

# AIRBUS

CUSTOMIZATION	AIRCRAFT TYPES	DOCTYPES	REVISION DATE	REVISION NUMBER	TITLE
FWI	A330 A340	AMM	01-Apr-2021	50	34-52-00-720-801-A02 - Functional Test of Air Traffic Control (ATC) MODE S
TAIL NUMBER - MSN - FSN: F-HPTP - 01265 - 003					
Print date: 2021-04-05 11:46:21					

**\*\* ON A/C FSN ALL**

TASK 34-52-00-720-801-A02

Functional Test of Air Traffic Control (ATC) MODE S

**NOTE:** If you do not do this test quickly, you can cause interference with the air traffic. If this test is long, it is necessary to tell the nearest airport about it.

1. Reason for the Job

Self explanatory

2. Job Set-up Information

A. Fixtures, Tools, Test and Support Equipment

REFERENCE	QTY	DESIGNATION
No specific	AR	ACCESS PLATFORM 3M (10 FT)- ADJUSTABLE
No specific	1	ACCESS PLATFORM 8M (26 FT) - ADJUSTABLE
No specific	1	TEST UNIT - ATCRB, MODE S WITH ELS EHS FUNCTIONS

B. Work Zones and Access Panels

ZONE/ACCESS	ZONE DESCRIPTION
811	

C. Referenced Information

REFERENCE	DESIGNATION
<a href="#">Ref. 22-70-00-860-801-A</a>	Procedure of the Flight Plan Entry
<a href="#">Ref. 22-70-00-860-801-A01</a>	Procedure for the Flight Plan Entry (Without Pre-stored Data)
<a href="#">Ref. 24-41-00-861-801-A</a>	Energize the Aircraft Electrical Circuits from the External Power A
<a href="#">Ref. 24-41-00-861-801-A01</a>	Energize the Aircraft Electrical Circuits from the APU (APU Started with APU BAT)
<a href="#">Ref. 24-41-00-861-801-A03</a>	Energize the Aircraft Electrical Circuits from the External Power A and B
<a href="#">Ref. 24-41-00-861-801-A04</a>	Energize the Aircraft Electrical Circuits from the APU (APU started with External power A)
<a href="#">Ref. 24-41-00-861-801-A05</a>	Energize the Aircraft Electrical Circuits from the External Power B
<a href="#">Ref. 24-41-00-862-801-A</a>	De-energize the Aircraft Electrical Circuits from the External Power A
<a href="#">Ref. 24-41-00-862-801-A01</a>	De-energize the Aircraft Electrical Circuits from the APU
<a href="#">Ref. 24-41-00-862-801-A03</a>	De-energize the Aircraft Electrical Circuits from the External Power A and B

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REFERENCE	DESIGNATION
<a href="#">Ref. 24-41-00-862-801-A04</a>	De-energize the Aircraft Electrical Circuits from the External Power B
<a href="#">Ref. 32-00-00-860-804-A</a>	Flight Configuration Precautions
<a href="#">Ref. 32-00-00-860-805-A</a>	Ground Configuration after Flight Configuration
<a href="#">Ref. 32-69-00-860-801-A</a>	Simulation of Flight, When the Aircraft is on the Ground
<a href="#">Ref. 34-10-00-860-801-A</a>	Air Data/Inertial Reference System (ADIRS) Start Procedure
<a href="#">Ref. 34-10-00-860-803-A</a>	ADIRS Stop Procedure
<a href="#">Ref. 52-41-00-010-801-A</a>	Opening of Avionics-Compartment Access Door 811
<a href="#">Ref. 52-41-00-410-801-A</a>	Closing of Avionics-Compartment Access Door 811
<a href="#">Ref. AWM 34-52-07</a>	

### 3. Job Set-up

#### SUBTASK 34-52-00-860-076-A

##### A. Aircraft Maintenance Configuration

- (1) Energize the aircraft electrical circuits  
[Ref. AMM TASK 24-41-00-861-801.](#)
- (2) Do the Air Data/Inertial Reference System (ADIRS) start procedure [Ref. AMM TASK 34-10-00-860-801.](#)
- (3) Enter a flight plan to get a flight number [Ref. AMM TASK 22-70-00-860-801.](#)
- (4) If the flight number is not shown:
  - Use a company route number stored in the navigation database, or
  - Manually enter the "TEST" flight number in the Multipurpose Control & Display Unit (MCDU).
- (5) On the center pedestal, on SWITCHING control panel 135VU, make sure that the AIR DATA selector switch is set to the NORM position.

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**EMB SB 34-3134 for A/C 151-151**

**EMB SB 34-3140 for A/C 051-052**

#### SUBTASK 34-52-00-480-055-B

##### B. Install the TEST UNIT - ATCRB, MODE S WITH ELS EHS FUNCTIONS in the cockpit.

**NOTE:** You can do this test if:

- You use a test set that has the automatic test function.
  - You make sure that the automatic test procedure does a test of all the parameters given in this procedure.
- (1) Make sure that the test set is in the correct condition.
  - (2) Connect the test antenna to the test set.
  - (3) Put the test antenna in position in front of the ATC1 and ATC2 bottom antenna.

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## SUBTASK 34-52-00-010-056-A

### C. Get access to the avionics compartment.

- (1) Put the ACCESS PLATFORM 3M (10 FT)- ADJUSTABLE in position below access door 811.
- (2) Open access door 811 [Ref. AMM TASK 52-41-00-010-801.](#)

## SUBTASK 34-52-00-941-050-A

### D. Get Access

- (1) For the antenna(s) 4SH3 and/or 4SH4, put the ACCESS PLATFORM 8M (26 FT) - ADJUSTABLE in position at zone 230.

## SUBTASK 34-52-00-860-088-A

### E. Aircraft Maintenance Configuration

- (1) Obey the flight configuration precautions [Ref. AMM TASK 32-00-00-860-804.](#)
- (2) Do a flight simulation [Ref. AMM TASK 32-69-00-860-801.](#)
  - Select LGCIU1 for ATC1 or LGCIU2 for ATC2.
  - Push the line select key adjacent to the "NOSE+LH+RH" indication.

**NOTE:** The simulation of the flight automatically stops after approximately five minutes. When the aircraft goes back to its ground configuration, the bottom antennas do not transmit squitters.

## SUBTASK 34-52-00-865-077-A

### F. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	FIN	LOCATION
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**\*\* ON A/C FSN 003-050**

**EMB SB 34-3226 for A/C 004-004**

721VU	T2CAS	104SG	B12
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**\*\* ON A/C FSN ALL**

722VU	ATC 2	3SH2	E47
722VU	COM NAV/MMR/2	42RT2	H43
742VU	COM NAV/MMR/1	42RT1	N68
742VU	ATC 1	3SH1	Q64

## SUBTASK 34-52-00-860-077-E

### G. Aircraft Maintenance Configuration

- (1) On the center pedestal, on the ATC/TCAS control unit:
  - Start ATC system 1(2).
  - Enter ATC code 7776 or a different code that your local authorities gave you to keep the traffic interference to a minimum.
  - Set the ALT RPTG/ON/OFF switch to ON.
  - Set the STBY/AUTO/ON switch to AUTO.
  - Set the STBY/TA/TA/RA switch to TA/RA.

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## 4. Procedure

**NOTE:** Two persons are necessary for this procedure.

**\*\* ON A/C FSN ALL**



**EMB SB 34-3134 for A/C 151-151**

**EMB SB 34-3140 for A/C 051-052**

SUBTASK 34-52-00-720-059-G

A. Functional Test of ATC MODE S

**NOTE:** There are many different types of test benches. This procedure gives a typical test sequence. The test sequence can change with the test bench used.

**NOTE:** For elementary surveillance and enhanced-surveillance capable transponders, elementary surveillance and enhanced surveillance capable test sets are used.

