

Vol en duO



PROCEDURES A321 CEO/NEO TOLISS

PRE REQUIS :

- Lire les check listes Pré Requis
- Appliquer les réglages de Pré Connexion relatif à l'appareil

VolenduO : Groupe pratiquant le vol en cockpit partagé

Site : Cliquez sur l'image au dessus

http://volenduo.djetdail.fr/Forum_vpi/

Contact : volenduo@laposte.net

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VolenduO : Group practicing shared cockpit flight

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<http://www.smartcockpit.com/plane/AIRBUS/A320.html>

http://a320dp.com/A320_DP/menu.html

<https://www.flightpilot.fr/apprendre-le-pilotage-dun-airbus-a320> MERCI JACQUES :-)

<https://skywaypublic.ru/index/a320im/0-10>

IMPORTANT A LIRE // IMPORTANT TO READ

Ce document a été construit pour être utilisé en **cockpit partagé (Smartcopilot)** avec l'**Airbus A321 CEO et NEO de Tollis**.

Hormis ces spécificités, les procédures et checklist associées peuvent être utilisées par les Airbus de la série A32x, A31x

PF = Pilot Flying // PM Pilot Monitoring

Les procédures sont réalisées de mémoire :-)

Le PF appelle la checklist qui est lue par le PM
Le PF vérifie et confirme les items de la checklist

"C/L down to the line" signifie que la checklist est lue jusqu'au trait gras.

"C/L below the line" signifie que la checklist est lue après le trait gras.

Notes spécifiques à Smartcopilot :
MASTER : pilote qui initie la connexion
SLAVE : pilote qui rejoint la connexion

Les zones en vert clair définissent des actions réalisées en parallèle avant que chacun poursuive les procédures.

Toute saisie sur le MCDU par les PF/PM est systématiquement cross checkées.

This document was built for use in a **shared cockpit (Smartcopilot)** with the **Airbus A321 CEO et NEO Tollis**.

Apart from these specificities, the associated procedures and checklist can be used by the Airbus A32x series

PF = Pilot Flying // PM = Pilot Monitoring

The procedures are performed by memory :-)

The PF calls the checklist which is read by the PM
The PF checks and confirms the items of the checklist

"C / L down to the line" means that the checklist is read up to the bold line.

"C / L below the line" means that the checklist is read after the bold line.

Notes specific to Smartcopilot:
MASTER: pilot who initiates the connection
SLAVE: pilot joining the connection

The light green areas define actions that are carried out in parallel before each person continues the procedures.

All entries on the MCDU by FF/PM are systematically cross-checked.



Prerequis avant connexion :
Utiliser la même livrée
Réglage dans l'ISCS :
Onglet SITUATIONS A/C CONFIG : Vérifier que les réglages dans AIRCRAFT CONFIGURATION soient identiques (de préférence sur AUTO)
Onglet LOADING PERFO : PAYLOAD est géré par le MASTER , BLOCK FUEL chaque pilote règle la même quantité
Onglet GROUND SERVICES : Tout est synchronisé
Onglet FAULT SCENARIOS : Ne jamais utiliser ENABLE RANDOM FAULTS, chaque pilote ajoute la même panne et l'active au même moment
Onglet GENERAL SETTINGS : STARTUP BEHAVIOUR : identique / MISCELLANEOUS les 3 premiers items identiques

Prerequisites before connection:
Use the same livery
Setting in ISCS:
SITUATIONS A/C CONFIG tab: Check that the settings in AIRCRAFT CONFIGURATION are identical (preferably AUTO)
LOADING PERFO tab : PAYLOAD is managed by the MASTER, BLOCK FUEL each pilot will set the same quantity
GROUND SERVICES tab: Everything is synchronized
FAULT SCENARIOS tab: Never use ENABLE RANDOM FAULTS, each driver adds the same fault and activates it at the same time
GENERAL SETTINGS tab : STARTUP BEHAVIOUR : identical / MISCELLANEOUS the first 3 items identical

PF	
PRELIMINARY COCKPIT PREPARATION	
COCKPIT LIGHTS	AS RQRD
ECAM	CHECK
RCL pb	PRESS 3 s

PM	
PRELIMINARY COCKPIT PREPARATION	
ENG MASTERS 1, 2	OFF
ENG MODE selector	NORM
WEATHER RADAR	OFF
L/G lever	DOWN
Both WIPER selectors	OFF
BAT	CHECK / AUTO
EXT PWR	AS RQRD
AIR STARTER UNIT (ASU)	AS RQRD
AIR COND panel	SET
COCKPIT LIGHTS	AS RQRD
ECAM OXY PRESS >> DOOR	CHECK
ECAM HYD QTY > HYD	CHECK
ECAM ENG OIL QTY > ENG	CHECK
FLAPS	CHECK POSITION
EMER EQPT	CHECK
SPD BRK lever	CHECK RET AND DISARMED
PARKING BRAKE handle	ON
ACCU/BRAKES PRESS	CHECK AND PRESSURIZE IF NECESSARY

