



FMS Upgrade Summary Pegasus 2003

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Overview

Major changes in PEGASUS 2003

- New features
 - Holding redesign
 - “On-approach” logic change
 - Option to inhibit GW entry
 - Uplink delay timer (ATS datalink)
- Fixes
 - VNAV overshoot
 - ATS datalink log from previous flight



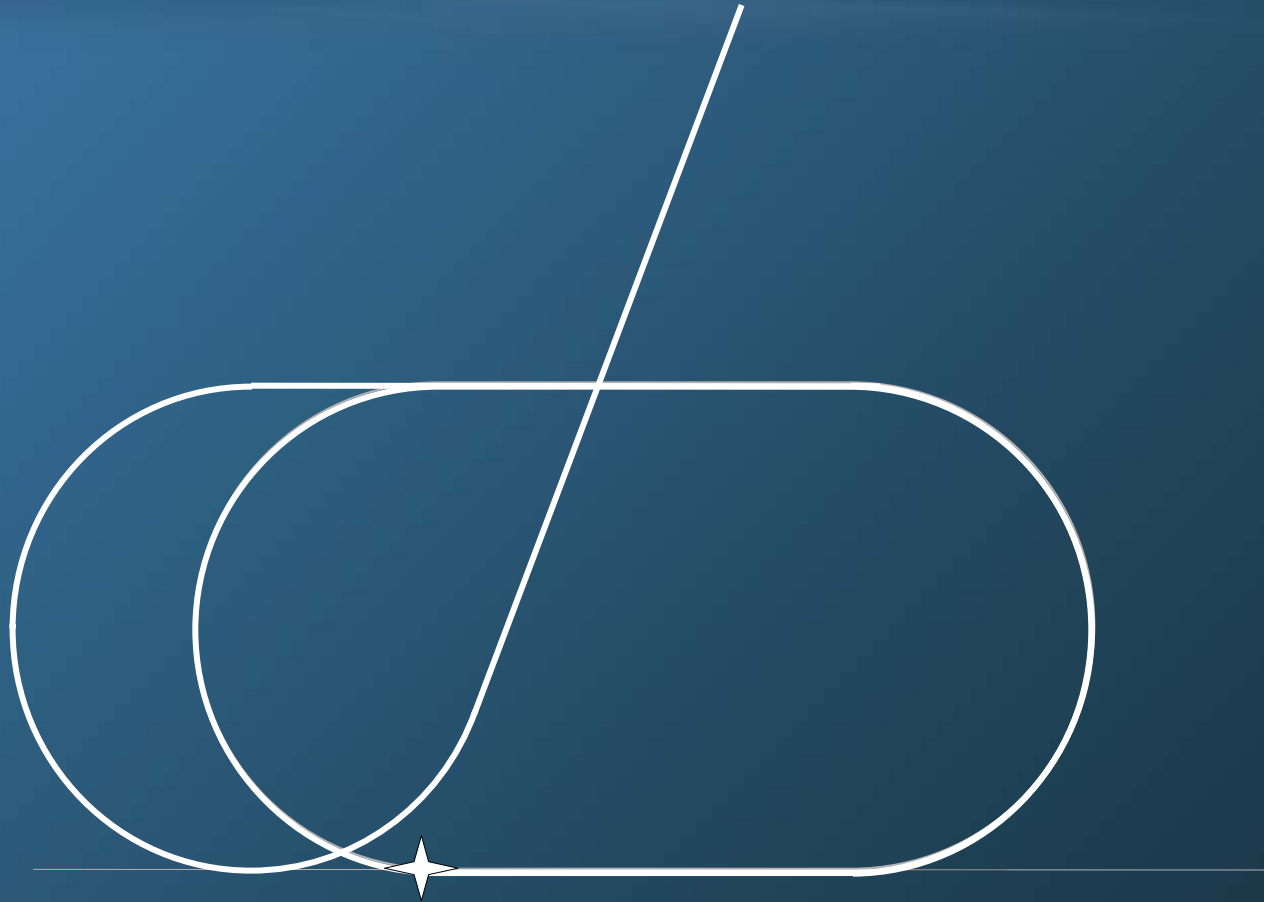
Holding

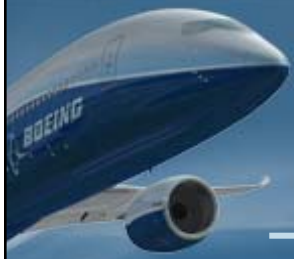
Total redesign of the entry and exit logic

- Flight path (entry and exit) is now displayed on the HSI/ND MAP
 - Entry displayed until established
 - Exit displayed when armed
- Holding fix not treated as “fly-over” waypoint
 - Allows lead turns on entry and exit
 - Keeps maneuvering on the holding side of the fix
- Complies with DO-236 RNP holding



Holding - Direct Entry (Sector 4)





Holding - Direct Entry (Sector 3)





Parallel Entry (Sector 1)