- (1) Do the test for system 1.  
Then, do the test for system 2.

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ACTION	RESULT
1. Set the test set (or bench) to:	The test set must show:
- Interrogation in MODE A	- MODE A code: 7776 or the code that your local authorities gave you (see para. 3)
- Interrogation in MODE A only (ATCRBS - MODE A only).	- "NO REPLY", "PASS" or "OK".
2. Set the test set (or bench) to:	The test set must show:
- Interrogation in MODE C	- MODE C code: Z,ZZZ ft (Z,ZZZ is a number that gives approximately the local field elevation)
- Interrogation in MODE C only (ATCRBS - MODE C only).	- "NO REPLY", "PASS" or "OK".
3. Set the test set (or bench) to:	The test set must show:
- Interrogation in MODE S.	- MODE S aircraft code: XXXXXX (the aircraft code has 6 digits and agrees with the 24-bit MODE S address) <a href="#">Ref. AWM 34-52-07</a> - MODE A in the DF 5 format - MODE C in the DF 4 format - Flight number/flight ID - Acquisition squitters (the period is between 0.8 and 2.4 seconds in the DF 11 format) - Aircraft status: "Flight" or "Air".
4. Set the test set (or bench) to:	The test set must show:
- Side lobe suppression-test	
- Side lobe suppression: -9 dB (P1>P2)	- MODE A: 7776 or the code that your local authorities gave you (see para. 3) - MODE C: "Z,ZZZ" or "PASS" (if the MODE C side lobe suppression-test is available in the test bench)
- Side lobe suppression: 0 dB (P1=P2).	- MODE A: "NO REPLY" or "PASS" - MODE C: "NO REPLY" or "PASS" (if the MODE C side lobe suppression-test is available in the test bench).
5. Set the test set (or bench) to:	The test set must show:
- "INVALID ADDRESS/UNDESIRE REPLY MODE S" test.	- MODE S ADDRESS: "NO REPLY" or "PASS".
6. On the center pedestal, on the ATC control unit:	The test set must show:
- Set the ALT RPTG/ON/OFF switch to OFF	
- Interrogation in MODE C.	- MODE C: "No Altitude Value".

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ACTION	RESULT
7. On the center pedestal, on the ATC control unit: - Set the ALT RPTG/ON/OFF switch to ON	On the test set:
- Push the IDENT pushbutton switch.	
Set the test set to:	
- Interrogation in MODE A.	- The IDENT signal is transmitted for a minimum of 20 seconds.
8. Set the test set (or bench) to:	On the test set:
- Antenna diversity test	- The antenna diversity or isolation is more than or equal to 20 dB.
- Refer to the diversity testing procedure given in the test-bench user manual.	
9. Set the test set (or bench) to:	On the test set:
- POWER test	- The power must be between 125W and 500W.
- To measure the ATC1 and ATC2 power and the ATC1 and ATC2 sensitivity, make sure that the test antenna is: . In front of the ATC1 and ATC2 bottom antenna . Then in front of the ATC1 and ATC2 top antenna. - Enter the distance between the ATC antennas and the test antenna in the set-up menu of the test set.  <b>NOTE:</b> This distance is different for the bottom antenna and the top antenna of the ATC transponder on which you do the test. - Measure the distance with precision.  <b>NOTE:</b> If you do not, the results of the power test and the sensitivity test will be unsatisfactory. - For more information, refer to the user manual of your test set.	
- FREQUENCY test	- The frequency must be 1090 MHz plus or minus 1 MHz.
- SENSITIVITY test	- The sensitivity or MTL must be -74 dBm plus or minus 3 dBm.
- SENSITIVITY difference MODE A/MODE C test.	- The sensitivity difference must be less than or equal to 1 dB.

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ACTION	RESULT
10. Put the aircraft back to the ground configuration <a href="#">Ref. AMM TASK 32-00-00-860-805.</a>	
11. Set the test set (or bench) to:	The test set must show:
- Interrogation in MODE A	- MODE A: "NO REPLY"
- Interrogation in MODE C	- MODE C: "NO REPLY"
- Interrogation in MODE S.	- MODE S aircraft code: XXXXXX - Flight number/flight ID - Aircraft status: Ground.

SUBTASK 34-52-00-720-060-A

B. Functional Test of ATC MODE S for the Elementary Surveillance

(1) Do a flight simulation [Ref. AMM TASK 32-69-00-860-801:](#)

- Push the line select key adjacent to the "NOSE+LH+RH" indication.
- Put the test antenna in position in front of the ATC1 and ATC2 bottom antenna.

ACTION	RESULT
1. Set the test set (or bench) for the capability report comm B data (BDS 1.0) test to:	The test set must show:
- Surveillance identifier code-test	- "PASS", "OK" or "YES"
- Aircraft identifier capability.	- "PASS", "OK" or "YES".
2. Set the test set (or bench) for the capability report comm B data (BDS 1.7) test.	The test set must show: - "No null coding" or "PASS".
3. Set the test set (or bench) for the capability report comm B data (BDS 3.0) test to:	The test set must show:
- Resolution advisory test.	- "No RA", "PASS", "OK" or "AVAIL".
4. Put the aircraft back to the ground configuration <a href="#">Ref. AMM TASK 32-00-00-860-805.</a>	

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- EMB SB 34-3133 for A/C 004-004, 051-052, 151-151**
- EMB SB 34-3134 for A/C 151-151**
- EMB SB 34-3140 for A/C 051-052**

SUBTASK 34-52-00-720-061-A

C. Functional Test of ATC MODE S for the Enhanced Surveillance

**NOTE:** The verification of the enhanced surveillance functionality uses one parameter for each binary data store and one parameter from each source (Flight Control)

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Unit (FCU), Air Data Computer (ADC), Inertial Reference System (IRS)).

- (1) Do a flight simulation [Ref. AMM TASK 32-69-00-860-801](#):
  - Push the line select key adjacent to the "NOSE+LH+RH" indication.
  - Put the test antenna in position in front of the ATC1 and ATC2 bottom antenna.

ACTION	RESULT
1. Set the test set (or bench) for the heading and speed report BDS 6.0 test to:	The test set must show:
- Magnetic heading.	- Magnetic heading of the aircraft.
<b>NOTE:</b> It is not necessary to do a check of the other parameters (barometric altitude rate, inertial vertical velocity, indicated airspeed, mach number) from BDS 6.0 because the sources are validated.	
2. Set the test set (or bench) for the track and turn report BDS 5.0 test to:	The test set must show:
- Roll angle	- X degrees (X is a number that gives approximately the roll angle of the aircraft).
- Ground speed.	- Approximately 0.0 kt.
<b>NOTE:</b> It is not necessary to do a check of the other parameters (true track angle, track angle rate, true airspeed) from BDS 5.0 because the sources are validated.	
3. On the center of the FCU: - Turn the altitude selector knob until an altitude of 10,000 ft shows on the "ALT" field of the display window. - Pull the altitude selector knob.	
4. On the CAPT and F/O sides of the FCU: - Turn the baro reference selector-knob until a pressure of 1013 hPa shows on the CAPT and F/O barometric display. - Do not pull the baro reference selector-knob.	
5. Set the test set (or bench) for the selected vertical intention BDS 4.0 test to:	The test set must show:
- Barometric pressure setting - FCU selected altitude.	- 1013 hPa - 10,000 ft.

- (2) Put the aircraft back to the ground configuration [Ref. AMM TASK 32-00-00-860-805](#).

**\*\* ON A/C FSN 003-150  
POST SB 34-3330 for A/C 151-151**



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**EMB SB 34-3219 for A/C 051-051, 151-151**  
**EMB SB 34-3330 for A/C 003-004, 051-052**



SUBTASK 34-52-00-720-063-CS

D. Functional Test of the ATC MODE S for the ADS-B OUT DO-260B capability

**NOTE:** If during this test, the GPS position is not available, it is necessary to do the test in an open area (not in a hangar).