COCKPIT PREPARATION



ALL WHITE LIGHTS	EXTINGUISH		
ALL IR MODE selector	NAV		
MCDU :			
INIT A PAGE	FILL	<< >>	INIT A PAGE
ADIRS POSITION INITIALIZATION	AS APPROPRIATE	<< >>	ADIRS POSITION INITIALIZATION
			CROSS CHECK
			CROSS CHECK
EXTERIOR LIGHTS	SET		
SIGNS	SET		
PROB/WINDOW HEAT	AUTO		
LDG ELEV	AUTO		
PACK FLOW : LO = less than 115 pax NORM = 115 pax or more HI = abnormal hot and humid conditions			
	AS RQRD		
ELEC panel	CHECK		
BAT	CHECK		
ENG FIRE	CHECK / TEST		
VENT panel	CHECK		
MAINTENANCE panel	CHECK		
ISIS	CHECK		
CLOCK	CHECK / SET		
A/SKID & N/W STRG sw	ON		
ACP	CHECK		
SWITCHING PANEL	NORM		
THRUST LEVERS	CHECK IDLE		
ENG MASTERS	CHECK OFF		
ENG MODE selector	CHECK NORM		
GRAVITY GEAR EXTN	CHECK STOWED		
ATC	AUTO		
NAV CHARTS CLIPBOARD	PREPARE	<< >>	NAV CHARTS CLIPBOARD
		<< >>	REQUEST CLEARANCE
			OBTAIN
			SET
MCDU	PREPARE	<< >>	MCDU
BAROMETRIC REFERENCE	SET	<< >>	BAROMETRIC REFERENCE
			SET
FD	CHECK ON		FD
LS/ILS	AS RQRD		LS/ILS
ND mode and range	AS RQRD		ND mode and range
VOR / ADF selector	AS RQRD		VOR / ADF selector
FCU	SET		
PFD-ND brightness	AS RQRD		PFD-ND brightness
LOUDSPEAKER knob	SET		LOUDSPEAKER knob
PFD-ND	CHECK		PFD-ND
LDG ELEV (ECAM)	CHECK AUTO		IRS ALIGN
			CHECK
ECAM STATUS	CHECK		
TAKEOFF BRIEFING	PERFORM	<< >>	



BEFORE PUSHBACK OR START

FOB	CHECK	<< >>	FOB	CHECK
MCDU PERF TO page	SELECT		MCDU F-PLN page	SELECT
			APU FIRE	CHECK / TEST
			APU	START
			APU BLEED	ON
			EXT PWR DISCONNECTION	REQUEST
BEFORE START C/L down to the lineCOMPLETE				
			PUSHBACK / START CLEARANCE	OBTAIN
			ATC	SET FOR OPERATION
WINDOWS / DOORS	CHECK CLOSED		WINDOWS / DOORS	CHECK CLOSED
EXTERIOR LIGHTS	SET			
THRUST LEVERS	IDLE			
ACCU PRESS	CHECK			
NW STRG DISC	AS RQRD			
PARK BRK	ON			
CHOCKS	OFF			
BEFORE START C/L below the line.....COMPLETE				

ENGINE START POWER

ENG MODE selector	IGN/START		
CHRONO	START		
ENG N 2 START	ANNOUNCE		
ENG MASTER N 2 ON ENG IDLE PARAMETERS	CHECK	<< >>	ENG MASTER N 2 ON ENG IDLE PARAMETERS MONITORING
ENG 2 START	ANNOUNCE		
REPEAT THE START SEQUENCE			

AFTER START POWER

ENG MODE selector	NORM		
APU BLEED pb-sw	OFF		GND SPOILERS ARM
ENG ANTI ICE pb-sw	AS RQRD		RUD TRIM ZERO
WING ANTI ICE pb-sw	AS RQRD		FLAPS SET
APU MASTER SW	AS RQRD		PITCH TRIM SET
ECAM STATUS	CHECK		ECAM STATUS CHECK
N/W STEER DISC MEMO	CHECK NOT DISPLAYED		
AFTER START C/L.....COMPLETE			

TAXI



EXTERIOR LIGHTS	SET		TAXI CLEARANCE	OBTAIN
PARKING BRAKE handle	OFF	<< >>	BRAKES PRESSURE	CHECK AT ZERO
THRUST LEVERS	AS RQRD			
BRAKE	CHECK			
TILLER or RUDDER PEDALS	USE AS RQRD			
FLT CTL	CHECK	<< >>	FLT CTL	CHECK
FMS REVISED T.O PERF DATA	CROSSCHECK	<< >>	FMS REVISED T.O PERF DATA	CROSSCHECK
			FLAPS lever	AS APPROPRIATE
			FMS F-PLAN / SPD	CHECK
			FCU ALT/HDG	SET
			BOTH FD	CHECK ON
PFD/NDCHECK	CHECK	<< >>	PFD/ND	CHECK
TAKEOFF BRIEFING	CONFIRM			
			RADAR	ON
			ATC CODE / MODE	CONFIRM / SET FOR TAKEOFF
TERR ON ND	AS RQRD		TERR ON ND	AS RQRD
			AUTO BRK	MAX
			T.O CONFIG pb	TEST
			T.O MEMO	CHECK NO BLUE
BEFORE TAKEOFF C/L down to the lineCOMPLETE ➤➤				

