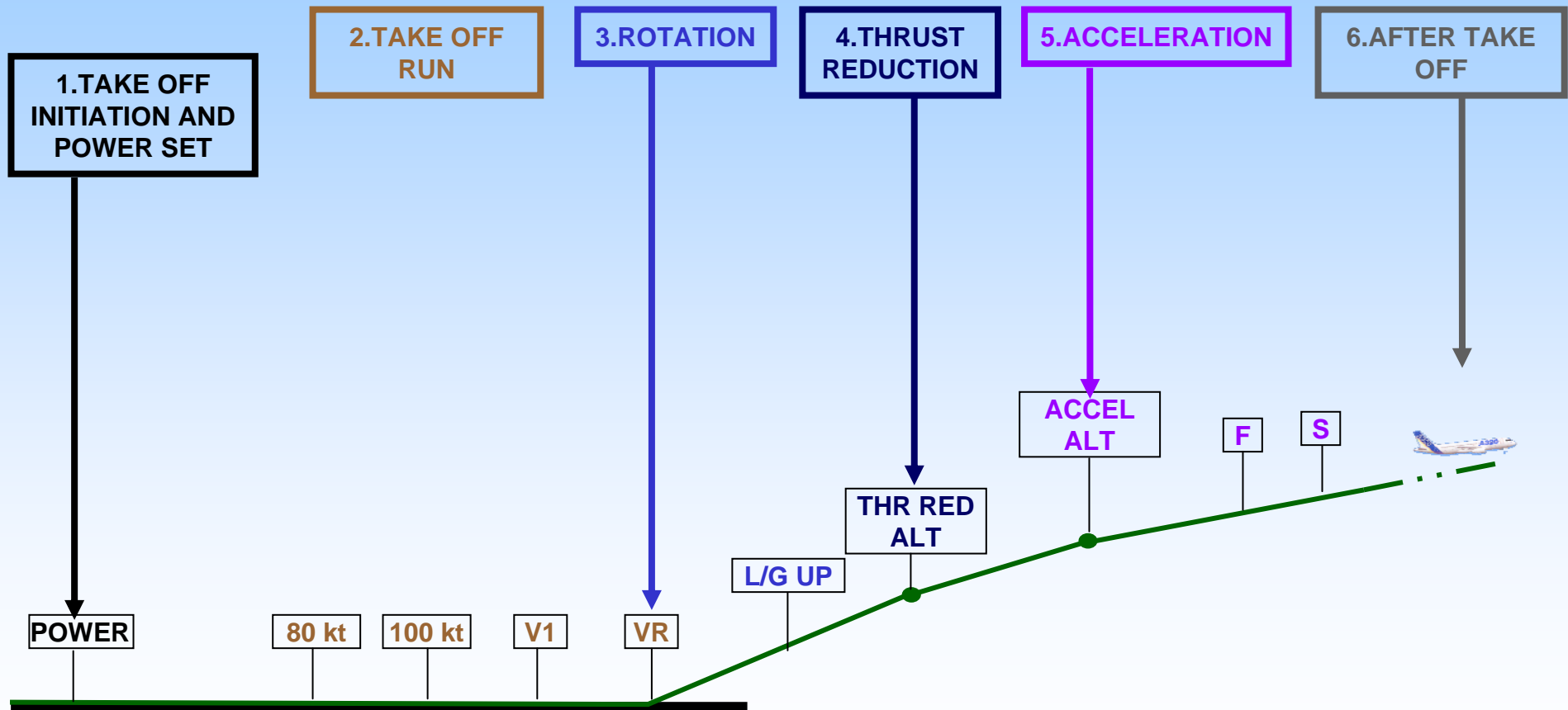


TAKE OFF



PF

PNF

1. TAKEOFF INITIATION AND POWER SET

ANNOUNCE....."TAKE OFF"

CHRONO.....START

BRAKES.....RELEASE

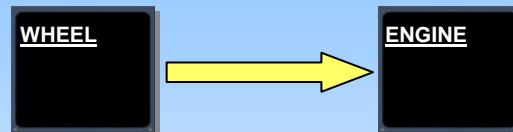
THRUST LEVERS...

... 1) From IDLE to 50 % N1 (1.05 EPR)

... 2) From Both engines THR stabilized to T/O THR

CHRONO.....START

- ECAM SD auto - switching



- Computer inhibits warnings and cautions.



