

MEMO AIRBUS A319/A320/A321

FMS Quick start



FMS Standard Procedures FMS Options, Special Features

Note

This document is for personal use only and must not be used for operational flight. Airbus FCOM and QRH must be considered as the only reference. This document describes some functions that can be used on FMS (AIRBUS A319/A320/A321)

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FMS Procedures - AIRBUS A320

1. Flight preparation

1.1. How to enter a TO time

- Use Vertical Revision then RTA or EET
 - VERTICAL REVISION
 - RTA
 - EET (Estimated Time of Takeoff)

1.2. How to find auto tuned Nav aids

- Use DATA function, then Position Monitor and Selected Nav aids
 - DATA
 - POS Monitor
 - Sel Nav aids
- In case of NOTAM with a VOR/DME Out of order, the previous procedure allows to remove the auto tuned nav aid. Another is automatically selected and tuned.

1.3. How to save a route

- Use DATA Page then Next Page, Code Route, Active F-PLN
 - DATA Page
 - NEXT PAGE
 - CODE ROUTE
 - ACTIVE F-PLN

1.4. How to get navigation data coding

- Use DATA Page and check coding of each nav aid (position, freq, ident...)
 - DATA Page
 - NEXT PAGE

2. Before Takeoff

2.1. How to insert new point (Bearing Distance)

- Use the Place/Bearing/Distance functions (PBD):
 - Scratch pad : SECHE/250/10
 - New point will be inserted using LSK

2.2. How to insert a point in Lat/Long

- Use specific coding in scratch pad
 - Scratch Pad : N1500.0/W1000.0 (for N15°00'0"/W10° 0'0")
 - LL01 will be inserted in routing

2.3. How to enter a Takeoff shift

- Use PERF PAGE
 - Under FLAPS Setting
 - Enter TO SHIFT in meter (e.g. [300] for 300m)
- This data is very important as FMS position is update applying Takeoff thrust. If a shift occurs and aircraft is not at threshold of runway, an error is inserted in FMS.

3. Navigation

3.1. How to sequence F-PLN (if not automatic)

- Sometime, the F-PLN is not properly sequenced (especially if distance from track is more than 7NM (D > 7NM). So the solution is to clear current FROM point and the new leg will be automatically sequenced.
 - CLR FROM POINT
 - F-PLN is automatically sequenced

3.2. How to intercept a route after resume own navigation

- After a resume own navigation (transition from HDG to NAV), the current track has to cross Active Leg (track FROM and TO / TO displayed on ND). Otherwise, guidance will never change from HDG to NAV.
 - Track has to cross Active Leg : HDG => NAV

3.3. How to enter a wind for a waypoint

- Use the following keys :
 - F-PLN
 - NEXT PAGE
 - Enter wind XXX°XX kts

3.4. How to recall ATC abeam a point

- If ATC request to report abeam a specific point (e.g. LUC), use DIRETC TO function
 - DIRECT TO
 - LUC
 - Choose abeam
- Use the FIX INFO function (Lateral Revision on FROM POINT 1st point), then a point and a bearing (maximum 5 abeam allowed)
 - FIX INFO (LAT REV FROM)
 - Scratch Pad : TOU
 - Scratch Pad : 180°

3.5. How to update FL CRZ (transition to next phase CRZ)

- If FCU ALT window is updated with FL higher than FMS FL CRZ entered in FMS, the FMS FL CRZ is automatically updated. To allow CRZ phase transition at a specific altitude, we can enter FL 1 in PROG Page (or any FL under current FCU FL) => it will automatically update FMS FL CRZ :
 - If new FCU ALT > FMS FL CRZ => FMS automatically updated with FCU ALT
 - To copy FCU ALT in FMS FL CRZ => enter FMS FL CRZ = 1 (PROG Page)

3.6. How to create a present position point in FMS

- Use PPOS function
 - CLEAR TO POINT (always displayed on ND : right upper corner)
 - PPOS appears
 - DISCONTINUITY appears
- This function can be used to perform a downwind without perform a radial inbound CI interception.

3.7. How to enter an offset on a leg

- Use LSK on a WAYPOINT then OFFSET
 - LSK DGN
 - OFFSET : enter 5L (for 5NM left of the current track)

3.8. How to enter an immediate offset on active leg

- Use FROM Point then OFFSET
 - LSK FROM
 - OFFSET : enter 5L (for 5NM left of the current track)

3.9. How to get Equitime Point

- Use DATA then Equitime Point function
 - DATA Page
 - EQUITIME (between LFMN and LFPO for e.g.)