BEFORE TAKEOFF

			BRAKE TEMP (if brake fan running)	CHECK
			BRAKE FAN pb-sw (if brake fan running)	OFF
			TAKEOFF / LINE UP CLEARANCE	OBTAIN
			TCAS Mode selector	TA or TA/RA
APPROACH PATH	CLEARED OF TRAFFIC	<< >>	APPROACH PATH	CLEARED OF TRAFFIC
			CABIN CREW	ADVISE
			ENG MODE selector	AS RQRD
SLIDING TABLE	STOW		SLIDING TABLE	STOW
TAKEOFF RUNWAY	CONFIRM	<< >>	TAKEOFF RUNWAY	CONFIRM
			PACKS 1+2	AS RQRD
BEFORE TAKEOFF C/L below the lineCOMPLETE ➤➤				

TAKEOFF

		TAKEOFF CLEARANCE	OBTAIN
EXTERIOR LIGHTS	SET		
TAKEOFF	ANNOUNCE		
BRAKES :RELEASE THRUST LEVERS	FLX or TOGA	CHRONO	START
FMA	ANNOUNCE	PFD/ND	MONITOR
•BELOW 80 kt:			
		N1 (EPR)	CHECK
		THRUST SET	ANNOUNCE
		PFD and ENG indications	MONITOR
•AT 100 kt:			
100 kt	CHECK	ONE HUNDRED KNOTS	ANNOUNCE
•AT V1:			
		V1	ANNOUNCE
•AT VR:			
ROTATION	PERFORM	ROTATION	ORDER
WHEN POSITIVE CLIMB:			
L/G UP	ORDER	POSITIVE CLIMB	ANNOUNCE
AP	AS RQRD	L/G	SELECT UP
•AT THR RED ALT:		•AT THR RED ALT:	
THRUST LEVERS	CL	PACK 1+2 (if applicable)	ON
•AT F SPEED:		•AT F SPEED:	
FLAPS 1	ORDER	FLAPS 1	SELECT
•AT S SPEED:		•AT S SPEED:	
FLAPS 0	ORDER	FLAPS 0	SELECT
		GND SPLRS	DISARM
		EXTERIOR LIGHTS	SET

AFTER TAKEOFF

		APU BLEED pb-sw	AS RQRD
		APU MASTER SW	AS RQRD
		ENG MODE selector	AS RQRD
		TCAS Mode selector	TA/RA
		ANTI ICE pb-sw	AS RQRD

AFTER TAKEOFF CLIMB C/L down to the lineCOMPLETE ➤➤

CLIMB ???

MCDU	PERF CLB		MCDU	F-PLN
FCU / FMGS	SET IF AP ON		FCU / FMGS	SET IF AP OFF
•At transition altitude:			•At transition altitude:	

BAROMETRIC REFERENCE SET STD / XCHECK << >> BAROMETRIC REFERENCE SET STD / XCHECK

AFTER TAKEOFF CLIMB C/L below the lineCOMPLETE ➤➤

RADAR	ADJUST AS APPROPRIATE		ENG ANTI ICE	AS RQRD
•At 10 000 ft:		???	•At 10 000 ft:	
			LAND LIGHTS selector	RETRACT
			SEAT BELTS sw	AS RQRD
			ECAM MEMO	REVIEW
			NAVAIDS	CLEAR
			SEC F-PLN	AS RQRD
			OPT / MAX ALT	CHECK

CRUISE

ECAM MEMO / SD PAGES	REVIEW		ECAM MEMO / SD PAGES	REVIEW
FLIGHT PROGRESS	CHECK	<< >>	FLIGHT PROGRESS	CHECK
FUEL	MONITOR	<< >>	FUEL	MONITOR
NAVIGATION ACCURACY	MONITOR	<< >>	NAVIGATION ACCURACY	MONITOR
RADAR	ADJUST AS APPROPRIATE			

DESCENT PREPARATION

		WEATHER AND LANDING INFORMATION		OBTAIN
NAV CHARTS CLIPBOARD	PREPARE	<< >>	NAV CHARTS CLIPBOARD	PREPARE
APPROACH MINIMUM	DETERMINE			
LANDING CONDITIONS	CONFIRM	<< >>	LANDING CONDITIONS	CHECK
•If landing conditions change:				
LANDING PERF DATA	COMPUTE		LANDING PERF DATA	COMPUTE
LANDING PERF DATA	CROSSCHECK		LANDING PERF DATA	CROSSCHECK
FMS	PREPARE		FMS PREPARATION	CHECK
			GPWS LDG FLAP 3	AS RQRD
LDG ELEV	CHECK			
AUTO BRK	AS RQRD			
SEC F-PLN	Alt Rwy, ...			
APPR BRIEFING	PERFORM	???	<< >>	
TERR ON ND	AS RQRD	<< >>	TERR ON ND	AS RQRD
RADAR	ADJUST AS APPROPRIATE			
			ENG ANTI ICE pb-sw	AS RQRD
			WING ANTI ICE pb-sw	AS RQRD
			DESCENT CLEARANCE	OBTAIN
CLEARED ALTITUDE ON FCU	SET			