PF

PNF

2. TAKEOFF RUN

ANNOUNCE FMA.....

FMA..... CHECK 

ANNOUNCE....."CHECKED"

BEFORE 80 kt

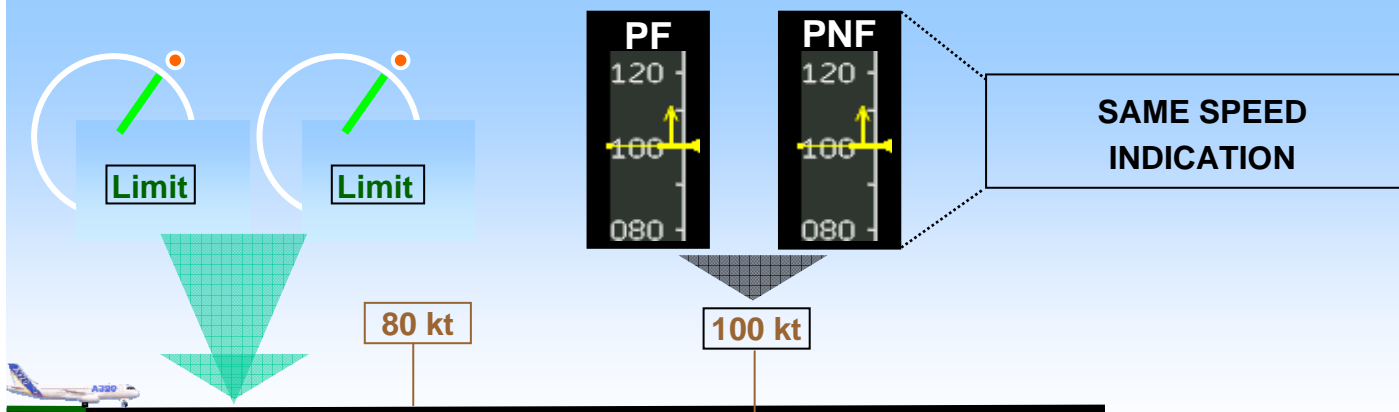
N1(EPR).....CHECK

ANNOUNCE....."POWER SET"

AT 100 kt

ANNOUNCE....."ONE HUNDRED KNOTS"

ANNOUNCE....."CHECKED"



PF

PNF

3.a. ROTATION

AT V1

ANNOUNCE....."V1"

At VR

ANNOUNCE....."ROTATE"

ROTATION.....PERFORM

WHEN V/S positive and RA positive

ANNOUNCE....."POSITIVE CLB"

ORDER....."GEAR UP"

L/G.....UP

ANNOUNCE....."GEAR UP"

GRND SPLR.....DISARM

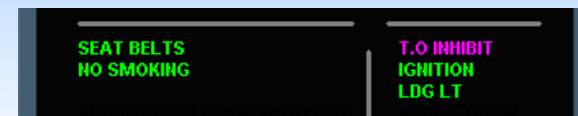
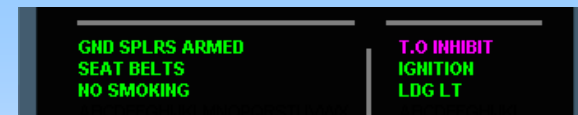
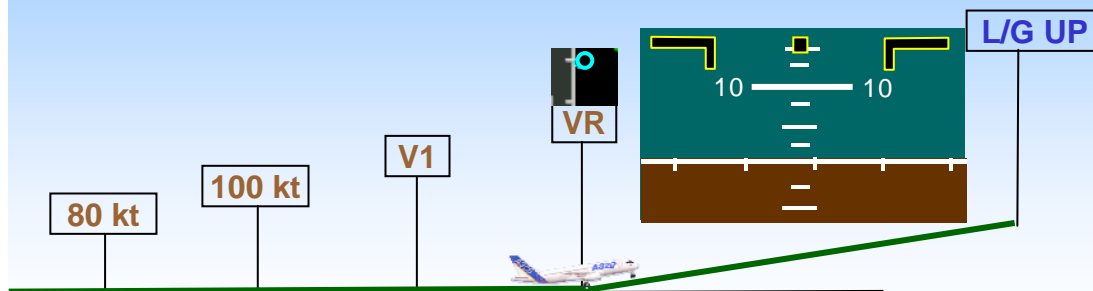
EXTERIOR LIGHTS.....SET



ORDER....."AUTOPILOT ON"

A/P.....ON (on PF SIDE)

➤ AP is available 5 sec after lift off (100 ft).