**NOTE:** You can ignore all the ECAM alerts related to the GPS system and the LS approach functions.

**NOTE:** The test set (or bench) stays on between the flight test simulation and the ground test.

- (1) Open, safety and tag circuit breaker 42RT2.
- (2) Do a flight simulation [Ref. AMM TASK 32-69-00-860-801](#).
  - Push the line select key adjacent to the "NOSE+LH+RH" indication.
- (3) Put the test antenna in position in front of the ATC1 and ATC2 bottom antenna.
- (4) Enter the local latitude and longitude in the test-bench set-up menu.
- (5) Refer to the ADS-B OUT testing procedure given in the test-bench user manual.

ACTION	RESULT
1.Set the test set (or bench) for the airborne position BDS 0.5 test to:	The test set must show:
<ul style="list-style-type: none"> <li>- Latitude</li> <li>- Longitude</li> <li>- Baro altitude</li> </ul>	<ul style="list-style-type: none"> <li>- Latitude of the aircraft</li> <li>- Longitude of the aircraft</li> <li>- Z.ZZZ ft (Z.ZZZ is a number that gives approximately the local field elevation)</li> </ul>
<ul style="list-style-type: none"> <li>- Transmission rate.</li> </ul>	<ul style="list-style-type: none"> <li>- The period is between 0.8 and 1.2 seconds.</li> </ul> <p><b>NOTE:</b> If your test set receives the signals from the two antennas, the period is between 0.4 and 0.6 seconds.</p>
2.Set the test set (or bench) for the aircraft identification BDS 0.8 test to:	The test set must show:
<ul style="list-style-type: none"> <li>- A/C identification</li> <li>- Transmission rate</li> </ul>	<ul style="list-style-type: none"> <li>- Flight number/flight ID</li> <li>- The period is between 9.6 and 10.4 seconds.</li> </ul> <p><b>NOTE:</b> If your test set receives the signals from the two antennas, the period is between 4.8 and 5.2 seconds.</p>
<ul style="list-style-type: none"> <li>- ADS-B Emitter Category.</li> </ul>	<ul style="list-style-type: none"> <li>- EMIT CAT = HEAVY.</li> </ul>

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ACTION	RESULT
3.Set MMR2 to ON and MMR1 to OFF: - Remove the safety clip and the tag and close circuit breaker 42RT2.	
- Open, safety and tag circuit breaker 42RT1.	
4.Set the test set (or bench) for the aircraft velocity BDS 0.9 test to:	The test set must show:
- Vertical rate.	- "0".
5.Set the test set (or bench) for the extended-squitter aircraft status BDS 6.1 subtype 1 test to:	The test set must show:
- Emergency Priority Status.	- "NO EMERGENCY".
6.Set the test set (or bench) for the aircraft operational-status BDS 6.5 subtype 0 test to:	The test set must show:
- ADS-B version number	- 2 (reflects DO-260B compliance)
- SIL.	- 3.
7.Put the test antenna in position in front of the ATC1 and ATC2 top antenna.	
8.Put the aircraft back to the ground configuration <a href="#">Ref. AMM TASK 32-00-00-860-805</a> .	
9.Set the test set (or bench) for the aircraft surface position BDS 0.6 test to:	The test set must show:
- Latitude	- Latitude of the aircraft
- Longitude	- Longitude of the aircraft
- Ground speed	- Approximately 0.0 kt
- Transmission rate.	- The period is between 4.8 and 5.2 seconds.
10.Set the test set (or bench) for the aircraft identification BDS 0.8 test to:	The test set must show:
- Aircraft identification	- Flight number/flight ID
- Transmission rate.	- The period is between 9.8 and 10.2 seconds.
11.Set the test set (or bench) for the aircraft operational-status BDS 6.5 subtype 1 test to:	The test set must show:
- Aircraft length and width	- "< Xm", "< Ym" (X is a value that gives the length of the aircraft and Y is a value that gives the width of the aircraft)
- GPS antenna offset.	- "0m", "6m".

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- (6) Remove the safety clip and the tag and close circuit breaker 42RT1.

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### 5. Close-up

#### SUBTASK 34-52-00-860-078-E

##### A. Put the aircraft back to its initial configuration.

- (1) On the center pedestal, on the ATC control unit:
  - Set the STBY/AUTO/ON switch to STBY.
  - Set the ALT RPTG/ON/OFF switch to OFF.
  - Set the STBY/TA/TA/RA switch to STBY.
- (2) Do the ADIRS stop procedure [Ref. AMM TASK 34-10-00-860-803](#).
- (3) De-energize the aircraft electrical circuits  
[Ref. AMM TASK 24-41-00-862-801](#).

#### SUBTASK 34-52-00-080-055-A

- ##### B. Remove the ground support and maintenance equipment, the special and standard tools and all other items.

#### SUBTASK 34-52-00-410-058-A

##### C. Close Access

- (1) Close access door 811 [Ref. AMM TASK 52-41-00-410-801](#).
- (2) Remove the access platform(s).



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**EMB SB 34-3070 for A/C 052-052**  
**EMB SB 34-3196 for A/C 004-004, 052-052**

TASK 34-36-00-720-802-A  
 Functional Test of the Instrument Landing System (ILS) Function

1. Reason for the Job  
 Self explanatory

2. Job Set-up Information

A. Fixtures, Tools, Test and Support Equipment

REFERENCE	QTY	DESIGNATION
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**\*\* ON A/C FSN ALL**

No specific	1	TEST UNIT-GROUND,VOR/ILS
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**\*\* ON A/C FSN ALL**

**EMB SB 34-3070 for A/C 052-052**  
**EMB SB 34-3196 for A/C 004-004, 052-052**

B. Work Zones and Access Panels

ZONE/ACCESS	ZONE DESCRIPTION
210	CKPT FWD PRESSURE BHD TO CKPT PARTITION

C. Referenced Information

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REFERENCE	DESIGNATION
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**\*\* ON A/C FSN ALL**

<u>Ref. 24-41-00-861-801-A</u>	Energize the Aircraft Electrical Circuits from the External Power A
<u>Ref. 24-41-00-861-801-A01</u>	Energize the Aircraft Electrical Circuits from the APU (APU Started with APU BAT)
<u>Ref. 24-41-00-861-801-A03</u>	Energize the Aircraft Electrical Circuits from the External Power A and B
<u>Ref. 24-41-00-861-801-A04</u>	Energize the Aircraft Electrical Circuits from the APU (APU started with External power A)
<u>Ref. 24-41-00-861-801-A05</u>	Energize the Aircraft Electrical Circuits from the External Power B
<u>Ref. 24-41-00-862-801-A</u>	De-energize the Aircraft Electrical Circuits from the External Power A
<u>Ref. 24-41-00-862-801-A01</u>	De-energize the Aircraft Electrical Circuits from the APU
<u>Ref. 24-41-00-862-801-A03</u>	De-energize the Aircraft Electrical Circuits from the External Power A and B
<u>Ref. 24-41-00-862-801-A04</u>	De-energize the Aircraft Electrical Circuits from the External Power B
<u>Ref. 31-60-00-860-801-A</u>	EIS Start Procedure
<u>Ref. 34-10-00-860-802-A</u>	IR Alignment Procedure
<u>Ref. 34-10-00-860-803-A</u>	ADIRS Stop Procedure

**\*\* ON A/C FSN ALL**

**EMB SB 34-3070 for A/C 052-052**  
**EMB SB 34-3196 for A/C 004-004, 052-052**

3. Job Set-up

SUBTASK 34-36-00-860-062-A

A. Aircraft Maintenance Configuration

- (1) Energize the aircraft electrical circuits  
Ref. AMM TASK 24-41-00-861-801.
- (2) Do the EIS start procedure (PFD DUs and ND DUs only) Ref. AMM TASK 31-60-00-860-801.