DESCENT

DESCENT	INITIATE			
MCDU	PROG / PERF DESCENT		MCDU	F-PLN
DESCENT	MONITOR / ADJUST			
			ECAM STATUS	CHECK
•At 10 000 ft:	CALL "10000ft check"	<< >>	•At 10 000 ft:	CALL "10000ft"
			LAND LIGHTS sw	SET
			SEAT BELTS sw	ON
			RADIO NAV	SELECT / IDENT
			ENG MODE selector	AS RQRD
BAROMETRIC REFERENCE	SET / XCHECK	<< >>	BAROMETRIC REFERENCE	SET / XCHECK
LS pb	AS RQRD	<< >>	LS pb	AS RQRD
•If GPS PRIMARY not available:				
NAV ACCY	CHECK			
APPROACH CHECKLIST COMPLETE				>>>

AIRCRAFT CONFIGURATION FOR APPROACH

INITIAL APPROACH

•Approx 15 NM from touchdown: MANAGED SPEED CHECK FLIGHT PATH MONITOR SPEED BRAKES lever AS RQRD RADAR APPROPRIATE	<< >>	NAV ACCURACY MONITOR
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INTERMEDIATE / FINAL APPROACH:

•At green dot: FLAPS 1 ORDER	<< >>	•At green dot: FLAPS 1 SELECT TCAS TA or TA/RA
•At 2 000 ft AGL minimum: When FLAPS 2: GEAR DOWN ORDER	<< >>	•At 2 000 ft AGL minimum: When FLAPS 2: L/G SELECT DOWN AUTO BRAKE CONFIRM GRND SPLRS ARM EXTERIOR LIGHTS SET
•When L/G down: FLAPS 3 ORDER	<< >>	•When L/G down: FLAPS 3 SELECT ECAM WHEEL PAGE CHECK
•When FLAPS 3: FLAPS FULL ORDER	<< >>	•When FLAPS 3: FLAPS FULL SELECT A/THR CHECK SPD or OFF WING A. ICE (if not required) OFF
CABIN REPORT RECEIVE		LDG MEMO CHECK NO BLUE CABIN REPORT RECEIVE

LANDING CHECKLIST COMPLETE >>>

ANNOUNCE ANY FMA MODIFICATION	<< >>	FLT PARAMETERS MONITOR Announce any deviation in excess of: <ul style="list-style-type: none"> V/S: 1 000 ft/min IAS: speed target h 10 kt; speed target - 5 kt PITCH: N.5 ° nose down; 10 ° nose up BANK: 7 °
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APPROACH USING ILS or GLS /SLS for A321NEO GUIDANCE

APPR on FCU	PRESS			
BOTH AP for ILS	ENGAGE			
FMA :				
LOC	CHECK ARMED			
G/S	CHECK ARMED			
LOC CAPTURE	MONITOR			
G/S CAPTURE	MONITOR	GO AROUND SET		
FINAL APPROACH:				
			FLT PARAMETERS MONITOR	
			Announce any deviation in excess of:	
			<ul style="list-style-type: none"> LOC: ½ dot GLIDE: ½ dot 	
•At 350 ft :				
LAND mode	CHECK ENGAGED / ANNOUNCE			
For CATI, CATII and CATIII with DH approach:				
•At minimum h100 ft:				
		<< >>	ONE HUNDRED ABOVE	MONITOR OR ANNOUNCE
•At minimum:				
CONTINUE OR GO-AROUND		<< >>	MINIMUM	MONITOR OR ANNOUNCE

APPROACH USING FINAL APP (RNP LNAV/VNAV) or FLS (A321NEO) GUIDANCE

•For RNAV(GNSS):				
GPS PRIMARY	CHECK			
BARO REF	SET			
INITIAL / INTERMEDIATE / FINAL APPROACH:				
POSITION	MONITOR			
APPR on FCU	PRESS			
FMA :				
APP NAV / F-GS F-LOC (FSL)	CHECK ARMED or ENGAGED			
FINAL APP / F-GS F-LOC (FSL)	CHECK ARMED			
•At Final Descent Point:				
FMA : FINAL APP / F-GS F-LOC (FSL)	CHECK ENGAGED			
GO AROUND ALT..... SET				
			FLT PARAMETERS MONITOR	
			<ul style="list-style-type: none"> Announce any deviation in excess of: XTK > 0.1 NM V/DEV > ½ dot 	
At minimum h100 ft:		<< >>	ONE HUNDRED ABOVE	MONITOR OR ANNOUNCE
•At minimum:				
CONTINUE OR GO-AROUND		<< >>	MINIMUM	MONITOR OR ANNOUNCE

APPROACH USING FPA (LOC only/VOR/NDB/RNP LNAV) GUIDANCE

•For RNAV(GNSS): GPS PRIMARY CHECK LATERAL GUIDANCE MODE SET FOR APPROACH		
•For LOC ONLY and ILS G/S OUT LOC sw PRESS FMA : LOC CHECK ARMED		
•For RNP LNAV / VOR NDB APPR on FCU PRESS FMA : FINAL APP CHECK ARMED		
•For BACK COURSE LOCALIZER APPROACHES : LATERAL path INTERCEPT TRK FPA (Bird) SELECT FPA FOR FINAL APPROACH SET		
•At 0.3 NM from the FINAL DESCENT POINT : FPA selector PULL FPA CHECK ENGAGED		
POSITION / FLT PATH MONITOR / ADJUST		
GO AROUND ALT.....SET		
		FLT PARAMETERS MONITOR • Announce any deviation in excess of: Approach using NAV MODE : XTK > 0.1 NM Approach using LOC MODE : LOC ½ dot Approach using TRK MODE : . VOR: ½ dot or N.5 ° . NDB: 5 °
•At minimum h100 ft:	<< >> ONE HUNDRED ABOVE	MONITOR OR ANNOUNCE
•At minimum:		
CONTINUE OR GO-AROUND ANNOUNCE	<< >> MINIMUM	ANNOUNCE