Note: With CFM engines, IGNITION is displayed only if IGN/START mode has been selected.

PF

PNF

3.b. PRESELECTED HEADING

ANNOUNCE FMA "AP 1 (or 2)"

FMA.....CHECKED

ANNOUNCE....."CHECKED"

If RWY TRK mode is engaged:

HDG.....PULL or MANAGE

➤ **RWY TRK** mode keeps the aircraft on the runway track memorized at 30 ft RA.



Pull HDG Knob
To maintain runway HDG

Or



Push HDG Knob:
NAV mode is engaged

PF

PNF

4. THRUST REDUCTION

FMA

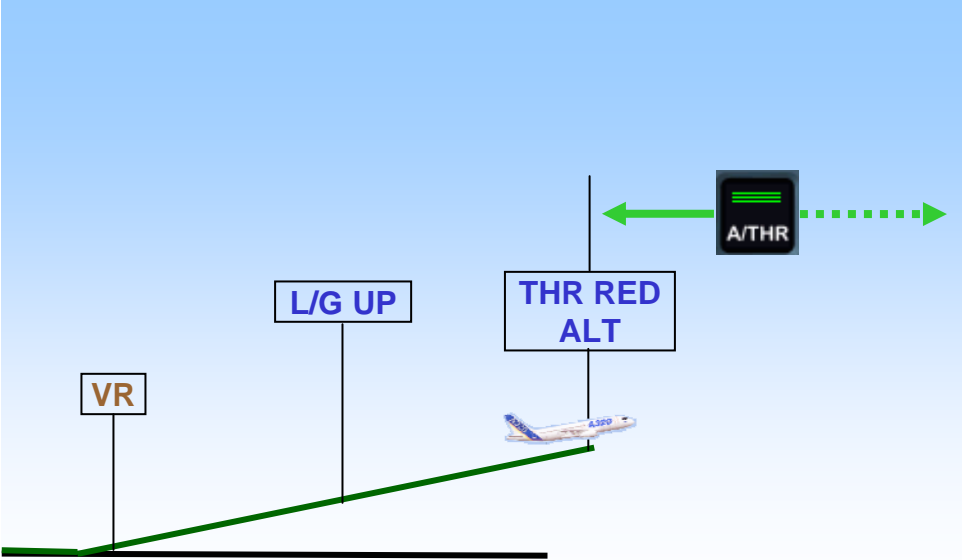
When LVR CLB flashing on FMA

THRUST LEVERS.....CL 

FMA

If takeoff was performed with packs off:

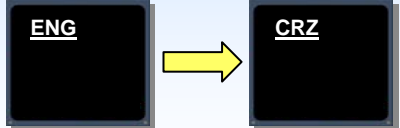
PACKS 1 and 2ON 



➤ 1500 ft AGL or 2 min after lift off :



➤ ECAM SD auto – switching :



PF

PNF

5. ACCELERATION

At acceleration altitude

FMA

At F speed with positive speed trend

ORDER....."FLAPS 1"

ANNOUNCE....."SPEED CHECKED"

FLAPS 1.....SELECT



CONFIRM....."FLAPS 1"

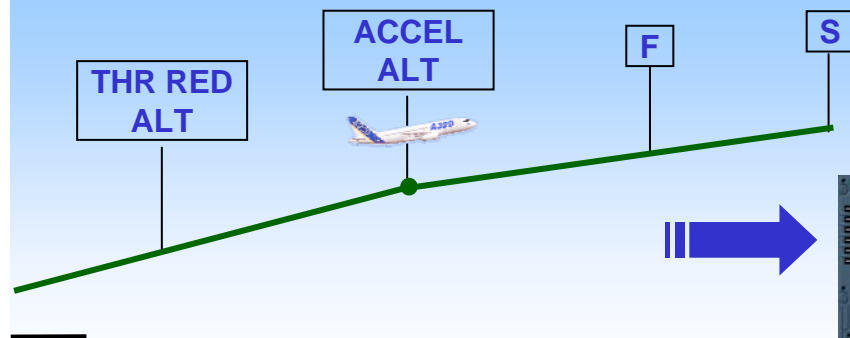
At S speed with positive speed trend

ORDER....."FLAPS 0"

ANNOUNCE....."SPEED CHECKED"

FLAPS 0.....SELECT

CONFIRM....."FLAPS 0"



