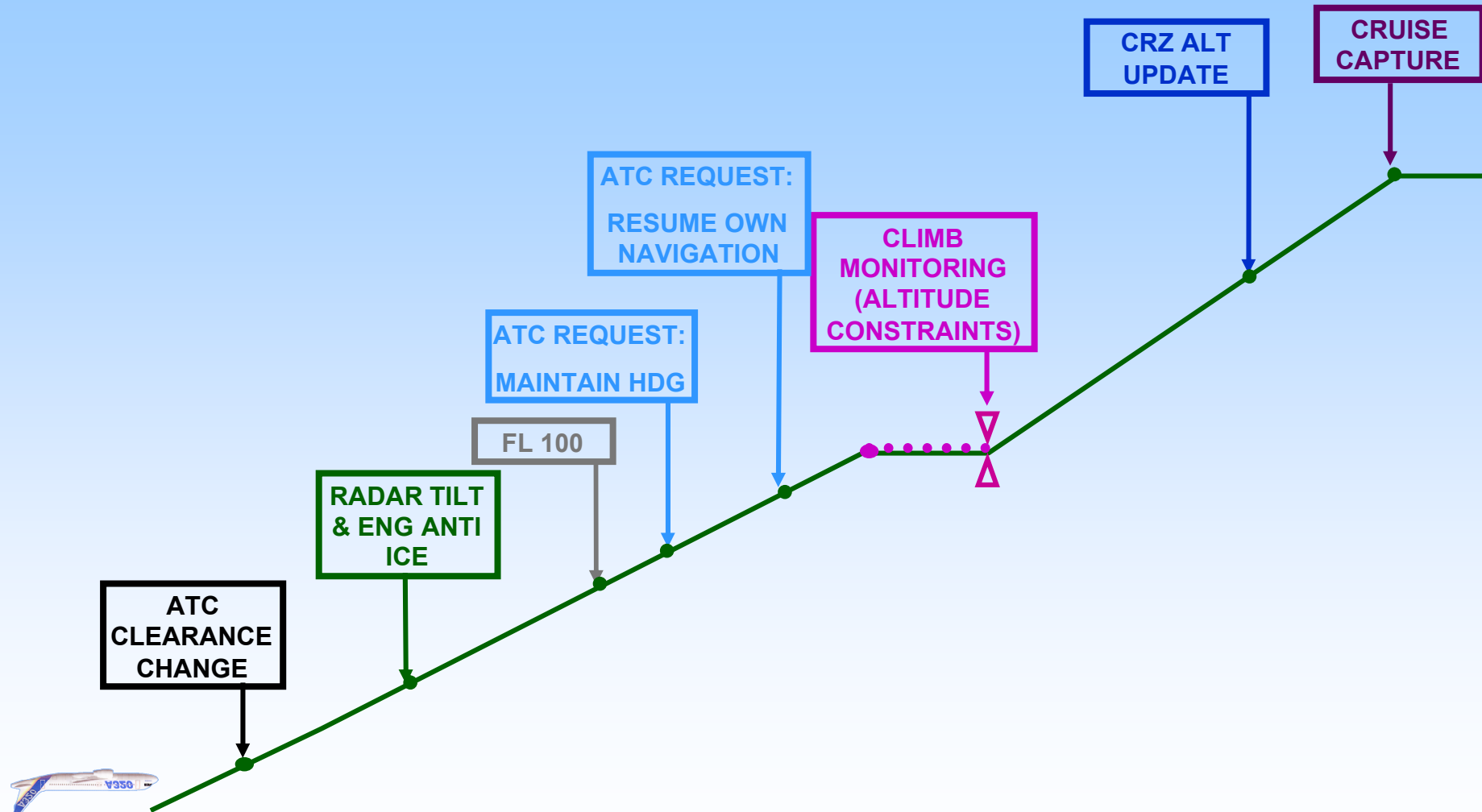


CLIMB PHASE



PF

PNF

1. ATC CLEARANCE CHANGE

MCDUPERF CLB

New ATC clearance : FL230

FCU ALTSET

ANNOUNCE....."FL 230"