4. Descent

4.1. How to enter a wind during DES

- Use the following keys :
 - F-PLN
 - NEXT PAGE
 - Enter wind XXX?XX kts

4.2. How to program a time remainder

- Use scratch pad and enter a time directly
 - Scratch Pad : 1645
 - A new point will be automatically inserted in routing

5. Approach

5.1. How to check NAV Accuracy

- Use PROG PAGE and enter NAVAID
 - PROG PAGE
 - AGN To[]
 - This will calculate Bearing/Distance
- Compare Data displayed on FMS with Raw Data (ND : VOR Needle and Distance)

5.2. How to check the Bearing/Distance of a point

- Use PROG PAGE and enter NAVAID
 - PROG PAGE
 - AGN To[]
 - This will calculate Bearing/Distance
- There are many possible NAVAID, for example
 - TOU (VOR)
 - TDP (VOR)
 - LFMN04L (for Bearing/Distance to threshold 04L in NICE)
 - NC (ADF)

5.3. How to intercept an inbound course (e.g. : for approaches)

- Use DIRECT TO Function to clear flight plan:
 - DIRECT TO a specific point
 - Radial 270
 - Intercept Inbound (never use outbound for this)
 - * to insert the point
- It will clear all previous waypoint. This function is very useful to perform approaches and intercept a specific radial (in HDG mode for example).

5.4. How to retard Decel Point (D)

- Set constraint Speed VApp on Final Descent Point
 - VERTICAL REVISION at FD
 - Enter SPEED CSTR = Vapp

5.5. How to compute new Green Dot, S-Speed, F-Speed

- Use FUEL PRED PAGE and enter new GW/CG
 - FUELD PRED PAGE
 - GW/CG update value
 - New GD, S, F will be computed

6. Holding pattern

6.1. How to enter a holding pattern on a waypoint

- Use LSK on waypoint name, then HOLD
 - LSK on AMIRO
 - > HOLD
 - Enter an exit time (for example 2045)

6.2. How to enter a standard holding pattern

- Use LSK on IAF name, then HOLD
 - LSK on TALAR
 - > HOLD
 - INSERT HOLD

6.3. How to update data of a standard holding pattern

- Use LSK HOLD R and read last exit time
 - LSK HOLD R
 - > HOLD
 - Update data like
 - inbound track
 - outbound track
 - length of leg (in mn)

6.4. How to enter a time for a holding

- Use LSK on Holding
 - LSK on HOLDING Point
 - > HOLD
 - Enter an exit time (for example 2045)

6.5. How to get the maximum time for an holding pattern

- Use LSK HOLD R and read last exit time
 - LSK HOLD R
 - > HOLD
 - Time : last exit time

7. Diversion

7.1. How to enter an Alternate at destination

- Use LSK at Destination
 - LSK at DEST
 - > ALTN
 - Enter new airport for diversion

7.2. How to delete an Alternate

- Use LSK at Destination
 - LSK at DEST
 - > ALTN
 - > NO ALTN or select DEST then INSERT
 - => it will remove all green routing

8. Miscellaneous / Fuel Management

8.1. How to enter a constraint in ALT, SPEED, TIME

- If ATC request to pass STP at 1945, use TIME Constraint function :
 - STP VERTICAL REVISION
 - Add new point LIM

8.2. How to activate a SEC F-PLN

- The condition to activate SEC F-PLN is that Active Leg has to be common with current P-PLN
 - Otherwise, SEC F-PLN ***-Activate F-PLN**

8.3. How to change FMS mode from GA to CLB

- Case 1 : Use LSK at Destination LFMN
 - LSK LFMN
 - > ALTN
 - NO ALTN then INSERT
- Case 2 : Enter a New destination
 - Any LSK
 - New DEST

8.4. How to attribute alternate fuel for an holding pattern

- Use LSK at Destination
 - LSK at DEST
 - > ALTN
 - > NO ALTN or select DEST then INSERT
 - => it will attribute additional fuel for holding

8.5. Specific FMS coding

8.5.1. Waypoint / Distance coding

- R278 Radial 278 of TOU (for example)
- 278R Radial 278 at 18NM (as letter R is the 18th letter on FMS keyboard)
- CF Final Course
- FF Final Fix
- FD Final Descent

8.5.2. Colour track coding

- | | |
|----------------------------|---------------|
| ➤ NAV F-PLN temporary | DASHED GREEN |
| ➤ NAV F-PLN (active) | SOLID GREEN |
| ➤ NAV GA | SOLID BLUE |
| ➤ NAV ALTERNATE | DASHED BLUE |
| ➤ NAV SEC F-PLN | WHITE |
| ➤ NAV F-PLN (not inserted) | DASHED YELLOW |
| ➤ EO SID | SOLID YELLOW |

8.5.3. Miscellaneous coding

- HD Head Wind
- TL Tail Wind