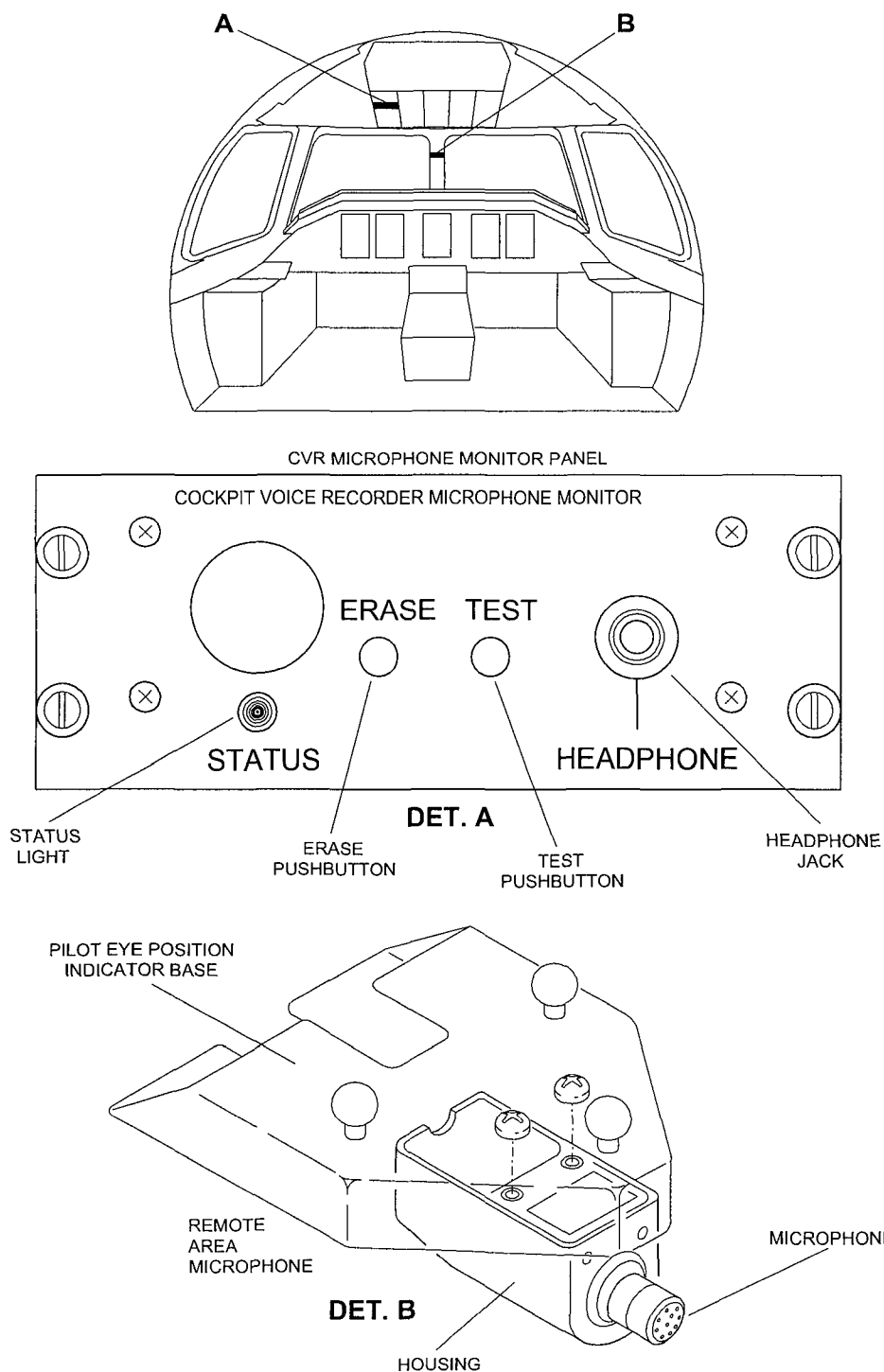
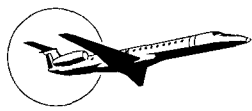
23-71-00