MANUAL LANDING

•In stabilized approach conditions, at approx. 30 ft: FLARE PERFORM THRUST LEVERS IDLE		ATTITUDE MONITOR
•At touchdown: DEROTATION INITIATE		
BOTH THRUST LEVERS REV MAX or REV IDLE	<< >>	GRND SPLRS CHECK / ANNOUNCE
	<< >>	REVERSERS CHECK / ANNOUNCE
DIRECTIONAL CONTROL ENSURE		DIRECTIONAL CONTROL MONITOR
BRAKES AS RQRD	<< >>	DECELERATION CHECK / ANNOUNCE
•At 70 kt: BOTH THRUST LEVERS REV IDLE	<< >>	SEVENTY KNOTS ANNOUNCE
•At taxi speed: BOTH THRUST LEVERS FWD IDLE		
•Before 20 kt: AUTOBRK DISENGAGE		

AUTOLAND

•At 350 ft RA : ILS/GLS/MLS COURSE ON PFD CHECK		
		Monitor auto callout
•At 40 ft RA	<< >>	•At 40 ft RA FLARE mode CHECK ENGAGED / ANNOUNCE
•At 30 ft RA		•At 30 ft RA THRUST IDLE mode CHECK
•At 10 ft RA : autocalloout "RETARD" BOTH THRUST LEVERS IDLE LATERAL GUIDANCE MONITOR		
•At TOUCH DOWN		•At TOUCH DOWN
	<< >>	ROLL OUT mode CHECK ENGAGED / ANNOUNCE
BOTH THRUST LEVERS REV MAX OR REV IDLE		
	<< >>	GRND SPLRS CHECK / ANNOUNCE
	<< >>	REVERSERS CHECK / ANNOUNCE
DIRECTIONAL CONTROL MONITOR / ENSURE		DIRECTIONAL CONTROL MONITOR
BRAKES AS RQRD		
	<< >>	DECELERATION CHECK / ANNOUNCE
•At 70 kt :		•At 70 kt :
	<< >>	SEVENTY KNOTS ANNOUNCE
BOTH THRUST LEVERS REV IDLE		
•Before 20 kt: AUTO BRK DISENGAGE		
•End of roll out BOTH THRUST LEVERS FWD IDLE		
AP OFF		

GO AROUND

THRUST LEVERS TOGA		
ROTATION PERFORM		
GO-AROUND ANNOUNCE		FLAPS lever SELECT AS RQRD
FMA ANNOUNCE		
	<< >>	POSITIVE CLIMB ANNOUNCE
L/G UP ORDER	<< >>	L/G UP
AP AS RQRD		
NAV or HDG mode AS RQRD		
•AT GA THR RED ALT: THRUST LEVERS CL		
•AT GA ACCEL ALT: SPEED MONITOR		
•AT F SPEED: FLAPS 1 ORDER	<< >>	FLAPS 1 SELECT
•AT S SPEED: FLAPS 0 ORDER	<< >>	FLAPS 0 SELECT
		GND SPLRS DISARM
		EXTERIOR LIGHTS SET
AFTER TAKEOFF CLIMB C/L down to the lineCOMPLETE >>>		

AFTER LANDING

GRND SPLRS	DISARM		
EXTERIOR LIGHTS	SET		
			RADAR OFF
			PREDICTIVE WINDSHEAR OFF
			ENG MODE selector NORM
			FLAPS RETRACT
			TCAS STBY
			ATC AS RQRD
			APU START
			ANTI ICE AS RQRD
			BRAKE TEMP CHECK
AFTER LDG C/L.....COMPLETE			

v

PARKING

ACCU PRESS	CHECK		ANTI-ICE OFF
PARKING BRAKE handle	ON		APU BLEED pb-sw ON
ALL ENG MASTERS	OFF		
SLIDES	CHECK DISARMED		
SEAT BELTS sw	OFF		FUEL PUMPS OFF
EXTERIOR LIGHTS	SET		ATC STBY
GROUND CONTACT	ESTABLISH		IRS PERFORMANCE CHECK
DISPLAY UNIT	DIM		DISPLAY UNIT DIM
			FUEL QTY CHECK
			STATUS CHECK
PARKING BRK	AS RQRD		BRAKE FAN OFF
PARKING C/L.....COMPLETE			

SECURING THE AIRCRAFT

PARKING BRK	CHECK ON		
ALL IR MODE selectors	OFF		OXY CREW SUPPLY pb OFF
			EXTERIOR LIGHTS OFF
			MAINT BUS SW AS RQRD
			APU BLEED pb-sw OFF
			APU MASTER SW OFF
			EMER EXIT LT sw OFF
			SIGNS sw OFF
			EXT PWR pb AS RQRD
			BAT 1+2 OFF
SECURING THE A/C C/L.....COMPLETE			