(3)

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# AIRBUS

CUSTOMIZATION	AIRCRAFT TYPES	DOCTYPES	REVISION DATE	REVISION NUMBER	TITLE
FWI	A330 A340	AMM	01-Apr-2021	50	34-36-00-720-802-A - Functional Test of the Instrument Landing System (ILS) Function
<b>TAIL NUMBER - MSN - FSN:</b> F-HPTP - 01265 - 003					
<b>Print date:</b> 2021-04-05 17:04:24					

Get the PFD and ND. To do this, on the Multipurpose Control and Display Unit (MCDU), align the Inertial References (IRs) Ref. AMM TASK 34-10-00-860-802.

- (4) On the Electronic Flight Instrument System (EFIS) control panels of the Flight Control Unit (FCU):
  - push the LS pushbutton switch
  - set the mode selector switch to ROSE/ILS.
- (5) On the center pedestal, on the Radio Management panel (RMP) RMP 1 (RMP 2):
  - set the ON/OFF switch to ON.

SUBTASK 34-36-00-865-056-A

B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	FIN	LOCATION
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**\*\* ON A/C FSN ALL**

722VU	COM NAV/MMR/2	42RT2	H43
722VU	COM NAV/MMR/2	42RT2	H43
722VU	FCU C	8CA2	R42
722VU	RMP 2	2RG2	X44
742VU	FCU A+B	8CA1	E69
742VU	COM NAV/MMR/1	42RT1	N68
742VU	COM NAV/MMR/1	42RT1	N68

**\*\* ON A/C FSN 003-003, 101-150**

742VU	RMP 1	2RG1	F70
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**\*\* ON A/C FSN 003-050, 101-200**

742VU	ACP F/O INT 2 AUDIO 3&4 OC CPNT BITE	4RN2	A72
742VU	ACP CAPT INT 1 AUDIO AVNC S SELCAL	4RN1	A71

**\*\* ON A/C FSN ALL**

**EMB SB 34-3070 for A/C 052-052**

**EMB SB 34-3196 for A/C 004-004, 052-052**

SUBTASK 34-36-00-480-051-A

- C. Install the test unit
  - (1) Refer to the installation instruction to install the TEST UNIT-GROUND,V OR/ILS.

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# AIRBUS

CUSTOMIZATION	AIRCRAFT TYPES	DOCTYPES	REVISION DATE	REVISION NUMBER	TITLE
FWI	A330 A340	AMM	01-Apr-2021	50	34-36-00-720-802-A - Functional Test of the Instrument Landing System (ILS) Function
<b>TAIL NUMBER - MSN - FSN:</b> F-HPTP - 01265 - 003					
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(2) Start the ground test unit. Set the LOC and G/S selector switches to 0.

#### 4. Procedure

SUBTASK 34-36-00-720-051-A

A. Functional Test of the Instrument Landing System (ILS)

**NOTE:** This test is for the ILS 1. For the ILS 2, use the indications between the parentheses.



# AIRBUS

CUSTOMIZATION	AIRCRAFT TYPES	DOCTYPES	REVISION DATE	REVISION NUMBER	TITLE
FWI	A330 A340	AMM	01-Apr-2021	50	34-36-00-720-802-A - Functional Test of the Instrument Landing System (ILS) Function
<b>TAIL NUMBER - MSN - FSN:</b> F-HPTP - 01265 - 003					
<b>Print date:</b> 2021-04-05 17:04:24					

# AIRBUS

CUSTOMIZATION	AIRCRAFT TYPES	DOCTYPES	REVISION DATE	REVISION NUMBER	TITLE
FWI	A330 A340	AMM	01-Apr-2021	50	34-36-00-720-802-A - Functional Test of the Instrument Landing System (ILS) Function
<b>TAIL NUMBER - MSN - FSN:</b> F-HPTP - 01265 - 003					
<b>Print date:</b> 2021-04-05 17:04:24					

ACTION	RESULT
1. On the center pedestal, on the RMP 1 (RMP 2):	On the RMP 1 (RMP 2):
- push the NAV pushbutton switch.	- the green LED on the NAV pushbutton switch comes on.
- push the ILS pushbutton switch.	- the green LED on the ILS pushbutton switch comes on.
- set the ILS 1 (ILS 2) frequency of the ILS ground test unit with the dual selector knob.	- in the right window, the set frequency comes into view.
- push the transfer (double arrow) pushbutton switch.	- the set frequency comes into view in the left window. On the CAPT (F/O) PFD: - the set frequency comes into view in the bottom left corner - the G/S and LOC deviation indexes come into view in the center of the scales. On the F/O (CAPT) ND: - the ILS 1 (ILS 2) indication and frequency come into view in the top right corner - the G/S deviation index and the LOC deviation bar come into view in the center of the scales.
2. On the ground test unit:	On the CAPT (F/O) PFD and on the F/O (CAPT) ND:
- set the G/S selector switch to up 1 point then up 2 points.	- the G/S index moves up 1 dot then up 2 dots.
- set the G/S selector switch to 0.	- the G/S index moves to the center of the scale.
3. On the ground test unit:	On the CAPT (F/O) PFD and on the F/O (CAPT) ND:
- set the LOC selector switch to left 1 point then left 2 points.	- the LOC index and the LOC deviation bar move left 1 dot then 2 dots.
- set the LOC selector switch to 0.	- the LOC index and the LOC deviation bar move to the center of the scale.
4. On the center pedestal, on the RMP 1 (RMP 2):	On the F/O (CAPT) ND:

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CUSTOMIZATION	AIRCRAFT TYPES	DOCTYPES	REVISION DATE	REVISION NUMBER	TITLE
FWI	A330 A340	AMM	01-Apr-2021	50	34-36-00-720-802-A - Functional Test of the Instrument Landing System (ILS) Function
<b>TAIL NUMBER - MSN - FSN:</b> F-HPTP - 01265 - 003					
<b>Print date:</b> 2021-04-05 17:04:24					

ACTION	RESULT
- set a CRS of 45°.	- the CRS 45° comes into view in the top right corner - the course pointer moves to 45°.
5. On the ground test unit, set the transmission of the identification signal.	
6. On the center pedestal, on the CAPT (F/O) Audio Control Panel (ACP):	
- push and release the ILS pushbutton switch.	In the loud speaker, you can hear the audio signal.
7. On the ground test unit:	
- cancel the transmission of the audio signal.	- the audio signal stops.

5. Close-up

SUBTASK 34-36-00-080-051-A

- A. Remove the ground support and maintenance equipment, the special and standard tools and all other items.

SUBTASK 34-36-00-860-063-A

- B. Put the aircraft back to its initial configuration.
- (1) Do the ADIRS stop procedure. Ref. AMM TASK 34-10-00-860-803
  - (2) On the CAPT and F/O EFIS switching panels 417VU and 418VU, set the PFD and the ND potentiometers to OFF.
  - (3) On the RMP 1 (RMP 2), set the ON/OFF switch to OFF.
  - (4) De-energize the aircraft electrical circuits  
Ref. AMM TASK 24-41-00-862-801.