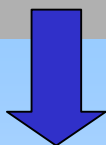
Read the new ALT on the PFD:

ANNOUNCE FMA, and....."FL 200 MAGENTA"

MCDUF-PLN

FMA and FL 200 magenta on PFD.....CHECK 

ANNOUNCE....."CROSSCHECKED"



PF

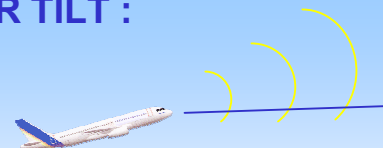
PNF

2. RADAR TILT & ENG ANTI ICE

RADAR TILT.....ADJUST

ENG ANTI ICE.....AS RQRD 

RADAR TILT :



Slightly reduce tilt
to avoid overscanning

PF

PNF

3. FL 100

Passing FL 100

EFIS OPTION.....AS RQRD



1. LAND LIGHTS.....OFF

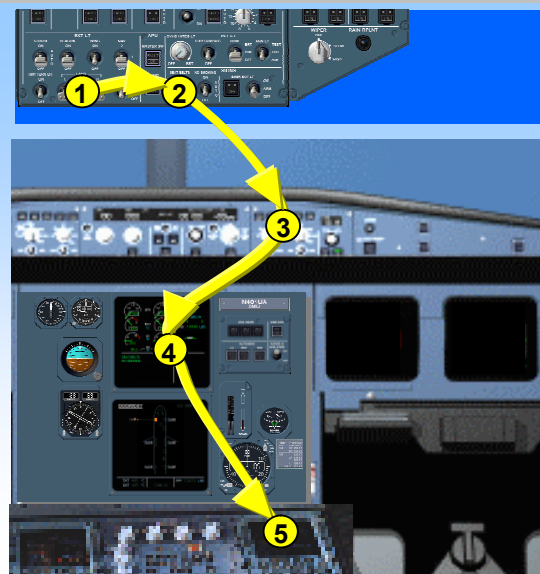
2. SEAT BELTSAS RQRD

3. EFIS OPTIONAS RQRD

4. ECAM MEMOREVIEW



- 5. {
 - NAVAIDS.....CHECK
 - SEC F-PLN.....AS RQRD
 - OPT/MAX ALTCHECK



PF

PNF

4. ATC REQUEST: MAINTAIN PRESENT HEADING

When ATC requests to maintain present Heading

HEADING..... PULL

FMA

➤ Pulling heading knob leads to lateral and vertical selected guidance.



PF

PNF

5.a. ATC REQUEST: RESUME OWN NAVIGATION

When ATC clears to resume own navigation

HEADING.....SET and MANAGE

FMA

When NAV engages:

FMA

➤ Step 1 : Resume Managed Lateral F-PLAN



PF

PNF

5.b. ATC REQUEST: RESUME OWN NAVIGATION

When NAV is green:

ALT.....MANAGE

FMA

➤ **Step 2** : Resume Managed Vertical F-PLAN



PF

PNF

6. CONSTRAINT MONITORING



Reaching ALT CST:

FMA

Reaching WPT CST:

FMA

FCU ALT set above the CSTR :

ALT CST



WPT CST



FCU ALT



PF

PNF

7. CRUISE ALTITUDE CLEARANCE

New ATC clearance : FL 240

FCU ALTSET

ANNOUNCE....."FL 240 BLUE"

FL 240 on PFD.....CHECK

ANNOUNCE....."FL 240 BLUE"

If final CRZ ALT clearance below intended FL :

PROG PAGE.....UPDATE



➤ If expedite climb is requested :