BEFORE START CHECKLIST	
Down the line	
COCKPITP PREP	COMPLETED(BOTH)
SIGNS	ON/AUTO
ADIRS	NAV
FUEL QUANTITY	_____ KG.LB
TO DATA	SET
BARO REF	_____ SET (BOTH)
Below the line	
WINDOWS/DOORS	CLOSED (BOTH)
BEACON	ON
THR LEVERS	IDLE
PARKING BRAKE	AS RQRD

AFTER START CHECKLIST	
ANTI ICE	AS RQRD
ECAM STATUS	CHECKED
PITCH TRIM	_____ % SET
RUDDER TRIM	ZERO

BEFORE TAKE OFF CHECKLIST	
Down the line	
FLIGHT CONTROLS	CHECKED (BOTH)
FLT INST	CHECKED (BOTH)
BRIEFING	CONFIRMED
FLAP SETTING	CONF _____ (BOTH)
V1. VR. V2/FLX TEMP	_____ (BOTH)
ECAM MEMO	TO NO BLUE
Below the line	
TAKEOFF RWY..... _____ CONFIRMED (BOTH)	
TCAS	TA OR TA/RA
ENG MODE SEL	AS RQRD
PACKS	AS RQRD

AFTER TAKE OFF / CLIMB CHECKLIST	
Down the line	
LDG GEAR	UP
FLAPS	RETRACTED
PACKS	ON
Below the line	
BARO REF	_____ SET (BOTH)

APPROACH CHECKLIST

BRIEFING	CONFIRMED
ECAM STATUS	CHECKED
SEAT BELTS	ON
BARO REF	___ SET (BOTH)
MINIMUM	___ SET (BOTH)
ENG MODE SEL	AS RQRD

LANDING CHECKLIST

CABIN CREW	ADVISED
A/THR	SPEED/OFF
AUTOBRAKE	AS RQRD
ECAM MEMO	LDG NO BLUE

AFTER LANDING CHECKLIST

FLAPS	RETRACTED
SPOILERS	DISARMED
APU	ON
RADAR	OFF
PREDICTIVE WINDS EAT SYSTEM	OFF

PARKING CHECKLIST

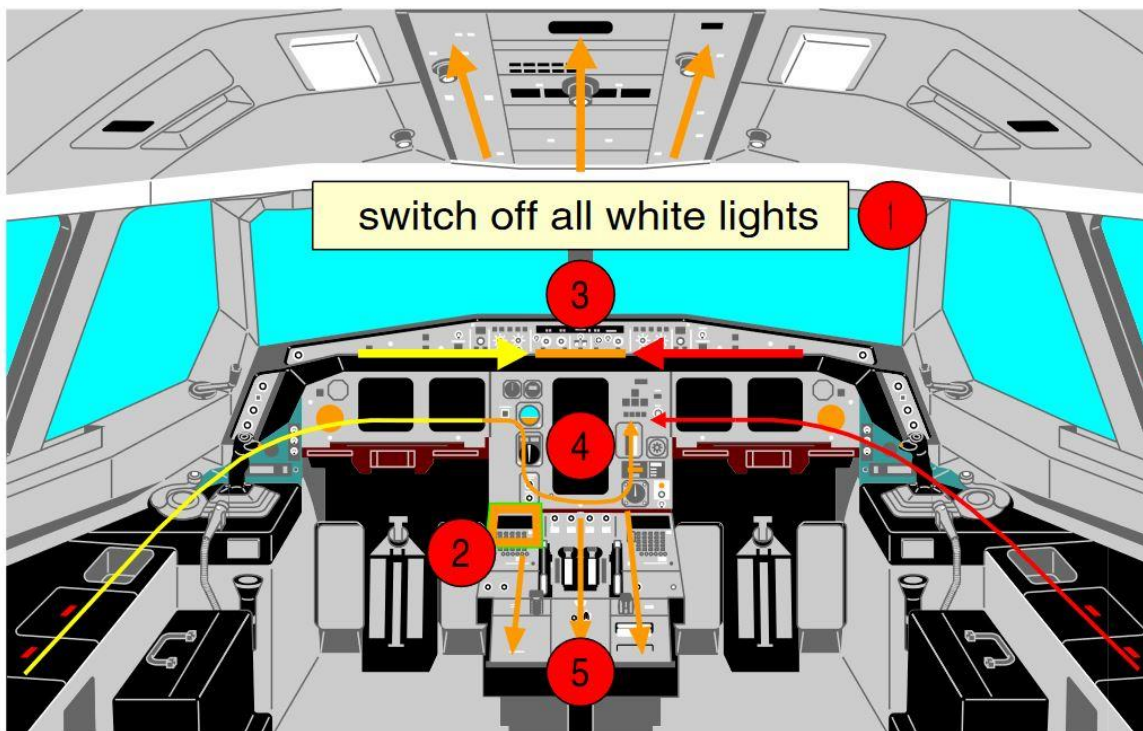
APU BLEED	ON
ENGINES	OFF
SEAT BELTS	OFF
EXT LT	AS RQRD
FUEL PUMPS	OFF
PARK BRK and CHOCKS	AS RQRD

