

Docket No. SA-538

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NATIONAL TRANSPORTATION SAFETY BOARD

Washington, D.C.

Attachment 27 – FMC Study Guide
(6 Pages)



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

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Attachment 27 – FMC Study Guide

OPERATIONAL FACTORS

DCA13MA133

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FMC STUDY GUIDE¹

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05.03.02.03 EXTENDING THE CENTERLINE

Getting back to the original flight plan where we left off, you need to re-sequence the waypoints to reflect only the anticipated approach and missed approach procedure. This is done by extending the approach centerline.

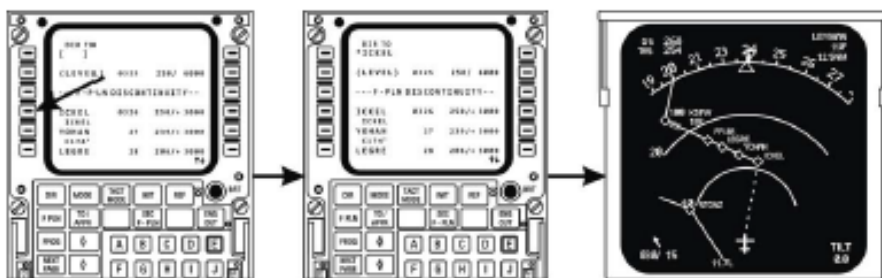
Approach ... Load. Use the scroll keys to ensure that the desired approach has been loaded. The start of the approach begins after the F-PLN DISCONTINUITY created prior to the first waypoint of the loaded approach procedure.

DIR key ... Select. Verify DIR TO [] is displayed on line 1L.

Waypoint To Extend From ... Select. Select the LSK next to the waypoint you want to extend the centerline from (ICKEL) or type it into the scratchpad and select LSK 1L. Verify the waypoint is now displayed in the DIR TO box on line 1L.

NOTE: If several waypoints are located on the final approach course, selecting the waypoint furthest from the runway displays the entire extended approach centerline on the ND between waypoints. Thus providing a better display for situational awareness.

The on-side ND corresponding to the CDU from which the modification is being made shows the following display. The yellow dashed line shows the impending DIR TO modification.

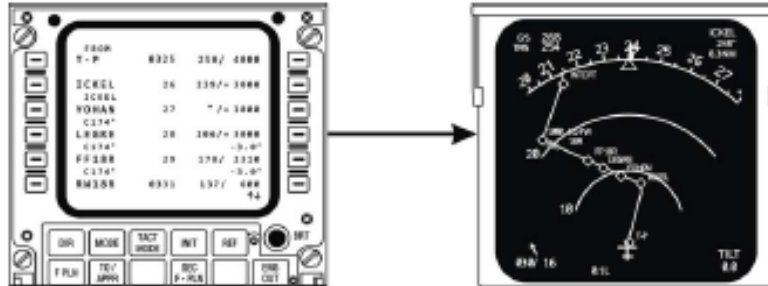


The PM should confirm this display with the PF before proceeding to the next step.

LSK 1L ... Re-select. Select LSK 1L again to insert the waypoint into the flight plan. A turn point (T-P) now becomes the FROM waypoint and the selected waypoint becomes the TO waypoint.

~~Per 48 USC 537.6 -- Confidential Commercial Information~~ Rev No: 5
Rev Date: 02/01/2011

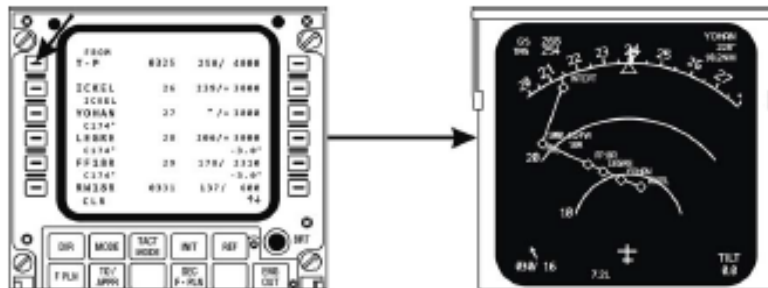
¹ Source: A300 Pilot Training Guide, Section 05.03.02.03 EXTENDING THE CENTERLINE. Note: The FMC Study guide is a part of the A300 Pilot Training Guide



The ND now displays the lateral navigation path from the T-P off the nose of the aircraft directly to the inserted waypoint.

CLR key ... Select. Verify CLR is displayed in the scratchpad and select the LSK next to the T-P (LSK 1L) to clear the T-P.

The line from the nose of the aircraft (T-P) is no longer displayed on the ND. The waypoints are automatically re-sequenced, with YOHAN becoming the TO waypoint.



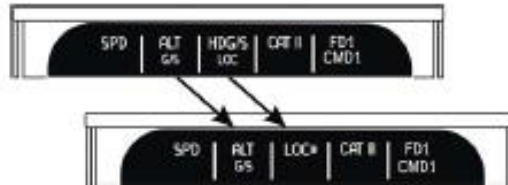
From this point the aircraft must be configured as necessary by following the normal approach profile. After receiving clearance for the approach, simply arm the AFDS system via the LAND mode to intercept and track the LOC and GS.

As the localizer captures, it is indicated on the FMA and the aircraft begins the turn to intercept.



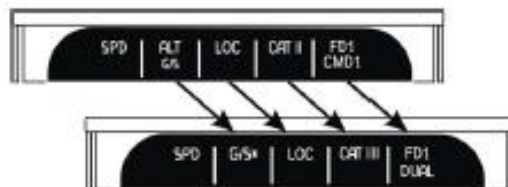
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NOTE: For non-precision approach, NAV mode will still engage and track the inbound course to the waypoint even though no course line is displayed outside of ICKEL.

With LAND mode armed, both autopilots can be engaged simultaneously. This is indicated by CAT III status and DUAL displays on the FMA. As the GS is captured the FMA changes on the ILS approach indicate the following:



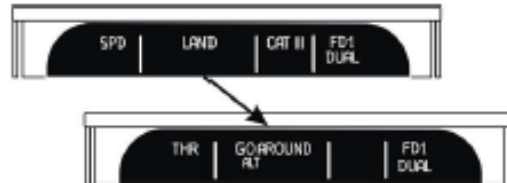
As the aircraft passes through 400 feet AGL, the LAND tracking mode engages:



Suddenly, the glideslope signal fails and you execute a GO-AROUND maneuver by selecting the TOGA levers. As you do so, you observe the FMA:

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Notice the changes in the A/THR, PITCH and CAT columns.

As you climb out via radar vectors, you are eventually vectored to a right downwind for runway 18R at KDFW. ATC advises you to expect the ILS approach, Glideslope out of service. Assume you have re-loaded the approach and are positioned as shown here:



05.03.02.04 BUILDING A PROCEDURE TURN

A procedure turn can be built at any waypoint using the LAT REV page. This procedure describes how to manually build a procedure turn with a manual PROC T termination. For purposes of illustration, you'll build a procedure turn along the ILS18R approach at KDFW.

Approach ... Load. Load the approach for which the procedure turn is desired (DFW ILS 18R). (After loading a Non-precision approach which displays a procedure turn on the Jeppesen approach page, the procedure turn is automatically inserted.)

In this example, you have re-loaded the DFW ILS 18R approach and extended the approach centerline. You are on downwind and positioned as previously shown. From this point, you are cleared direct to YOHAN to execute a procedure turn via a left 45/270 maneuver:

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~~Per 15 USC 651-6 Confidential Commercial Information~~