➤ Target speed change



PF

PNF

6. AFTER TAKEOFF

APU BLEED/MASTER SW.....AS RQRD

ENG MODE SEL.....AS RQRD

TCAS.....TA/RA

ANTI ICE.....AS RQRD



PF

PNF

7. TRANSITION ALT

At transition altitude :

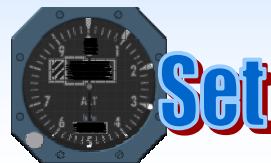
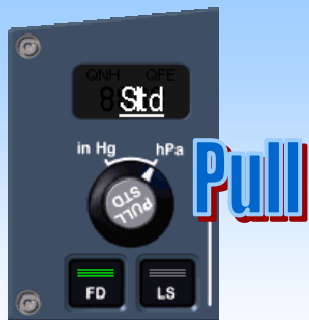
ANNOUNCE....."PULL STANDARD"
BARO REFPULL STANDARD

BARO REFPULL STANDARD
ANNOUNCE....."STANDARD CROSS-CHECKED"

ALTCHECK
ANNOUNCE....."CHECKED"

ANNOUNCE....."PASSING FL XX, now"

AFTER T/O CLIMB C/L



THE END...

PF

PNF

2. TAKEOFF RUN

ANNOUNCE FMA

Typical announcement is :

“MAN TOGA (or MAN FLX XX), SRS, RWY,
A/THR *blue*”

FMA..... CHECK 

ANNOUNCE.....”CHECKED”

BEFORE 80 kt

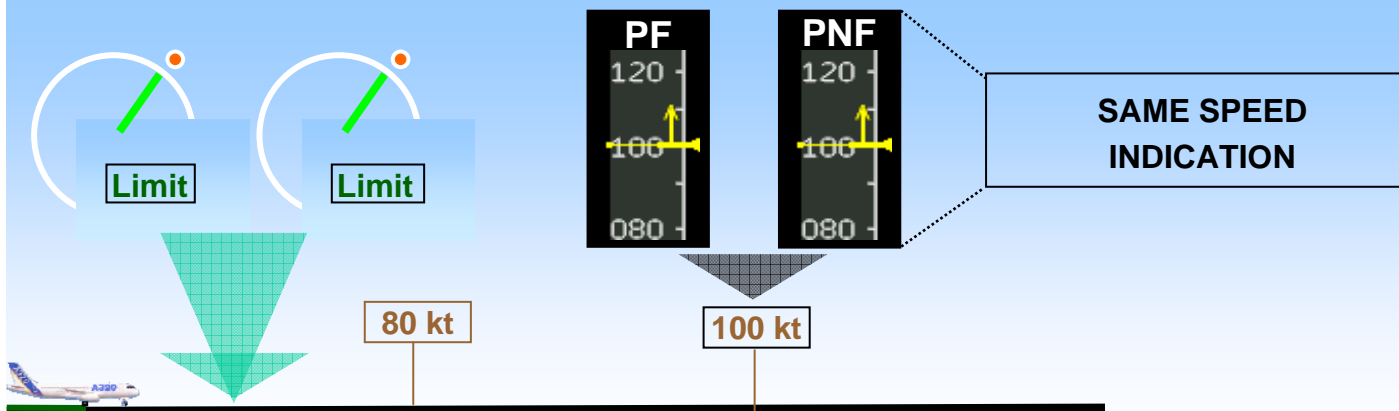
N1(EPR).....CHECK

ANNOUNCE.....”POWER SET”

AT 100 kt

ANNOUNCE.....”ONE HUNDRED KNOTS”

ANNOUNCE.....”CHECKED”



PF

PNF

3.a. ROTATION

AT V1

ANNOUNCE....."V1"

At VR

ANNOUNCE....."ROTATE"

ROTATION.....PERFORM

WHEN V/S positive and RA positive

ANNOUNCE....."POSITIVE CLB"

ORDER....."GEAR UP"

L/G.....UP

➤ Set NOSE and RWY TURN OFF lights switches to OFF

ANNOUNCE....."GEAR UP"

