RADIO MANAGEMENT SYSTEM - ADJUSTMENT/TEST

EFFECTIVITY: ALL

1. General

   A. This section gives the procedures to do the test of the Radio Management System.

   B. The procedure includes the operational test of the Radio Management Units (RMUs) and the Tuning Backup Unit.

   C. 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*
23-81-00-700-801-A	RADIO MANAGEMENT SYSTEM - OPERATIONAL TEST	ALL

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TASK 23-81-00-700-801-A
EFFECTIVITY: ALL

2. RADIO MANAGEMENT SYSTEM - OPERATIONAL TEST

A. General

(1) This task gives the procedures to do the Operational test of the Radio Management System.

(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 AMM TASK 21-00-00-860-804-A/200.

B. References

REFERENCE	*DESIGNATION*
AMM SDS 23-12-00/1	
AMM SDS 23-31-00/1	
AMM SDS 23-51-00/1	
AMM SDS 23-81-00/1	
AMM SDS 31-51-00/1	
AMM SDS 34-22-00/1	
AMM SDS 34-32-00/1	
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 TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 21-00-00-860-804-A/200	PROCEDURE TO TURN THE COOLING PACKS ON UNDER COLD SOAK CONDITIONS

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

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H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	Cockpit

I. Preparation (Figure 501)

SUBTASK 841-002-A

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

(2) Make sure that the Systems below are operational and on:

– VHF System (AMM SDS 23-12-00/1).

– Passenger Address & Cabin Interphone System (AMM SDS 23-31-00/1).

– Airborne Audio System (AMM SDS 23-51-00/1).

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

– Aural Warning System (AMM SDS 31-51-00/1).

– EFIS (AMM SDS 34-22-00/1).

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

– TCAS (AMM SDS 34-43-00/1).

– DME System (AMM SDS 34-51-00/1).

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

– ADF System (AMM SDS 34-53-00/1).

J. Radio Management System - Test Procedures (Figure 501) (Figure 502) (Figure 503) (Figure 504)

SUBTASK 710-002-A

NOTE: The procedures in steps (a) to (aa) are applicable to RMU 1 and RMU 2.

(1) Make sure that the aircraft is on the ground condition.

(2) Do the test of the Radio Management Unit as follows (Figure 501) (Figure 502):

(a) On the circuit breaker panel, open the RMU 1 (or RMU 2) circuit breaker.

(b) Wait for 10 seconds.

NOTE: The power-on self-test will start only if the power was off for 10 seconds.

(c) On the circuit breaker panel, close the RMU 1 (or RMU 2) circuit breaker.
Result:
1 The RMU is turned on.

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2 The RMU power-on self-test starts.

NOTE: If an error occurs during the Power-On Self-Test, an error message will be shown on the RMU display.

(d) Set the MFD to the TCAS page.

(e) Push the select key to set the RMU to the ATC/TCAS window.

Result:

1 The cursor moves to stay around the data field related to that line select key.

(f) With the select key, set the ATC/TCAS window to the TA/RA mode.

(g) Push and hold the RMU TST function key.

Result:

1 On the RMU, the ATC/TCAS window shows TEST and SYS TEST (amber).

2 The MFDs and PFDs show TCAS TEST (white).

NOTE: If the TCAS is defective, the MFDs and PFDs show TCAS FAIL (amber).

3 The Aural Warning gives the TCAS TEST message.

4 The MFDs show a Traffic test pattern, which permits the check of each type of intruder symbol:

- hollow blue diamond.
- solid blue diamond.
- solid amber circle.
- solid red square.

5 On the PFDs, the VSI shows red and green arc zones.

(h) At the end of the test cycle:

Result:

1 The RMU shows a green ATC PASS indication.

NOTE: If the transponder is defective, the RMU shows ATC ERROR (amber).

2 The Aural Warning gives the TCAS TEST PASS message.

NOTE: If the TCAS is defective, the TCAS FAIL aural warning is heard, and the MFD and PFD show an amber TCAS FAIL indication.