# AIRBUS

CUSTOMIZATION	AIRCRAFT TYPES	DOCTYPES	REVISION DATE	REVISION NUMBER	TITLE
FWI	A330 A340	AMM	01-Apr-2021	50	34-51-00-720-803-A - Functional Test of the Distance Measuring Equipment (DME)
<b>TAIL NUMBER - MSN - FSN:</b> F-HPTP - 01265 - 003					
<b>Print date:</b> 2021-04-05 17:06:09					

**\*\* ON A/C FSN ALL**

TASK 34-51-00-720-803-A

Functional Test of the Distance Measuring Equipment (DME)

1. Reason for the Job  
To make sure that the system operates correctly.
2. Job Set-up Information

A. Fixtures, Tools, Test and Support Equipment

REFERENCE	QTY	DESIGNATION
No specific	1	TEST UNIT-GROUND,DME

B. Referenced Information

# AIRBUS

CUSTOMIZATION	AIRCRAFT TYPES	DOCTYPES	REVISION DATE	REVISION NUMBER	TITLE
FWI	A330 A340	AMM	01-Apr-2021	50	34-51-00-720-803-A - Functional Test of the Distance Measuring Equipment (DME)
<b>TAIL NUMBER - MSN - FSN:</b> F-HPTP - 01265 - 003					
<b>Print date:</b> 2021-04-05 17:06:09					

REFERENCE	DESIGNATION
<u>Ref. 24-41-00-861-801</u> <u>-A</u>	Energize the Aircraft Electrical Circuits from the External Power A
<u>Ref. 24-41-00-861-801</u> <u>A01</u>	Energize the Aircraft Electrical Circuits from the AP U (APU Started with APU BAT)
<u>Ref. 24-41-00-861-801</u> <u>A03</u>	Energize the Aircraft Electrical Circuits from the External Power A and B
<u>Ref. 24-41-00-861-801</u> <u>A04</u>	Energize the Aircraft Electrical Circuits from the AP U (APU started with External power A)
<u>Ref. 24-41-00-861-801</u> <u>A05</u>	Energize the Aircraft Electrical Circuits from the External Power B
<u>Ref. 24-41-00-862-801</u> <u>-A</u>	De-energize the Aircraft Electrical Circuits from the External Power A
<u>Ref. 24-41-00-862-801</u> <u>A01</u>	De-energize the Aircraft Electrical Circuits from the APU
<u>Ref. 24-41-00-862-801</u> <u>A03</u>	De-energize the Aircraft Electrical Circuits from the External Power A and B
<u>Ref. 24-41-00-862-801</u> <u>A04</u>	De-energize the Aircraft Electrical Circuits from the External Power B
<u>Ref. 31-60-00-860-801</u> <u>-A</u>	EIS Start Procedure
<u>Ref. 31-60-00-860-802</u> <u>-A</u>	EIS Stop Procedure
<u>Ref. 34-10-00-860-801</u> <u>-A</u>	Air Data/Inertial Reference System (ADIRS) Start Procedure
<u>Ref. 34-10-00-860-802</u> <u>-A</u>	IR Alignment Procedure
<u>Ref. 34-10-00-860-803</u> <u>-A</u>	ADIRS Stop Procedure

**\*\* ON A/C FSN 003-100, 151-200**

Ref. Fig. VOR or ILS Frequency Selection

**\*\* ON A/C FSN ALL**

3. Job Set-up

SUBTASK 34-51-00-860-052-A

A. Aircraft Maintenance Configuration

- (1) Energize the aircraft electrical circuits Ref. AMM TASK 24-41-00-861-801  
1.

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CUSTOMIZATION	AIRCRAFT TYPES	DOCTYPES	REVISION DATE	REVISION NUMBER	TITLE
FWI	A330 A340	AMM	01-Apr-2021	50	34-51-00-720-803-A - Functional Test of the Distance Measuring Equipment (DME)
<b>TAIL NUMBER - MSN - FSN:</b> F-HPTP - 01265 - 003					
<b>Print date:</b> 2021-04-05 17:06:09					

- (2) Do the EIS start procedure Ref. AMM TASK 31-60-00-860-801.
- (3) Do the ADIRS start procedure Ref. AMM TASK 34-10-00-860-801.
- (4) Do the IR alignment procedure Ref. AMM TASK 34-10-00-860-802.
- (5) On the center pedestal, on RMP1 and RMP2, set the ON/OFF selector switches to ON.

SUBTASK 34-51-00-865-051-A

B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	FIN	LOCATION
722VU	DME 2	2SD2	E50
722VU	FCU C	8CA2	R42
722VU	RMP 2	2RG2	X44
742VU	FCU A+B	8CA1	E69

**\*\* ON A/C FSN ALL**

**EMB SB 34-3204 for A/C 004-004, 051-052, 151-151**

742VU	DME 1	2SD1	N79
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**\*\* ON A/C FSN 003-003, 101-150**

742VU	RMP 1	2RG1	F70
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**\*\* ON A/C FSN ALL**

SUBTASK 34-51-00-860-054-A

C. Installation of the Test Unit

- (1) Install the TEST UNIT-GROUND,DME (refer to the installation instructions and the user guide).
- (2) Make sure that the battery(ies) of the TEST UNIT-GROUND,DME is(are) fully charged.
- (3) Set the TEST UNIT-GROUND,DME at 10 m (32.81 ft) from the DME antennas.
- (4) Align the antenna of the TEST UNIT-GROUND,DME with the DME antennas.

4. Procedure

**\*\* ON A/C FSN 003-003, 101-150**

SUBTASK 34-51-00-720-050-B

A. Functional Test of the DME with VOR Frequency

# AIRBUS

CUSTOMIZATION	AIRCRAFT TYPES	DOCTYPES	REVISION DATE	REVISION NUMBER	TITLE
FWI	A330 A340	AMM	01-Apr-2021	50	34-51-00-720-803-A - Functional Test of the Distance Measuring Equipment (DME)
<b>TAIL NUMBER - MSN - FSN:</b> F-HPTP - 01265 - 003					
<b>Print date:</b> 2021-04-05 17:06:09					



**AIRBUS**

CUSTOMIZATION	AIRCRAFT TYPES	DOCTYPES	REVISION DATE	REVISION NUMBER	TITLE
FWI	A330 A340	AMM	01-Apr-2021	50	34-51-00-720-803-A - Functional Test of the Distance Measuring Equipment (DME)
<b>TAIL NUMBER - MSN - FSN:</b> F-HPTP - 01265 - 003					
<b>Print date:</b> 2021-04-05 17:06:09					

ACTION	RESULT
1. On the EFIS control section of the FCU:	
- Set the mode selector switches to ROSE or ARC.	
- Set the ADF/VOR selector switches to VOR.	- The horizontal dashes come into view. - No DME1(DME2) distance is shown.
2. On RMP1 (RMP2):	<b>** ON A/C FSN 003-003, 101-150</b>
- Set a VOR/DME1 (VOR/DME2) test frequency and a course. <b>** ON A/C FSN 003-003</b> <u>Ref. Fig. VOR or ILS Frequency Selection</u>	
3. On the TEST UNIT-GROUND, DME:	On the left (right) side of the CAPT and F/O NDs:
- Start the TEST UNIT-GROUND, DME. - Set the functional mode to DME. - Enter the same frequency as the one used on the RMP.	
- Set the transmission of the identification signal (morse code).	- The VOR1 (VOR2) indication, the station identification, the frequency and the course come into view.
- Set the DME1 (DME2) range to 5 NM.	- The range 5.0 comes into view. <b>NOTE:</b> Below 20 NM, the value is shown with a decimal point and the tenth of NM.
- Set the DME1 (DME2) range to 270 NM.	- The range 270 comes into view. <b>NOTE:</b> Above 20 NM, the value is shown without a decimal point and the tenth of NM.
4. On the center pedestal, on one ACP:	In the loudspeaker:
- Push the VOR1 (VOR2) pushbutton switch.	- You can hear the identification signal.

# AIRBUS

CUSTOMIZATION	AIRCRAFT TYPES	DOCTYPES	REVISION DATE	REVISION NUMBER	TITLE
FWI	A330 A340	AMM	01-Apr-2021	50	34-51-00-720-803-A - Functional Test of the Distance Measuring Equipment (DME)
<b>TAIL NUMBER - MSN - FSN:</b> F-HPTP - 01265 - 003					
<b>Print date:</b> 2021-04-05 17:06:09					

ACTION	RESULT
- Adjust the volume as necessary.	
- Do the adjustment slowly and continuously.	- There is no unwanted noise.
5. On the center pedestal, on the ATC control unit:	On the CAPT and F/O NDs:
- Set the ATC master switch to the ON or XPNDR position.	- The DME1 (DME2) indication does not change.
	In the loudspeaker: - The audio signal does not change.
- Set the ATC master switch to the STBY position.	
6. Stop the TEST UNIT-GROUND, DME.	