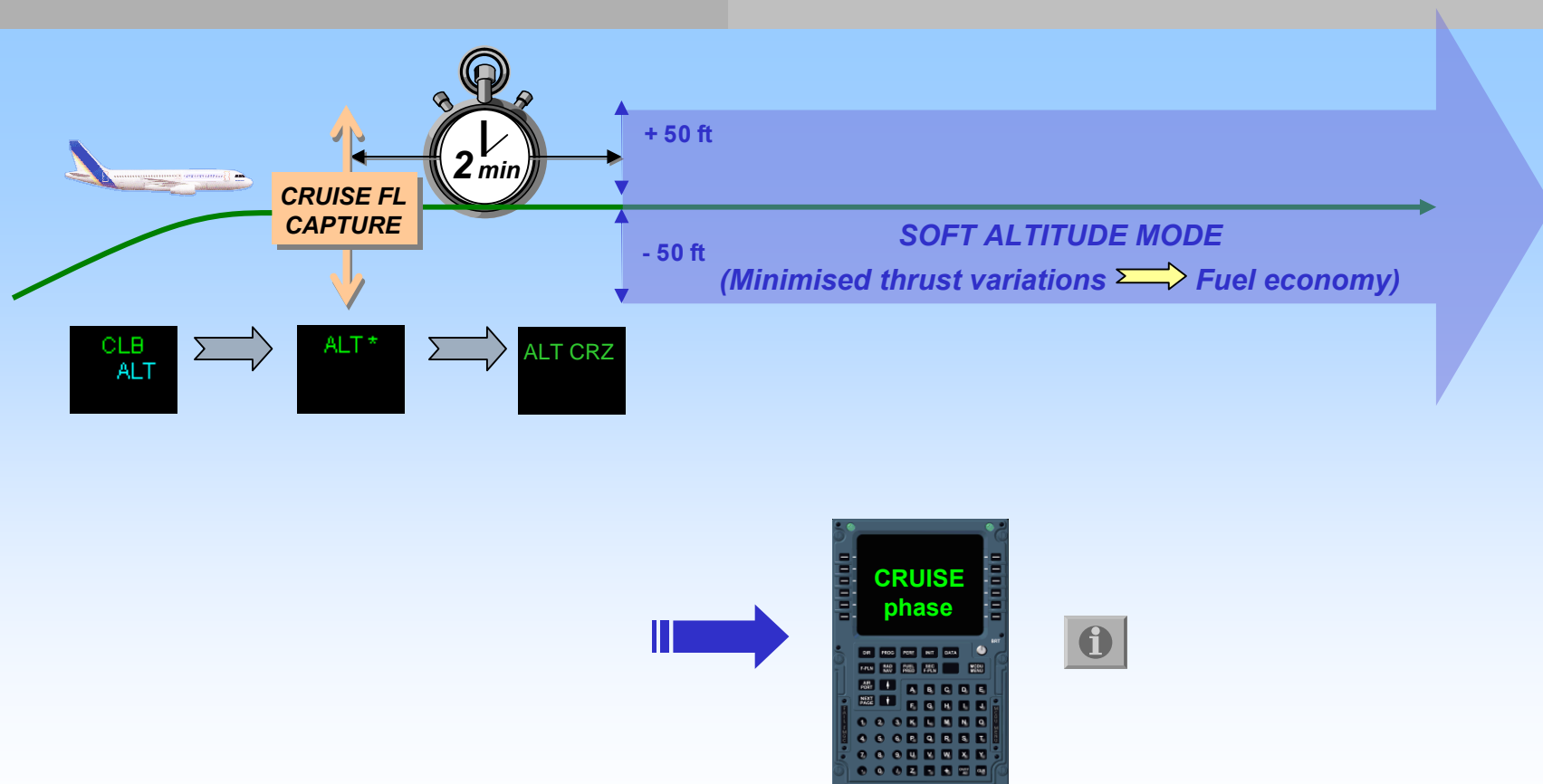


PF

PNF

8. CRUISE CAPTURE

FMA



PF

PNF

1. ATC CLEARANCE CHANGE

MCDUPERF CLB

New ATC clearance : FL230

FCU ALTSET

ANNOUNCE....."FL 230"

Read the new ALT on the PFD:

ANNOUNCE FMA, and....."FL 200 MAGENTA"