(i) Release the RMU TST function key.

(j) On the RMU, push the SQ function key.

Result:

1 The COM radio squelch opens and the noises or signals of the radios can be heard on the audio system.

2 The COM window shows the letters SQ (amber) along the top.

(k) On the RMU, push the SQ function key.

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Result:

1 The radio squelsh is closed.

2 The letters SQ go off.

(l) On the RMU, push the DIM function key.

Result:

1 The RMU display brightness window comes into view.

(m) Turn the tuning knobs.

Result:

1 The display brightness can be adjusted.

(n) On the RMU, push the DIM function key.

Result:

1 The RMU display brightness window goes off.

(o) On the RMU, push the 1/2 function key.

Result:

1 The RMU operation and display are changed to the cross-side system.

NOTE: The legend color changes from white to magenta when one system is controlled by the RMU of the cross-side system.

(p) On the RMU, push the 1/2 function key.

Result:

1 The RMU operation and display are changed to the on-side system.

(q) On the RMU, push the STO function key.

Result:

1 The COM/NAV preselect frequency is temporarily stored in the memory and a numbered location is given, if the cursor was first put around that frequency.

(r) On the RMU, push the ID function key.

Result:

1 Put the transponder in the identification response mode.

NOTE: The ATC/TCAS window shows the letters ID during 18 seconds.

(s) On the RMU, push the PGE function key.

Result:

1 The RMU display will change to the System 1 Page Menu (Figure 502).

(t) On the System 1 Page Menu, push the select key beside the Return option.

Result:

1 The RMU goes back to the main page.

(u) On the RMU, push the DME function key.

Result:

1 The NAV window is split into upper half VOR/ILS tuning and lower half DME channel tuning.

(v) Set the cursor to the DME window.

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Result:

1 The key "de-slaves" the DME from the active VOR frequency, and permits tuning of a different DME channel while the active VOR is not changed.

NOTE: This is also called DME hold.

(w) On the RMU, push the DME function key twice

Result:

1 The split is removed from the NAV window.

(x) Push the select key to set the RMU to the COM window.

Result:

1 The cursor moves to stay around the data field related to that line select key.

(y) Turn the tuning knobs.

Result:

1 The data filed contained in the cursor changes.

(z) On the RMU, push all the line select keys and see if the yellow cursor moves to stay around the date field related to that line select key.

(aa) On the RMU, push the two transfer keys and see if the active frequency changes its position with the preset frequency.

(3) Do the Tuning Backup Power on Self Test as follows (Figure 503) (Figure 504):

(a) On the circuit breaker panel, open the CDH circuit breaker.

(b) On the circuit breaker panel, close the CDH circuit breaker.

Result:

1 The Tuning Backup unit is turned on.

2 The Tuning Backup Power on Self Test starts.

(4) Do the Tuning Backup test as follows:

(a) (FOR AIRCRAFT WITH A CHANNEL SPACING OF 25KHZ) If the COM field on the Tuning Backup panel is deselected, push the transfer key (4) to select the COM field.

Result:

1 The COM field is selected on the Tuning Backup display.

(b) (FOR AIRCRAFT WITH A CHANNEL SPACING OF 8.33KHZ) If the COM field on the Tuning Backup panel is deselected, push the transfer key (5) to select the COM field.

Result:

1 The COM field is selected on the Tuning Backup display.

(c) On the Tuning Backup panel, turn the Tuning Knob (2) to change the COM frequency.

Result:

1 The COM frequency changes on the Tuning Backup field and on the RMU's COM 2 field.

(d) (FOR AIRCRAFT WITH A CHANNEL SPACING OF 25KHZ) On the Tuning Backup panel, push the transfer key (4).

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Result:

1 The NAV field is selected on the Tuning Backup display.

(e) (FOR AIRCRAFT WITH A CHANNEL SPACING OF 8.33KHZ) On the Tuning Backup panel, push the transfer key (5).