SECURING THE AIRCRAFT

ADIRS	OFF
OXYGEN	OFF
APU BLEED	OFF
EMER EXIT LT	OFF
APU AND BAT	OFF



COCKPIT PREPARATION FLOW PATTERN



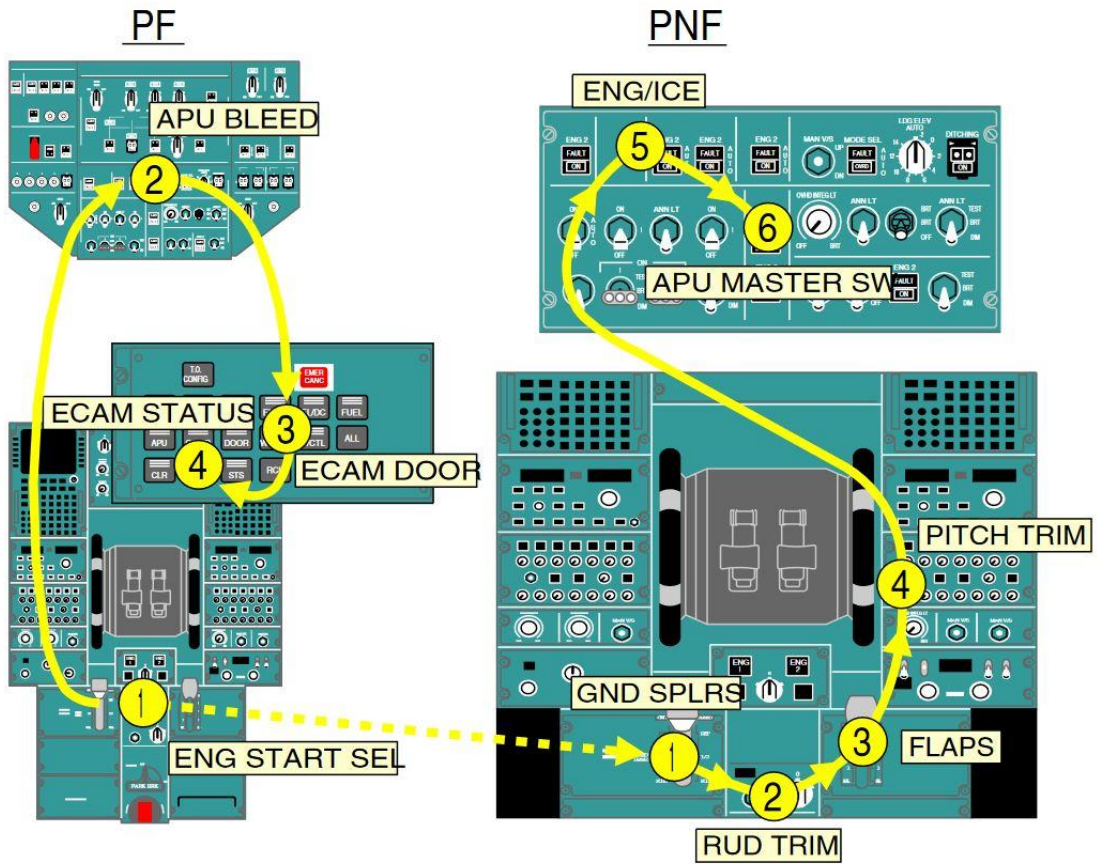
COCKPIT PREPARATION

<p> PF Responsibility → CM1/CM2 Responsibility </p> <p>When both pilots are seated</p> <p>6 → 2 → 6</p> <p>4 → 3</p>	<p>Navigation</p> <p>Status Init A F-PLN (SEC F-PLN) RAD NAV</p>	
<p>Performance</p> <p>Init B PERF</p>	<p>OR NEXT PAGE</p>	