➤ LAND lights should be left ON

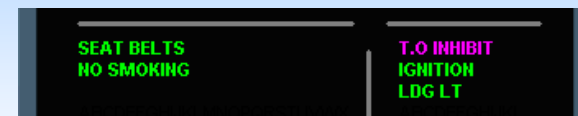
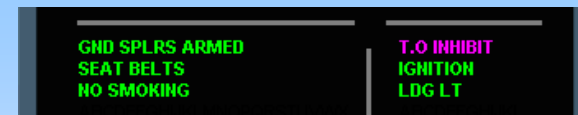
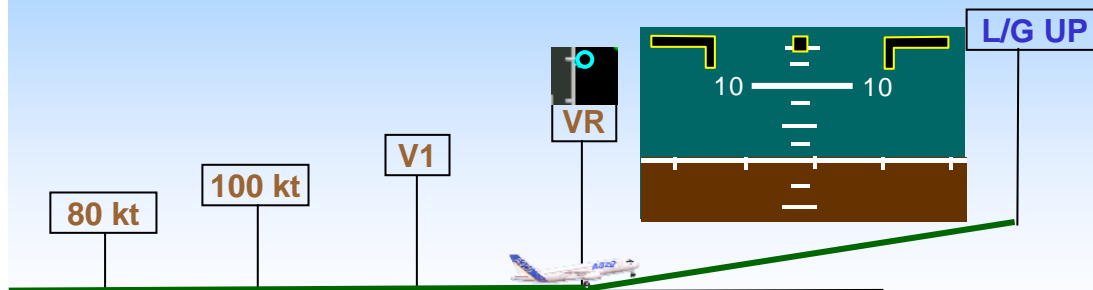
GRND SPLR.....DISARM

EXTERIOR LIGHTS.....SET 

ORDER....."AUTOPILOT ON"

A/P.....ON (on PF SIDE)

➤ AP is available 5 sec after lift off (100 ft).



Note: With CFM engines, IGNITION is displayed only if IGN/START mode has been selected.

PF

PNF

4. THRUST REDUCTION

FMA

When LVR CLB flashing on FMA

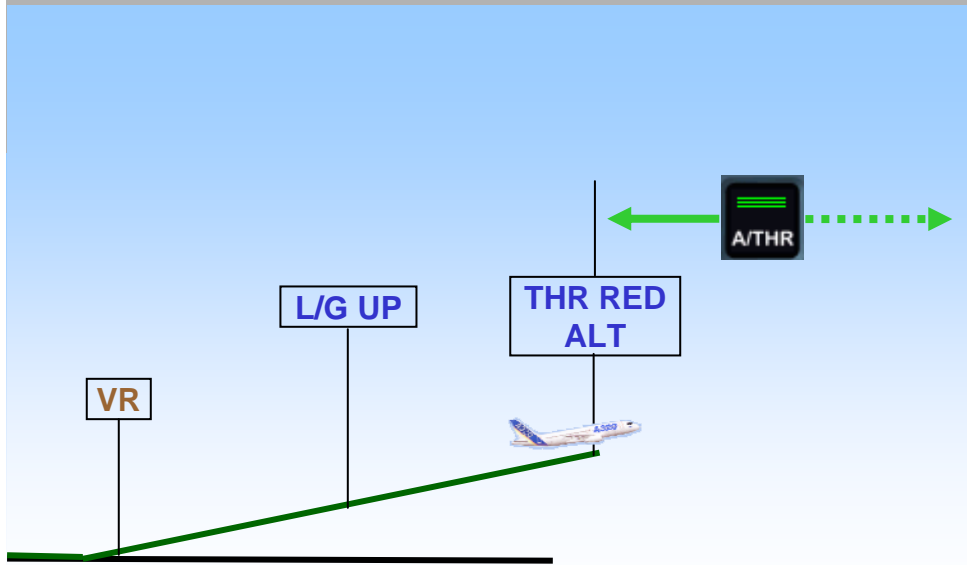
THRUST LEVERS.....CL 

THR RED ALT ~ 1500 ft AGL is the default value of the FMS, It can be modified by the pilot as required by the procedure

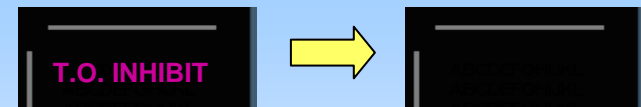
FMA

If takeoff was performed with packs off:

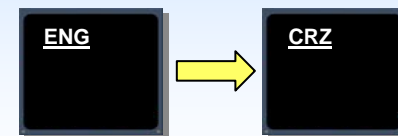
PACKS 1 and 2ON 



➤ 1500 ft AGL or 2 min after lift off :