Result:

1 The NAV field is selected on the Tuning Backup display.

(f) Turn the Tuning Knob (2) to change the NAV frequency.

Result:

1 The NAV frequency changes on the Tuning Backup field and on the RMU's NAV 2 field.

K. Follow-on

SUBTASK 842-002-A

(1) Deenergize the aircraft AMM TASK 20-40-01-860-801-A/200.

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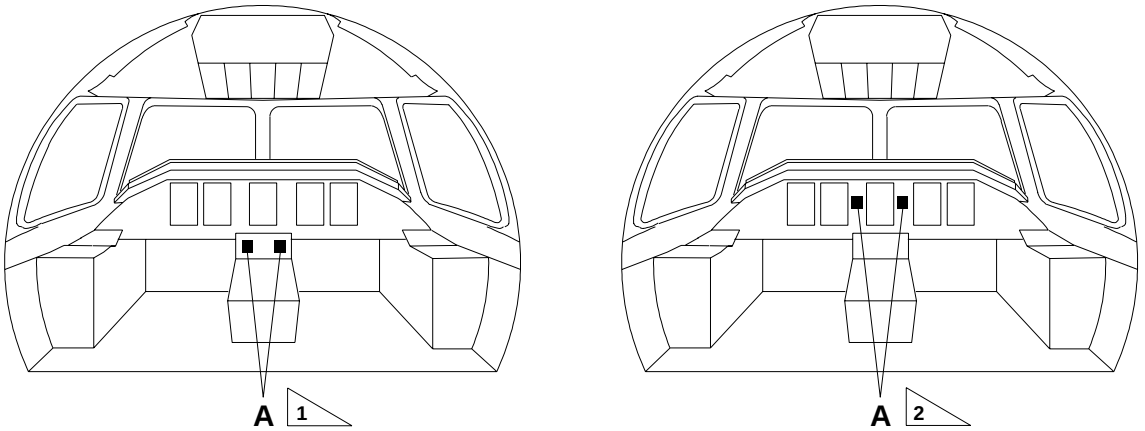
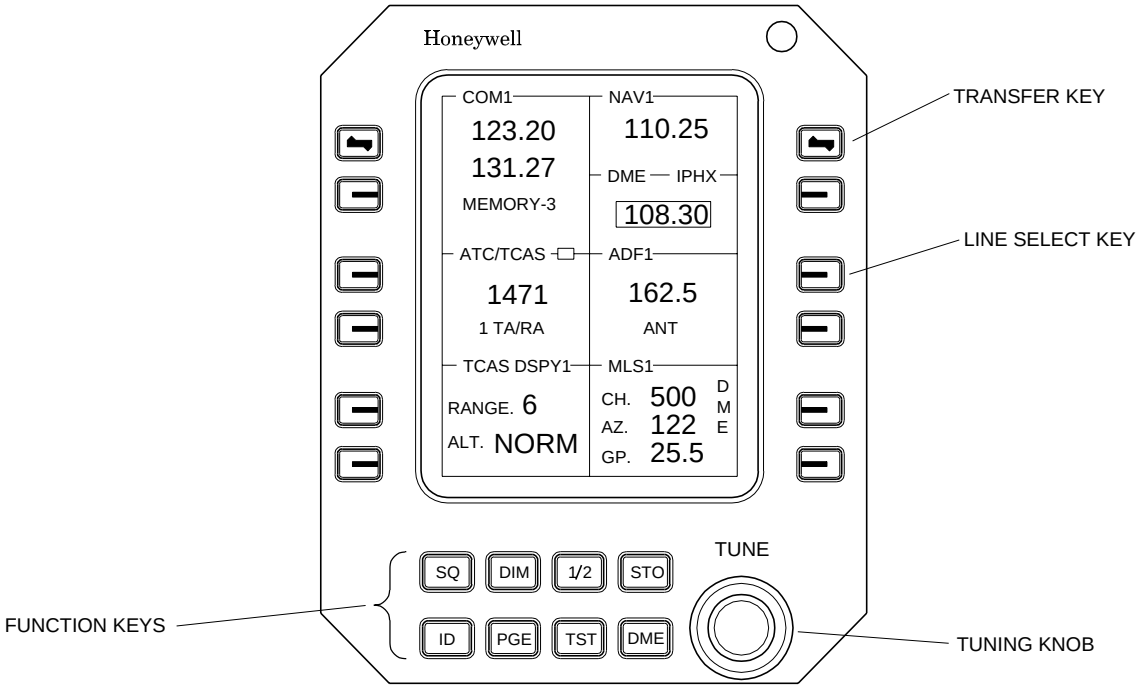
EFFECTIVITY: ALL
Radio Management Unit
Figure 501