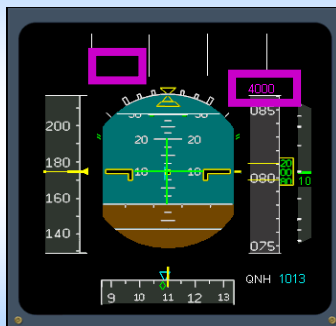
MCDUF-PLN

FMA and FL 200 magenta on PFD.....CHECK

ANNOUNCE....."CROSSCHECKED"



When FCU ALT is selected above the CSTR



Observe:

- FMA color change
- Altitude constraint on altitude scale

PF

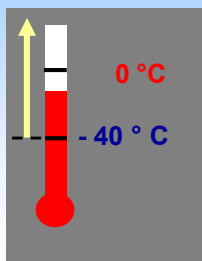
PNF

2. RADAR TILT & ENG ANTI ICE

ENG ANTI ICE.....AS RQRD 

RADAR TILT.....ADJUST

When is ENG ANTI ICE required ?



SAT above - 40° C

&

ICING CONDITIONS
expected

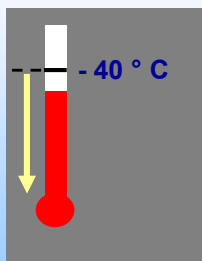
OR

&

Before descent
SAT below - 40° C



ENG ANTI ICE required



FCOM 3.04.30

EFIS OPTIONS



MORA

150

Provided if selected range is ≥ 40 NM

DATABASE
AIRPORTS

LIML

LIMC

LIMF

Select the most appropriate option, according to circumstances :

➤ Obstacle area, diversion considerations, etc...

Select preferably different option on each side

**NAVAIDS.....CHECK**

- Clear NAVAIDS from MCDU RAD NAV page, if manually tuned.

Note:

Actions on MCDU should be performed upon PF request, or at least, with PF approval

SEC F-PLN.....AS RQRD

- In most of the cases copy active should be performed at that time.

OPT/MAX ALTCHECK

- Check on the PROG page  **MORE DETAILS** 

**NAVAIDS.....CHECK**

- Clear NAVAIDS from MCDU RAD NAV page, if manually tuned.

Note:

Actions on MCDU should be performed upon PF request, or at least, with PF approval

SEC F-PLN.....AS RQRD

- In most of the cases copy active should be performed at that time.

OPT/MAX ALTCHECK

- Check on the PROG page  **MORE DETAILS**

**PROG****OPTIMUM FL (OPT)**

- THE MOST ECONOMIC FL at given :
 - Cost Index,
 - Gross Weight,
 - Weather conditions (Winds and Temp)
- It ensures a minimum estimated cruising time of 15 min
- It is continuously updated in flight.

MAXIMUM ALTITUDE (REC MAX)

- $REC\ MAX = f(\text{Gross Weight}, \text{Temperature})$
 - It ensures the 0.3g buffet margin
 - It is continuously updated in flight