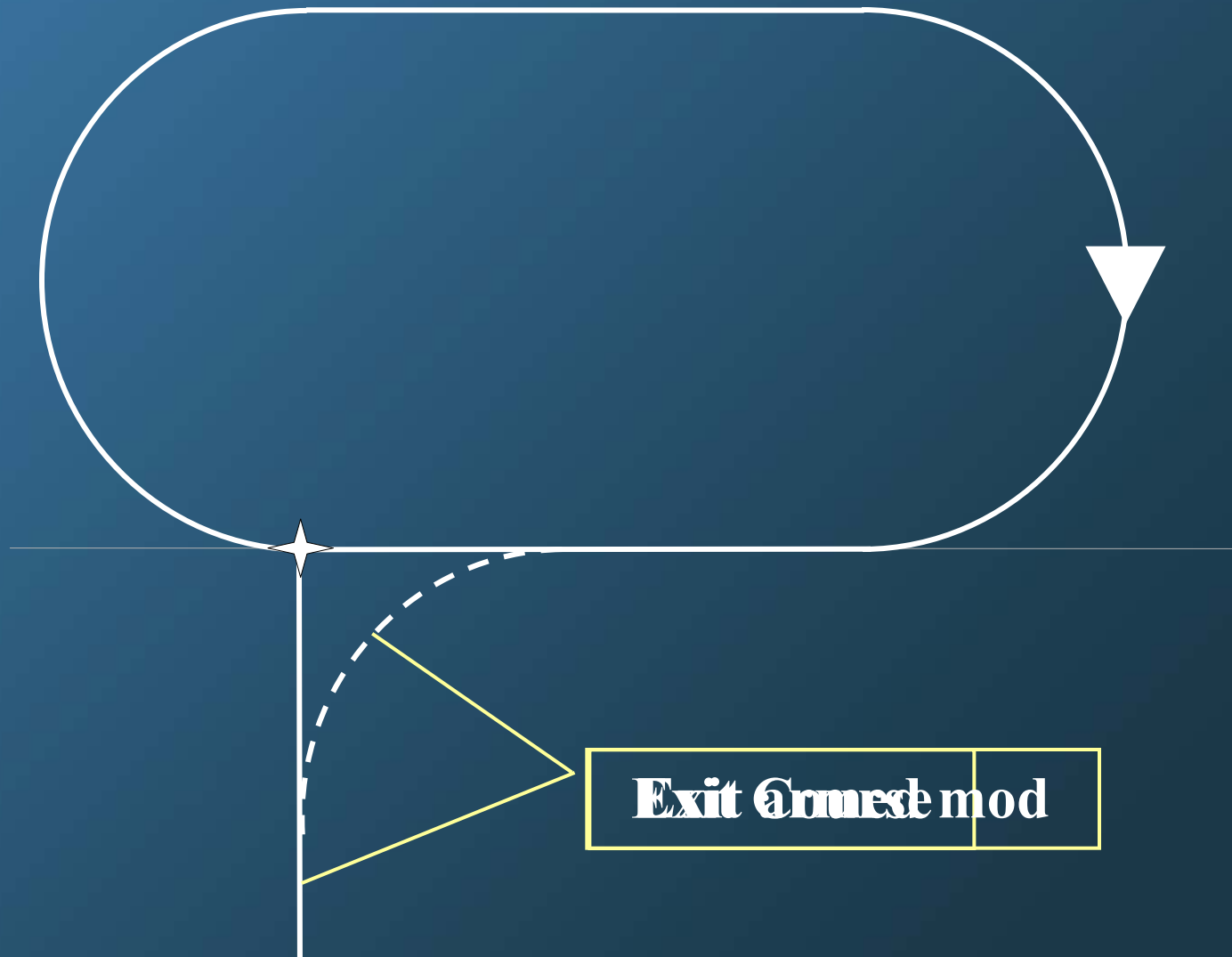


Teardrop Entry





Exit Hold





Exit Hold

Displayed path after executing the EXIT





“On Approach” Logic Change

Intended to make VNAV more predictable

- What is “ON APPROACH”?
 - Allows VNAV PATH control with speed window open
 - Altitude window can be set above airplane
- Prior to Peg 03 “on approach” determined by
 - Active leg part of NavDB approach or
 - Runway or Missed Approach Point is active waypoint and airplane within 25 nm of destination



“On Approach” Logic Change

What is different in Peg 03?