DET. A

1 AIRCRAFT WITH RMU INSTALLED ON CONTROL PEDESTAL

2 AIRCRAFT WITH RMU INSTALLED ON MAIN INSTRUMENT PANEL

145AMM230118.MCE B

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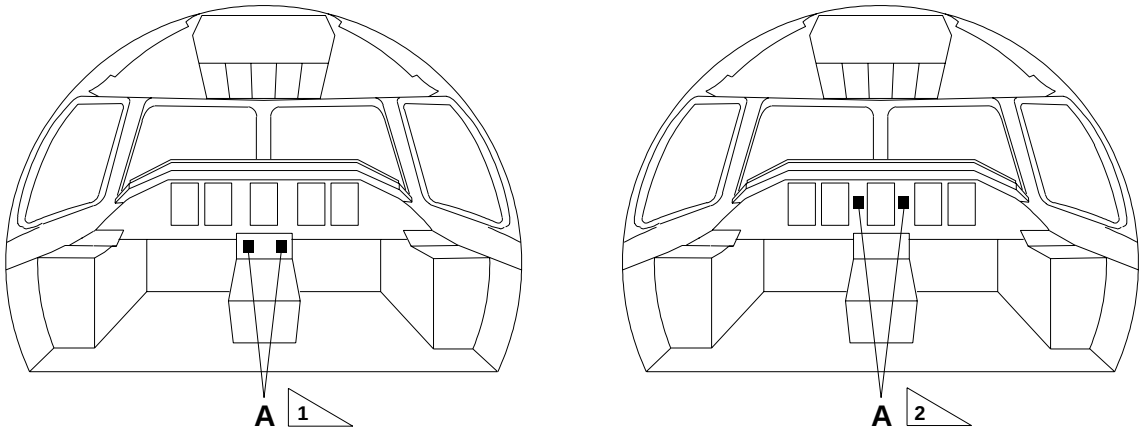
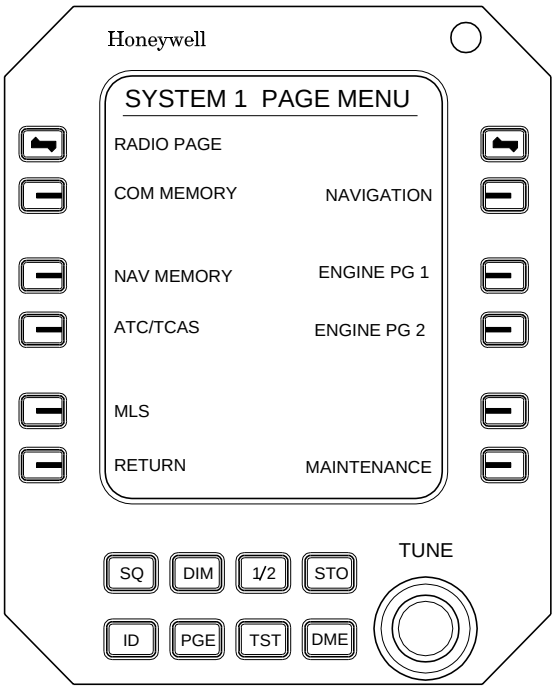
EFFECTIVITY: ALL
RMU - System Page Menu
Figure 502