LATERAL GUIDANCE : SELECTED MODE

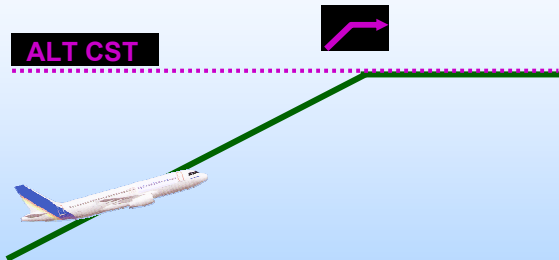


CLB
ALT

NAV

Vertical Constraint
respected

ALT CST



HDG



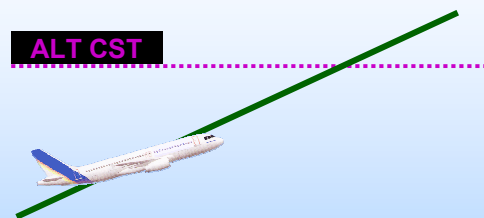
PULL

OP CLB
ALT

HDG

Constraint not
respected

ALT CST



RESUME MANAGED LATERAL F-PLAN



OP CLB
ALT

HDG

Constraint not
respected

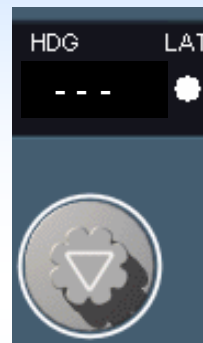
Active leg

"TO"
WPT

"FROM"
WPT



HDG



PUSH
To MANAGE

OP CLB
ALT

NAV

Constraint not
respected

"TO"
WPT

INTCPT

"FROM"
WPT



Minimum Distance to engage Nav mode : 1 NM

Maximum divergence angle between Active leg & A/C Heading : 160 °

RESUME MANAGED VERTICAL F-PLAN

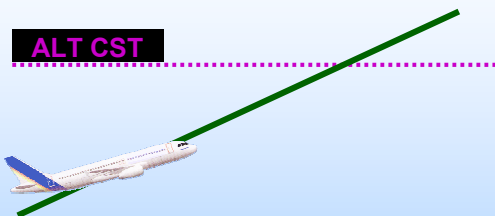


OP CLB
ALT

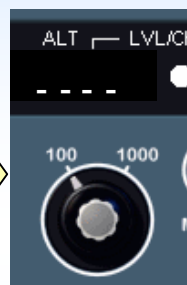
NAV

Constraint not
respected

ALT CST



ALT



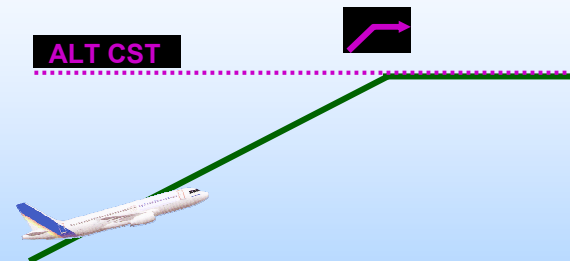
PUSH
To MANAGE

CLB
ALT

NAV

Vertical Constraint
respected

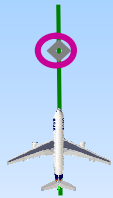
ALT CST



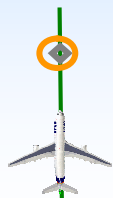
MONITORING THE CONSTRAINT



➤ ALTITUDE constraint:



Magenta : The aircraft will **match** the constraint



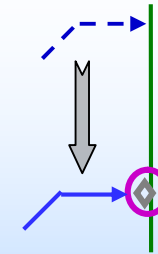
Amber : The aircraft will **miss** the constraint

➤ To **match** the constraint :

① Select the CSTR ALT on FCU, to visualize the blue arrow.



② Then Select a lower SPD, until the CSTR is met



➤ SPEED constraint to be missed by more than 10 kt :

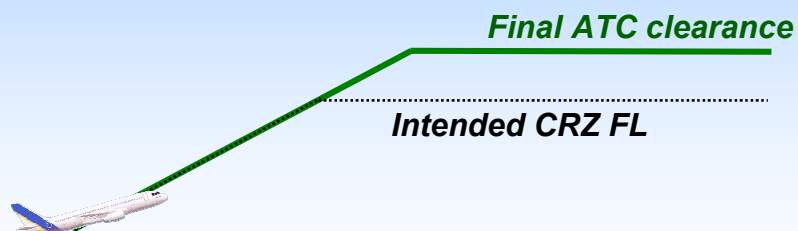
➤ The MCDU scratchpad displays



CRZ ALT UPDATE ON PROG PAGE

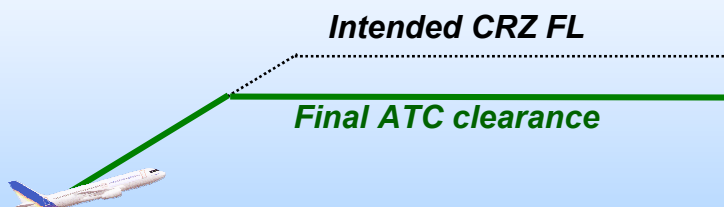


Final ATC clearance at or above intended CRZ FL :



Automatically updated.
No action required.