SUBTASK 34-51-00-720-051-B

B. Functional Test of the DME with ILS Frequency

**AIRBUS**

<b>CUSTOMIZATION</b>	<b>AIRCRAFT TYPES</b>	<b>DOCTYPES</b>	<b>REVISION DATE</b>	<b>REVISION NUMBER</b>	<b>TITLE</b>
FWI	A330 A340	AMM	01-Apr-2021	50	34-51-00-720-803-A - Functional Test of the Distance Measuring Equipment (DME)
<b>TAIL NUMBER - MSN - FSN:</b> F-HPTP - 01265 - 003					
<b>Print date:</b> 2021-04-05 17:06:09					

# AIRBUS

CUSTOMIZATION	AIRCRAFT TYPES	DOCTYPES	REVISION DATE	REVISION NUMBER	TITLE
FWI	A330 A340	AMM	01-Apr-2021	50	34-51-00-720-803-A - Functional Test of the Distance Measuring Equipment (DME)
<b>TAIL NUMBER - MSN - FSN:</b> F-HPTP - 01265 - 003					
<b>Print date:</b> 2021-04-05 17:06:09					

ACTION	RESULT
1. On the EFIS control sections of the FCU: <ul style="list-style-type: none"> <li>- Set the mode selector switches to LS.</li> <li>- Push the LS key in the right bottom corner.</li> </ul>	
2. On RMP1 (RMP2): <ul style="list-style-type: none"> <li>- Set an ILS/DME1 (ILS/DME2) test frequency and an ILS course.</li> </ul> ** <b>ON A/C FSN 003-003</b> <u>Ref. Fig. VOR or ILS Frequency Selection</u>	** <b>ON A/C FSN 003-003, 101-150</b>
3. On the TEST UNIT-GROUND, DME: <ul style="list-style-type: none"> <li>- Start the TEST UNIT-GROUND, DME.</li> <li>- Enter the same ILS test frequency as the one used on the RMP.</li> </ul>	On the left lower corner of the CAPT and F/O PFDs:
<ul style="list-style-type: none"> <li>- Set the transmission of the identification signal (morse code).</li> </ul>	- The ILS frequency and the identification comes into view.
<ul style="list-style-type: none"> <li>- Set the distance to 5 NM.</li> </ul>	- The range 5.0 comes into view.
<ul style="list-style-type: none"> <li>- Set the distance to 270 NM.</li> </ul>	- The range 270 comes into view.
4. On the center pedestal, on one AC P: <ul style="list-style-type: none"> <li>- Push the ILS pushbutton switch.</li> </ul>	In the loudspeaker: <ul style="list-style-type: none"> <li>- You can hear the identification signal.</li> </ul>
<ul style="list-style-type: none"> <li>- Adjust the volume as necessary.</li> </ul>	
<ul style="list-style-type: none"> <li>- Do the adjustment slowly and continuously.</li> </ul>	- There is no unwanted noise.
5. On the center pedestal, on the ATC control unit: <ul style="list-style-type: none"> <li>- Set the ATC master switch to the ON or XPNDR position.</li> </ul>	On the CAPT and F/O NDs: <ul style="list-style-type: none"> <li>- The DME1 (DME2) indication does not change.</li> </ul>
	In the loudspeaker: <ul style="list-style-type: none"> <li>- The audio signal does not change.</li> </ul>

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**AIRBUS**

CUSTOMIZATION	AIRCRAFT TYPES	DOCTYPES	REVISION DATE	REVISION NUMBER	TITLE
FWI	A330 A340	AMM	01-Apr-2021	50	34-51-00-720-803-A - Functional Test of the Distance Measuring Equipment (DME)
<b>TAIL NUMBER - MSN - FSN:</b> F-HPTP - 01265 - 003					
<b>Print date:</b> 2021-04-05 17:06:09					

ACTION	RESULT
- Set the ATC master switch to the STBY position.	
6. Stop the TEST UNIT-GROUND, DME.	

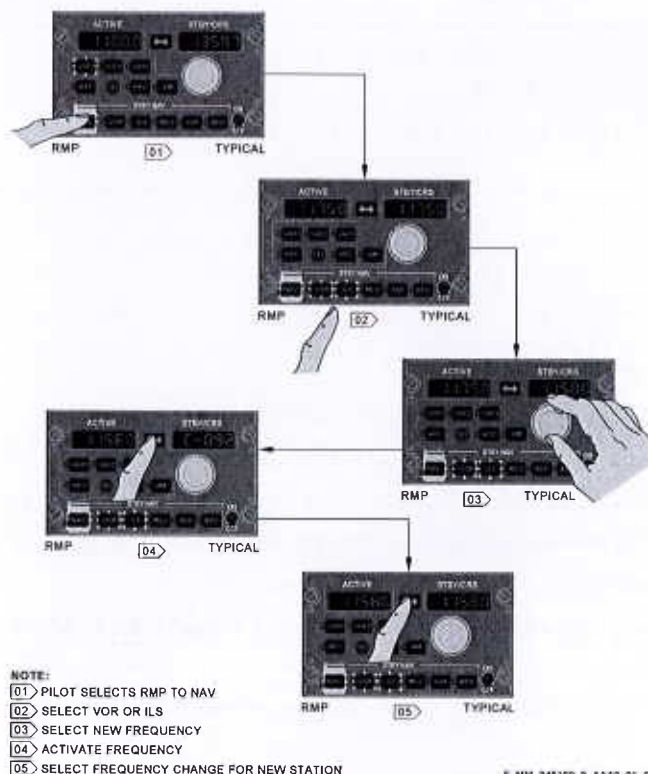
**\*\* ON A/C FSN ALL**5. Close-up

## SUBTASK 34-51-00-860-053-A

- A. Put the aircraft back to its initial configuration.
- (1) Do the EIS stop procedure Ref. AMM TASK 31-60-00-860-802.
  - (2) Do the ADIRS stop procedure Ref. AMM TASK 34-10-00-860-803.
  - (3) On the center pedestal, on the RMP, set the ON/OFF switch to OFF.
  - (4) De-energize the DME ground test unit.
  - (5) De-energize the aircraft electrical circuits Ref. AMM TASK 24-41-00-862-801.
  - (6) Make sure that the work area is clean and clear of tools and other items.

# AIRBUS

CUSTOMIZATION	AIRCRAFT TYPES	DOCTYPES	REVISION DATE	REVISION NUMBER	TITLE
FWI	A330 A340	AMM	01-Apr-2021	50	34-51-00-720-803-A - Functional Test of the Distance Measuring Equipment (DME)
<b>TAIL NUMBER - MSN - FSN:</b> F-HPTP - 01265 - 003					
<b>Print date:</b> 2021-04-05 17:06:09					



**Figure 34-51-00-991-00200-00-A (SHEET 1) - VOR or ILS Frequency Selection**  
**\*\* ON A/C FSN 003-100, 151-200**

**\*\* ON A/C ALL**

**2. Functional Test**

- A. Reason for the Job  
 (1) To ensure correct operation of the VOR system.
- B. Equipment and Materials

ITEM	DESIGNATION
(1)	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
(2)	Headset (600 Ω)
(3)	VOR/ILS Ground Test Unit
<b>Referenced Procedures</b>	
- 23-71-00, P. Block 501	Cockpit Voice Recorder
- 24-41-00, P. Block 301	AC External Power Control
- 34-71-00, P. Block 501	EFIS - General
- 34-25-00, P. Block 501	Inertial Reference System (IRS)