DET. A

1 AIRCRAFT WITH RMU INSTALLED ON CONTROL PEDESTAL

2 AIRCRAFT WITH RMU INSTALLED ON MAIN INSTRUMENT PANEL

145AMM230119.MCE A

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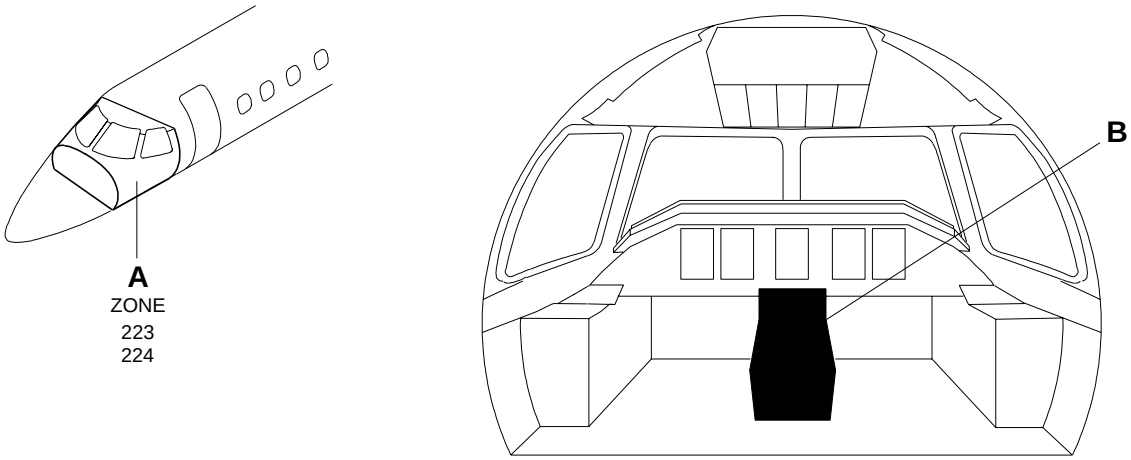
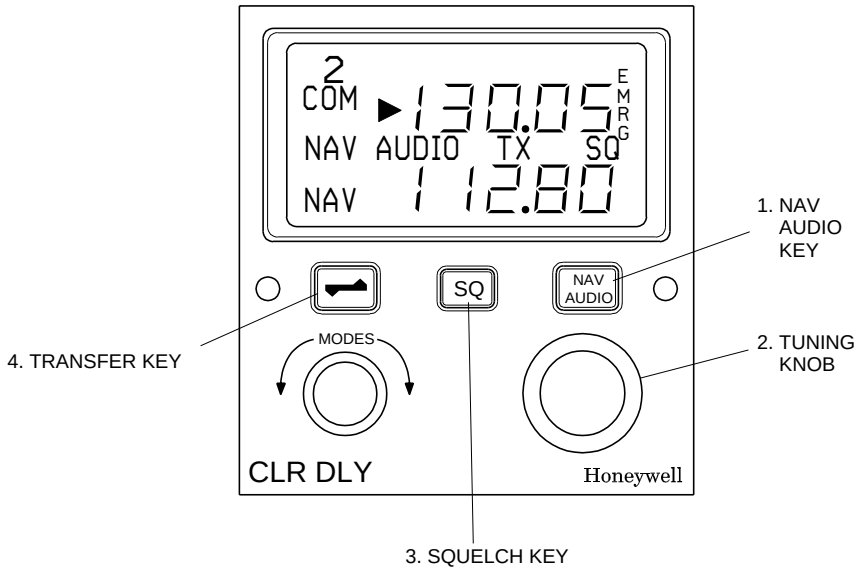
EFFECTIVITY: FOR AIRCRAFT WITH A CHANNEL SPACING OF 25KHZ
Tuning Backup Panel
Figure 503