- Peg 03 adds one criteria
 - Flaps not up while in Descent Phase
- Impact
 - More predictable
 - May change habit pattern
 - If below path with speed intervention selected (VNAV SPD)
 - Extend flaps, FMC will transition to “On Approach”
 - VNAV PATH will engage,
 - Airplane will fly level to capture the path



Gross Weight Inhibit Option

OPC controlled

Box
prompts
~~deleted~~
ZFW
only
weight
entry
available

PERF INIT

GW	CRZ	ALT
		□□□□
FUEL	COST	INDEX
201.6		□□□□
ZFW		
□□□.□		
RESERVES	CRG	CG
□□□.□		
REQUEST	STEP	SIZE
<SEND		ICAO
- - - - -		
<INDEX		READY



Uplink Delay Timer

Applicable to ATS COMM function

Page layout prior to Peg 03

ATC LOGON / STATUS	
LOGON TO	

FLT NO	
BOE1234	
TAIL NO	ACT CTR
N767BO	FMCB
ATC COMM	NEXT CTR
<SELECT OFF	PANC
ADS (ACT)	ADS EMERG
<OFF↔ARM	OFF↔ON>
-----	DATA LINK
<INDEX	READY



Uplink Delay Timer

Applicable to ATS COMM function

Page layout with Peg 03

New entry
0 to 999
seconds

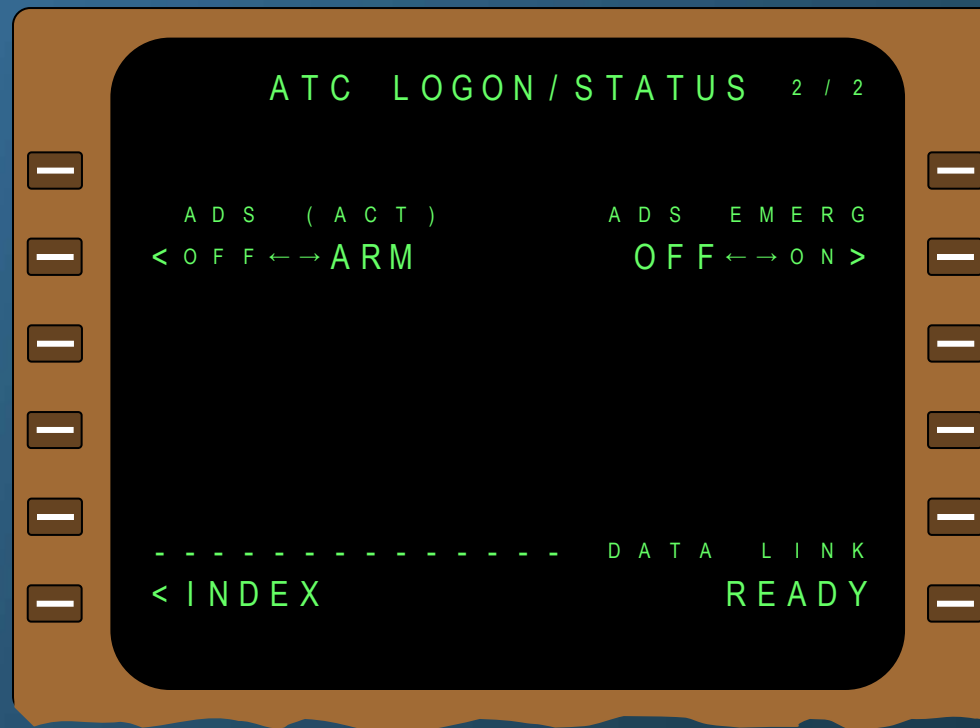
ATC LOGON / STATUS 1 / 2			
LOGON TO			
- - - -			
FLT NO			
BOE1234			
TAIL NO		ACT CTR	
N767BO		FMCB	
MAX U / L DELAY		NEXT CTR	
- - - SEC		PANC	
ATC COMM			
< SELECT OFF			
- - - - -		DATA LINK	
< INDEX		READY	



Uplink Delay Timer

Second page created to make room

“Suspect” ADS Emergency selection moved





Uplink Delay Timer

Uplink Message - Delay Exceeded

Notice
precedes
message

—	1428Z ATC UPLINK 1 / 1	—
—	STATUS	—
—	<REQUEST OPEN	—
—	- UPLINK DELAY EXCEEDED -	—
—	PROCEED DIRECT TO SEA	—
—	<STANDBY LOAD>	—
—	<REJECT ACCEPT>	—
—	- - - - - DATA LINK	—
—	<INDEX READY	—



THRUST LIM Page – 767-400

767-400 only

THRUST LIM

SEL	OAT	TO 1	N1
- - -	12 ° C	96 . 6 %	
<TO		CLB>	
<TO 1 <SEL>		<ARM> CLM 1>	
<TO 2		CLB 2>	
MAN THR			
90 . 5 %			
- - - - -			
<INDEX		TAKEOFF>	
TAKEOFF SPEEDS DELETED			

Manual
Thrust entry
deletes
takeoff
speeds



VNAV Overshoot OMB

Baro Correction Filter Removed

- Baro Correction Filter
 - Limits FMC rate of response to altimeter setting changes
 - 1200 feet per minute
 - Intended to smooth VNAV response to altimeter changes
- Can cause an overshoot of MCP altitude
 - Low pressure day
 - Level off shortly after passing transition altitude
 - Effect aggravated in 767-400 (push button STD altimeter selection)



VNAV Overshoot OMB

Baro Correction Filter Removed

- Impact of change
 - VNAV response to altimeter setting changes is improved
 - Ride quality is not impacted
 - Autoflight control limits still provide assurance of ride quality



OMB Fix

ATS datalink log from previous flight

- Trust us – we fixed it