990-001-A

Page 505

Apr 28/10

6



145AMM230071.MCE A

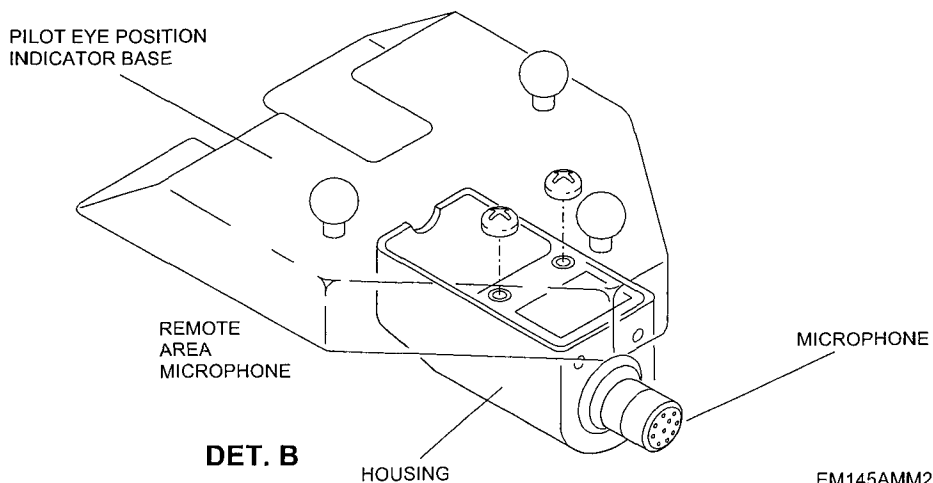
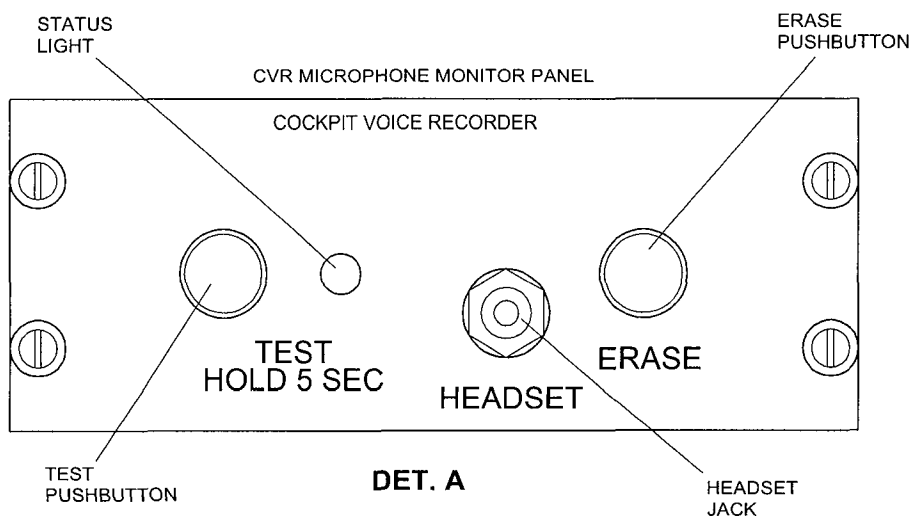
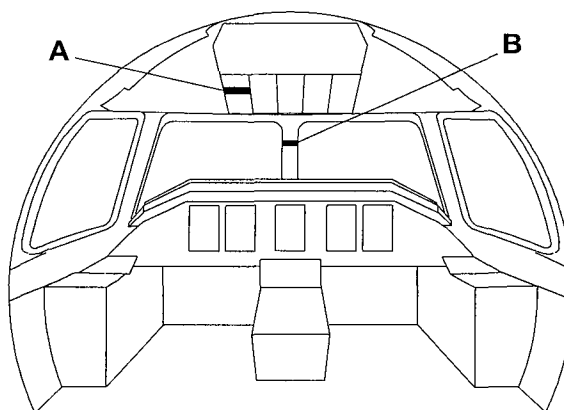
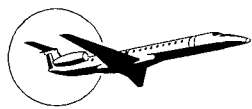
Voice Recording Operational - Check
Figure 502

EFFECTIVITY: AIRCRAFT WITH HONEYWELL
CVR INSTALLED

23-71-00

DCA14FA058

990-002-A
Page 506
Mar 28/06



EM145AMM231028A.DGN

Voice Recording Operational - Check
Figure 503

EFFECTIVITY: AIRCRAFT WITH L3 CVR IN-
STALLED

DCA14FA058

23-71-00

990-003-A
Page 507
Nov 30/05
8

2.9

RECEIVING FLOW — CAPTAIN (continued)

• **Emergency Equipment**

Check that the following cockpit emergency equipment is aboard:

- FOs and ACMs Life Vests
- Crash Axe
- CAs Smoke Goggles (*)
- ACMs Oxygen Mask
- CAs Escape Rope
- Fire Extinguisher
- CAs Flashlight

Note: Ensure that there are no items other than the life vests in the seat back pocket.

Note: Use of aircraft emergency flashlights for other than their intended purpose is prohibited.

+ **CVR**

Press the CVR TEST button and observe the STATUS LED illuminated for approximately one second

▶ **Emergency Lights**

Verify the emergency lighting system is selected to the ARM position and the EMERG LT NOT ARMED message does not appear on the EICAS display.

+ ▶ **Fuel Pumps and Selectors**

- + ▶ Select MFD system fuel page to verify fuel quantity and observe pump operation
- + ▶ RESET fuel used, if necessary
- + Select tank 1 pump power ON and check operation of each pump
- + Select tank 2 pump power ON and check operation of each pump
- + Select crossfeed to LOW 2
- + Observe EICAS message FUEL XFEED OPEN
- + Observe tank 2 pump OFF and tank 1 pump ON
- + Select crossfeed to LOW 1
- + Observe EICAS message FUEL XFEED OPEN
- + Observe tank 1 pump OFF and tank 2 pump ON
- + Select both tank 1 and tank 2 power OFF (unless starting the APU)
- + Select XFEED knob to OFF
- + ▶ Electric fuel pumps should be alternated for each engine start