DET. A



DET. B

145AMM230184.MCE A

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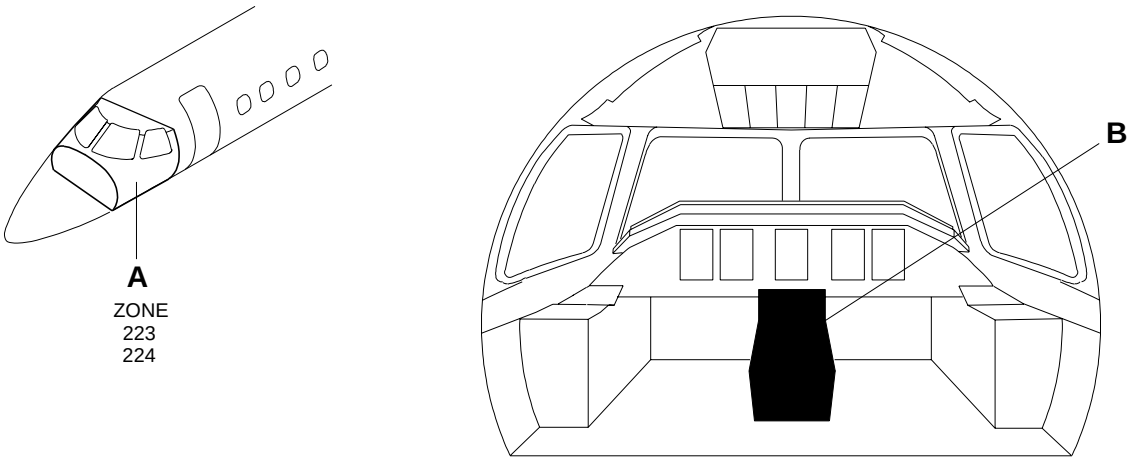
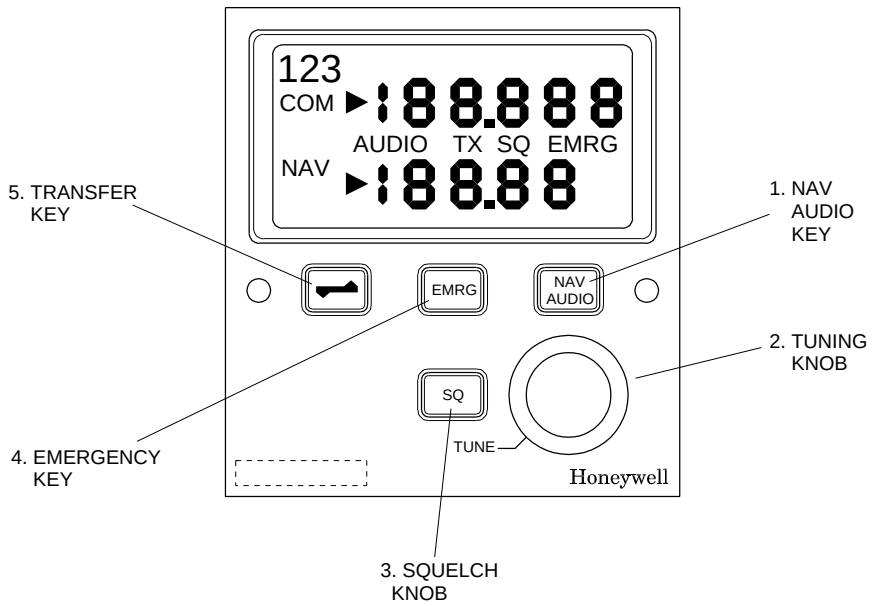
EFFECTIVITY: FOR AIRCRAFT WITH A CHANNEL SPACING OF 8.33KHZ
Tuning Backup Panel
Figure 504



DET. A



DET. B

145AMM230186.MCE B

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