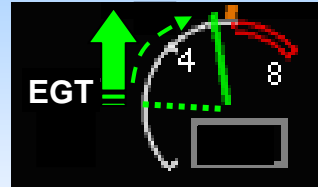
➤ ECAM SD auto – switching :



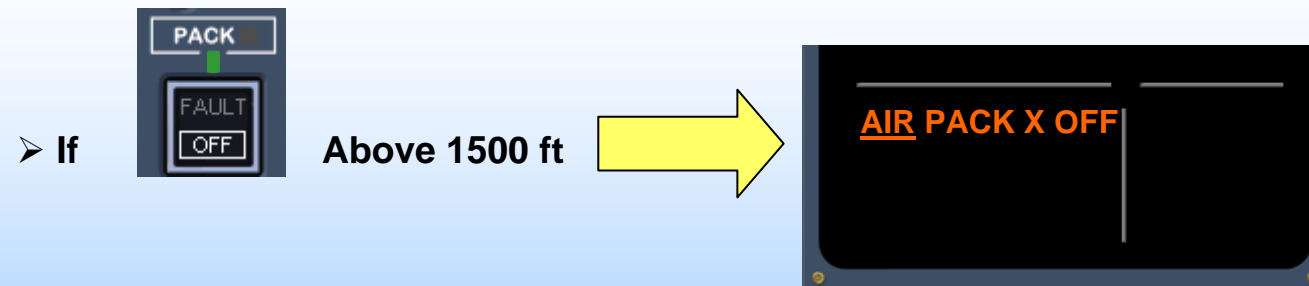
ONE PACK



- Do not select PACK 1 ON before reducing Takeoff Thrust, otherwise :



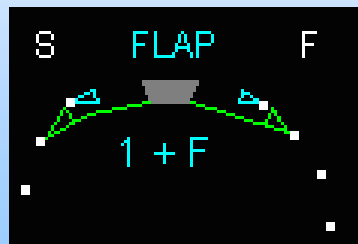
- Second pack selection is delayed until clean configuration.
 - It may be selected earlier, in order to avoid ECAM caution activation,
 - but not earlier than 10 seconds after PACK 1 ON, for passenger comfort



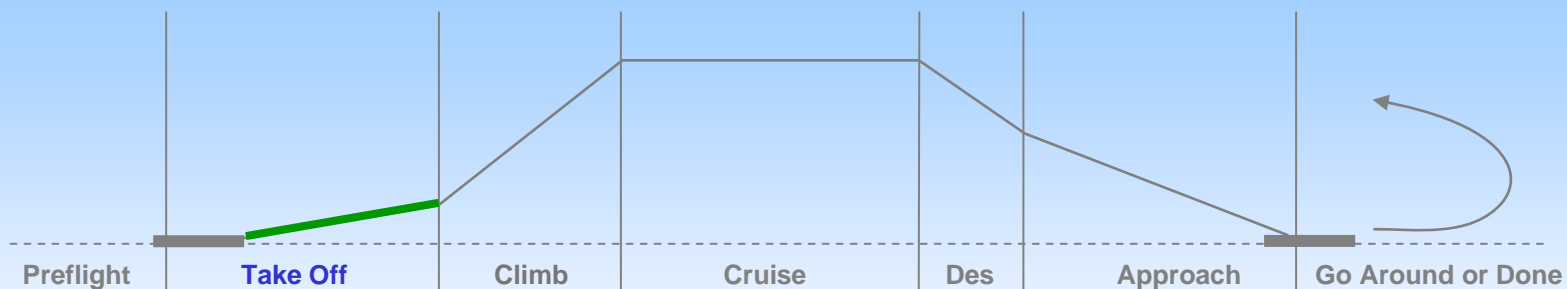
FLAPS



- For T/O in CONF **1+F** minimum flap retraction speed “F” is not displayed.
- When CONF 1+F is selected, auto retraction of flaps to CONF **1** occurs at 210 kt
- Announce “FLAPS X” as soon as the proper position has been selected



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

PF

PNF

6. AFTER TAKEOFF

APU BLEED/MASTER SW.....AS RQRD

ENG MODE SEL.....AS RQRD

TCAS.....TA/RA

ANTI ICE.....AS RQRD



Select :

- APU BLEED to OFF, if APU has been used during T/O
- IGN, in case of severe turbulence or heavy rain

- TA/RA, if TA has been used during T/O
- ENG ANTI ICE, in case of expected icing conditions