Final ATC clearance below intended CRZ FL :



CRZ FL must be updated by the crew.

Otherwise: No transition to CRZ phase when reaching CRZ FL

EXPEDITE TO A HIGHER FL



① Select a Lower SPD 



- Observe V/S
- See predictions on F-PLN before any action
 - *To allow comparisons with the new predictions*



② When **ALT*** engages,
Resume managed SPD

FCU selected altitude

Note:

*At high altitude, acceleration
to resume managed speed
may take a long time.*

EXPEDITE TO A HIGHER FL



① Select a Lower SPD

- Above FL 250: Select turbulence SPD/Mach (QRH5.00)
- Below FL 250: Do not select SPD below **green dot**



- Observe V/S
- See predictions on F-PLN before any action
 - *To allow comparisons with the new predictions*



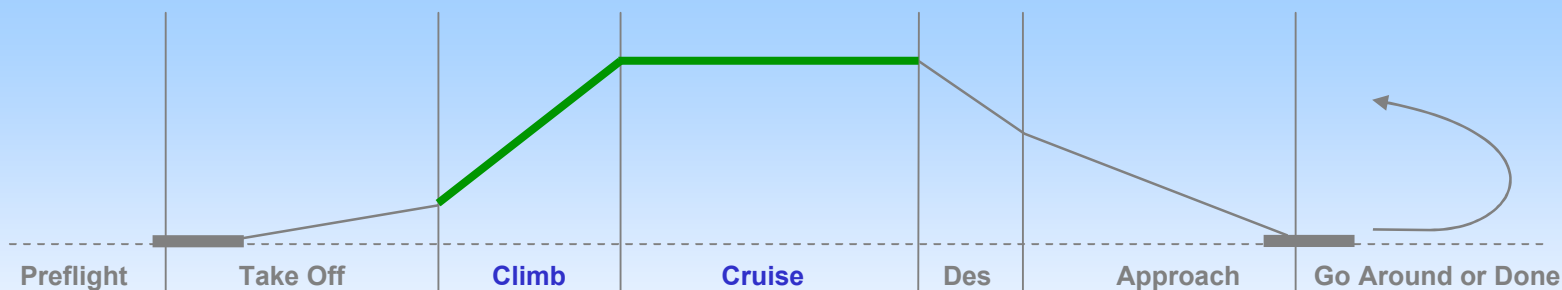
② When **ALT*** engages, Resume managed SPD

FCU selected altitude

Note:

At high altitude, acceleration to resume managed speed may take a long time.

FLIGHT PHASE SWITCHING CONDITIONS



FLIGHT PHASES	OPTIMUM SPEED PROFILE	SWITCHING CONDITIONS TO NEXT PHASE
PREFLIGHT	/	SRS take off mode engaged and N1 > 85% (EPR >= 1.25) or Ground Speed > 90 kt
TAKE OFF	V2 (V2 + 10)	At acceleration altitude or by engagement of another vertical mode
CLIMB	ECON CLB SPD / MACH	Reaching cruise FL
CRUISE	ECON CRZ MACH	At descent initiation (if distance to DEST < 200 NM and no step descent)
DESCENT	ECON DES MACH / SPD	- Over flying (DECEL) pseudo waypoint with NAV (or LOC*/LOC) mode engaged and altitude < 7200 ft AGL - Manual activation of the approach phase.
APPROACH	Vapp (GS Min)	1. To Go Around : when thrust levers at TO.GA detent or 2. To Done: 30 seconds after landing or 3. To Climb: when inserting a new CRZ FL
GO AROUND	Vapp or current SPD whichever is greater. Green Dot at ACC ALT	1. To Approach : Manual activation of the approach phase or 2. To Climb: Above acceleration altitude by - Selecting ALTN or - inserting NEW DEST and CRZ FL
DONE	/	To preflight when INIT or PERF key depressed