**C. Procedure**

**(1) Job Set-Up**

- (a) Connect electrical ground power unit and energize the aircraft electrical network (Ref. AMM 24-41-00, P. Block 301 ) .
- (b) Make certain that electronics racks ventilation is correct.
- (c) Energize the EFIS (Ref. AMM 34-71-00, P. Block 501 ) .
- (d) Energize and align the IRS (Ref. AMM 34-25-00, P. Block 501 ) .
- (e) Make certain that the following circuit breakers are closed:

PANEL	SERVICE	IDENT.	LOCATION
21VU	RADIO NAV & COM/VOR1	6RS1	C 2
21VU	RADIO NAV & COM/VOR2	6RS2	C13
22VU	NAVIGATION/CAPT/RMI/VOR/DME	11FN1	F15
21VU	NAVIGATION/F/0/RMI/VOR/DME	11FN2	F10

- (f) Energize the audio integrating system (Ref. AMM 23-71-00, P. Block 501 ) .
- (g) Connect a headset to each audio integrating system jack box.
- (h) Select VOR1 (VOR2) mode on each audio selector panel.
- (i) Position the ground test unit within range of the VOR antenna.
- (j) Select ROSE or ARC mode in the EFIS control panel.
- (k) Place the VOR/NAV/ILS switch on the Captain (F/0) EFIS complimentary control panel in the VOR position.

**NOTE:** The test described below is for the VOR1. VOR2 is identical, for testing refer to information shown in brackets. All symbols and letters at the ND appear in blue color if not otherwise specified.

**\*\* ON A/C 001-021, 030-031**

**(3) Test**

ACTION	RESULT
1. On control unit 3RS1 (3RS2): - select a frequency of 108.00 MHz. - select a course of 0 degrees.	On VOR/DME control unit: - 108.00 MHz and 000 degrees are displayed.
2. On ground test unit: - extend antenna and set controls	On both DDRMIs: - VOR1 (VOR2) pointers indi-

to transmit a valid 0 degree  
 TO test signal on 108.00 MHz.

3. On control unit 3RS1 (3RS2):

- rotate CRS selector to 350 degrees.

- press CRS selector knob.

- rotate CRS selector to 190 degrees.

- press CRS selector knob.

4. On ground test unit:

- set controls to transmit a valid 0 degree FROM test signal.

cate 0 degrees.

- VOR1 (VOR2) flag is out of view.

On EFIS ND unit, LH (RH):

- VOR is annunciated.
- selected course annunciator in the right upper corner indicates 000 degrees.
- selected course pointer indicates 0 degrees.
- lateral deviation bar is in center position.
- TO/FROM indication is TO.

On control unit 3RS1 (3RS2):

- course window displays 350 degrees.

On ND unit, LH (RH):

- selected course annunciator indicates 350 degrees.
- selected course pointer indicates 350 degrees.
- lateral deviation bar is in extreme right position of course pointer.

On control unit 3RS1 (3RS2):

- course window displays 170 degrees.

On ND unit, LH (RH):

- selected course annunciator indicates 170 degrees.
- selected course pointer changes to 170 degrees.
- lateral deviation bar is now extreme left of the course pointer.
- TO/FROM indication is now FROM.

On control unit 3RS1 (3RS2):

- course window displays 190 degrees.

On ND unit, LH (RH):

- selected course annunciator indicates 190 degrees.
- selected course pointer indicates 190 degrees.
- lateral deviation bar is in the extreme right position of the course pointer.

On control unit 3RS1 (3RS2):

- course window displays 010 degrees.

On ND unit, LH (RH):

- selected course annunciator indicates 010 degrees.
- selected course pointer changes to 10 degrees.
- lateral deviation bar is now extreme left of the course pointer.
- TO/FROM indication is now TO.

On both DDRMIs:

- VOR1 (VOR2) pointers indicate 180 degrees.



5. On ground test unit:
  - set controls to transmit a valid VOR 270 degrees FROM test signal.
 On control unit 3RS1 (3RS2):
  - rotate CRS selector to 080 degrees.
  
6. On ground test unit:
  - set controls to transmit a valid 270 degrees TO signal.
  
7. On ground test unit:
  - set controls to transmit a 1020 Hz tone output signal.
8. On Captain's audio selector panel:
  - rotate the VOR1 (VOR2) volume controller.
  - set loudspeakers control knob to high level.
9. Connect headset to all other available jackboxes successively and set respective loudspeaker control knobs to high level. At each station rotate the VOR1 (VOR2) volume controller on corresponding audio selector panel.
10. On ground test unit:
  - switch off 1020 Hz signal.
11. On IRS1 (IRS2) control panel:
  - set selector switch to position OFF.

- On ND unit LH (RH):
- lateral deviation bar is in the extreme right position of the course pointer.
  - TO/FROM indication is FROM.

- On control unit 3RS1 (3RS2):
- CRS window displays 080 degrees.

- On both DDRMIs:
- VOR1 (VOR2) pointers indicate 90 degrees.

- On ND unit, LH (RH):
- selected course annunciator indicates 080 degrees.
  - selected course pointer indicates 80 degrees.
  - lateral deviation bar is in the extreme right position of the course pointer.
  - TO/FROM indication is TO.

- On both DDRMIs:
- VOR1 (VOR2) pointers indicate 270 degrees.

- On ND unit, LH (RH):
- lateral deviation bar is in the extreme left position of the course pointer.
  - TO/FROM indication is FROM.

- On headset:
- audio tone corresponding to 1020 Hz signal is heard.

- audio tone in headset and/or loudspeakers changes progressively and no crackling is heard.

- audio tone in headset and/or loudspeakers changes progressively and no crackling is heard.

- audio tone is no longer heard.

- On DDRMI, LH (RH):
- HDG flag, LH (RH) appears.
  - VOR1 (VOR2) flag appears.
  - pointer remains in last position.

- On ND unit, LH (RH):

- 12. On EFIS switching panel LH (RH):
    - push ATT HDG.
  
  - 13. On EFIS complementary control panel LH (RH):
    - set VOR/NAV/ILS switch to position NAV.
  
  - 14. ON EFIS complementary control panel RH (LH):
    - set VOR/NAV/ILS switch to position VOR.
    - and
    - On control unit 3RS2 (3RS1):
      - select a frequency of 108.00 MHz.
      - select a course of 280 degrees.
- 
- course system is in vertical position.
  - HDG failure legend appears in red.
  - compass rose disappears.
  - selected course annunciator indicates same course.
  - course pointer disappears.
  - lateral deviation bar is in vertical position.
  - TO/FROM indicator is in the same configuration.
- On EFIS switching panel LH
    - SYS3 in white color (F/0/3 in green color) appears.
  - On EFIS switching panel RH:
    - CAPT/3 in green color (SYS3 in white color) appears.
  - On DDRMI, LH (RH):
    - HDG flag, LH (RH) disappears.
    - VOR1 (VOR2) flag disappears.
    - pointer moves to actual position.
  - On ND unit, LH (RH):
    - red HDG failure legend disappears.
    - compass rose appears.
    - course pointer is in actual position.
  - On control unit 3RS1 (3RS2):
    - frequency window displays dashes.
    - course window displays dashes:
  - On both DDRMIs:
    - VOR1 (VOR2) flags remain invisible.
    - VOR1 (VOR2) pointers are in 3 o'clock position.
  - On ND, LH (RH):
    - VOR legend disappears.
    - VOR course annunciator, course pointer, lateral deviation bar, TO/FROM indicator and lateral deviation dots disappear.
- 
- On control unit 3RS2 (3RS1):
    - 108.00 MHz and 280 degrees are displayed.
  - On both DDRMIs:
    - VOR2 (VOR1) pointers indicate 270 degrees.
  - On ND unit, RH (LH):
    - VOR is annunciated.
    - selected course annunciator indicates 280 degrees.

15. On EFIS switching panel RH (LH):  
 - push VOR.

16. On EFIS complementary control panel LH (RH):  
 - set VOR/NAV/ILS switch to position VOR.

17. On EFIS switching panel RH (LH):  
 - push VOR again.

- selected course pointer indicates 280 degrees.
- lateral deviation bar is in extreme left position of course pointer.
- TO/FROM indicator is TO.

On EFIS switching panel RH  
 - SYS1 in white color (CAPT/2 in green color) appears.

On EFIS switching panel LH:  
 - F/0/1 in green color (SYS2 in white color) appears.

On ND unit, RH (LH):  
 - VOR failure legend flashes red.  
 - deviation bar and TO/FROM indicator disappear.

On control unit 3RS1 (3RS2):  
 - 108.00 MHz and 080 degrees are displayed.

On both DDRMIs:  
 - VOR1 (VOR2) pointers indicate 270 degrees.

On ND unit, LH (RH):  
 - VOR legend appears.  
 - selected course annunciator indicates 080 degrees.  
 - selected course pointer indicates 80 degrees.  
 - lateral deviation bar is in extreme left position of course pointer.  
 - TO/FROM indicator is FROM.

On ND unit, RH (LH):  
 - red VOR failure legend disappears.  
 - selected course annunciator indicates 080 degrees.  
 - selected course pointer indicates 80 degrees.  
 - lateral deviation bar is in extreme left position of course pointer.  
 - TO/FROM indicator is FROM.

On EFIS switching panel RH:  
 - SYS1 in white color (CAPT/2 in green color) disappears.


On EFIS switching panel LH:  
 - F/0/1 in green color (SYS2 in white color) disappears.

On ND unit, RH (LH):  
 - selected course annunciator indicates 280 degrees.  
 - selected course pointer indicates 280 degrees.  
 - lateral deviation bar is in extreme left position of course pointer.  
 - TO/FROM indicator is TO.

**\*\* ON A/C ALL**

(5) Close-Up

- (a) De-energize the EFIS (Ref. AMM 34-71-00, P. Block 501 ) .
- (b) De-energize the IRS (Ref. AMM 34-25-00, P. Block 501 ) .
- (c) De-energize the audio integrating system (Ref. AMM 23-71-00, P. Block 501 ) ,
- (d) Disengage VOR mode on the audio selector panels.
- (e) Remove headset from jack box.
- (f) Remove ground test equipment.
- (g) De-energize the aircraft electrical network and disconnect the electrical ground power unit (Ref. AMM 24-41-00, P. Block 301 ) .
- (h) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

End of document 

**\*\* ON A/C ALL**

**2. Functional Test**

- A. Reason for the Job
  - (1) To ensure correct operation of DME system.
- B. Equipment and Materials

ITEM	DESIGNATION
(1)	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz
(2)	Headset, 600 Ohm
(3)	DME Ground Test Unit (ATC-600A, T-48D or equivalent)

Referenced Procedures

- 23-71-00, P. Block 501 Cockpit Voice recorder
- 24-41-00, P. Block 301 AC External Power Control
- 34-71-00, P. Block 501 EFIS - General
- 34-25-00, P. Block 501 Inertial Reference System (IRS)
- 34-60-00, P. Block 501 Position Computing - General
- 34-52-00, P. Block 501 ATC

C. Procedure

(1) Job Set-Up

- (a) Connect electrical ground power unit and energize the aircraft electrical network (Ref. AMM 24-41-00, P. Block 301) .
- (b) Make certain that electronics racks ventilation is correct.
- (c) Make certain that the following circuit breakers are closed:

PANEL	SERVICE	IDENT.	LOCATION
21VU	RADIO NAV & COM/DME 1	4SD1	C 4
21VU	RADIO NAV & COM/DME 2	4SD2	C11
21VU	RADIO NAV & COM/VOR 1	6RS1	C 2
21VU	RADIO NAV & COM/VOR 2	6RS2	C13
22VU	NAVIGATION/CAPT/RMI/VOR/DME	11FN1	F15
21VU	NAVIGATION/F/O/RMI/VOR/DME	11FN2	F10

- (d) Energize the Audio Integrating System (Ref. AMM 23-71-00, P. Block 501) .
- (e) Connect headset to associated connector on Captain's jack box.
- (f) Select VOR 1 (VOR 2) mode on each audio selector panel and place volume controller in mid position.
- (g) Energize the EFIS (Ref. AMM 34-71-00, P. Block 501) .
- (h) Energize and align the IRS (Ref. AMM 34-25-00, P. Block 501) .
- (i) Energize the FMS (Ref. AMM 34-60-00, P. Block 501) .
- (j) Place VOR/NAV/ILS switch on Captain's and F/O's EFIS complementary control panel in VOR position.
- (k) Place ground test equipment in vicinity of DME 1 (DME 2) antenna, according to the ground test equipment operating instructions.

**NOTE:** The test described below is for DME 1. The DME 2 is identical, for testing refer to information shown in brackets.

**\*\* ON A/C 001-021, 030-031, 040-041, 060-060**

(2) Test

ACTION	RESULT

1. On ground test unit:
  - activate test unit.
  - select 5 NM.
2. On VOR/DME control unit 3RS1 (3RS2):
  - select frequency of the ground test unit.

On both DDRMIs:

  - dashed lines go out of view and 5 ±0.1 NM is displayed in DME-1 (DME-2) windows.

In headset:

  - audio tone is heard.

In headset:

  - audio tone changes progressively and no crackling is heard.
  - audio tone is no longer heard.
3. On Captain's audio selector panel:
  - rotate VOR 1 (VOR 2) volume controller.
  - place VOICE/IDENT toggle switch in VOICE position.
  - place VOICE/IDENT toggle switch in IDENT position.
4. Repeat test in step 3. on F/O's and third occupant station audio selector panels with headset connected successively to corresponding jack box.
5. On ground test unit:
  - select 180 NM.
  - select 270 NM.

On both DDRMIs:

  - 180 ±2 NM is displayed in DME-1 (DME-2) windows.

On both DDRMIs:

  - 270 ±2 NM is displayed in DME-1 (DME-2) windows.

NOTE : The remainder of the test can only be carried out if an ILS/DME beacon is within range, and this beacon with associated runway is in the data-base of the FMC.

6. On VOR control unit 3RS1 (3RS2):
  - select the frequency of the local ILS/DME beacon.

On both DDRMIs:

  - distance between the aircraft and DME beacon is displayed in DME-1 (DME-2) windows.
7. On EFIS complimentary control panel Captain (F/O):
  - place VOR/NAV/ILS switch in ILS position.

On both DDRMIs:

  - dashed lines are indicated in DME-1 (DME-2) windows.
8. On ILS control unit 34RT:
  - select the frequency of the local ILS/DME beacon.

On PFD unit, LH (RH):

  - DME and distance between the aircraft and the DME beacon is indicated in LH lower corner.

On both DDRMIs:

  - dashed lines remain indicated in DME-1 (DME-2) windows.
  - DME operations are not affected.
9. Energize ATC systems 1 and 2 (Ref. 34-52-00, P. Block 501).

**\*\* ON A/C ALL**

(4) Close-Up

- (a) Disengage VOR 1 (VOR 2) mode on audio selector panel.
- (b) Remove headset from associated jack box.
- (c) De-energize the EFIS (Ref. AMM 34-71-00, P. Block 501) .
- (d) De-energize the IRS (Ref. AMM 34-25-00, P. Block 501) .
- (e) De-energize the audio integrating system (Ref. AMM 23-71-00, P. Block 501) .

- (f) Remove ground test equipment
- (g) De-energize the aircraft electrical network and disconnect the electrical ground power unit (Ref. AMM 24-41-00, P. Block 301 ) .
- (h) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

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