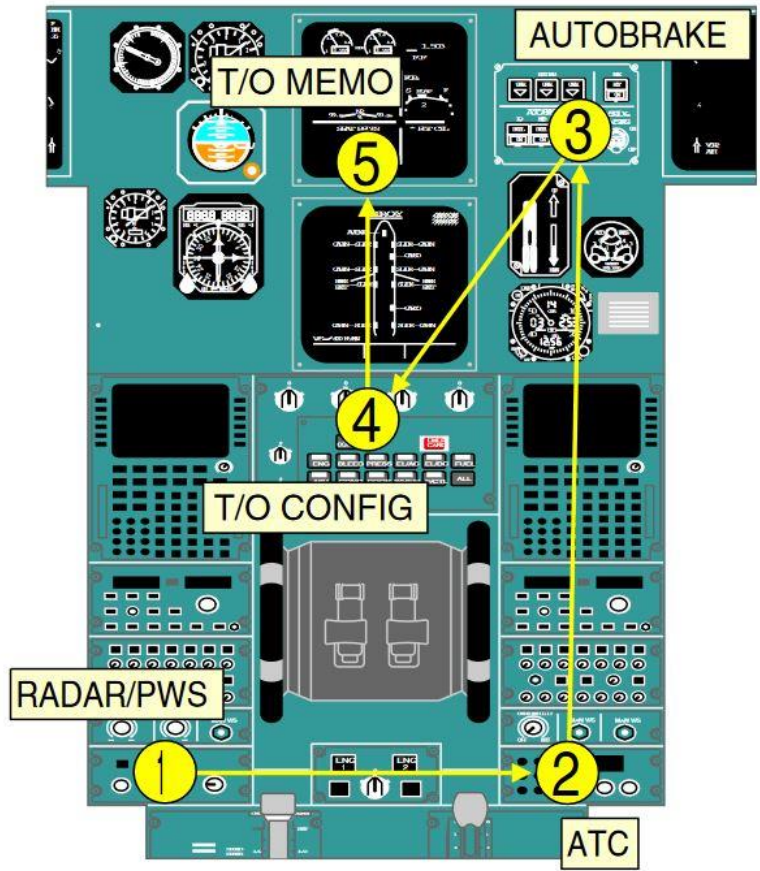
after_start_flow_pattern

AFTER START FLOW PATTERN



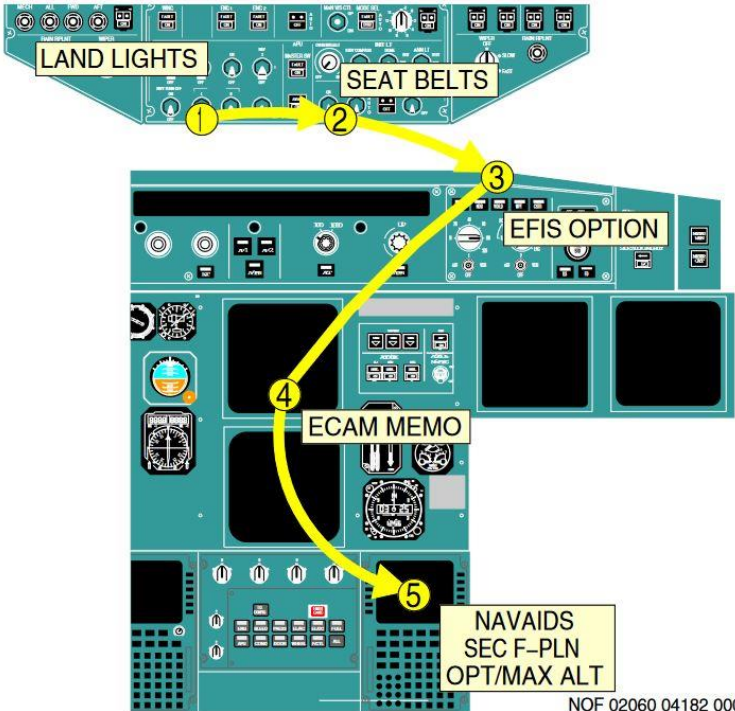


taxi_flow_pattern





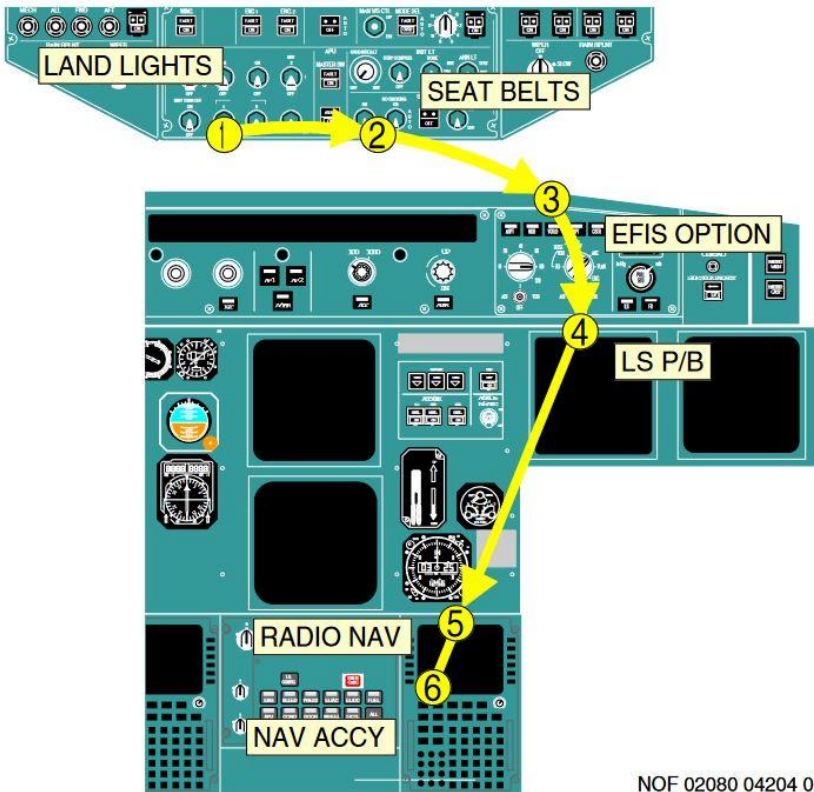
climb_flow_pattern



EFIS Option:
 The PF will select CSTR for grid MORA
 The PNF will select ARPT



10.000 FT FLOW PATTERN



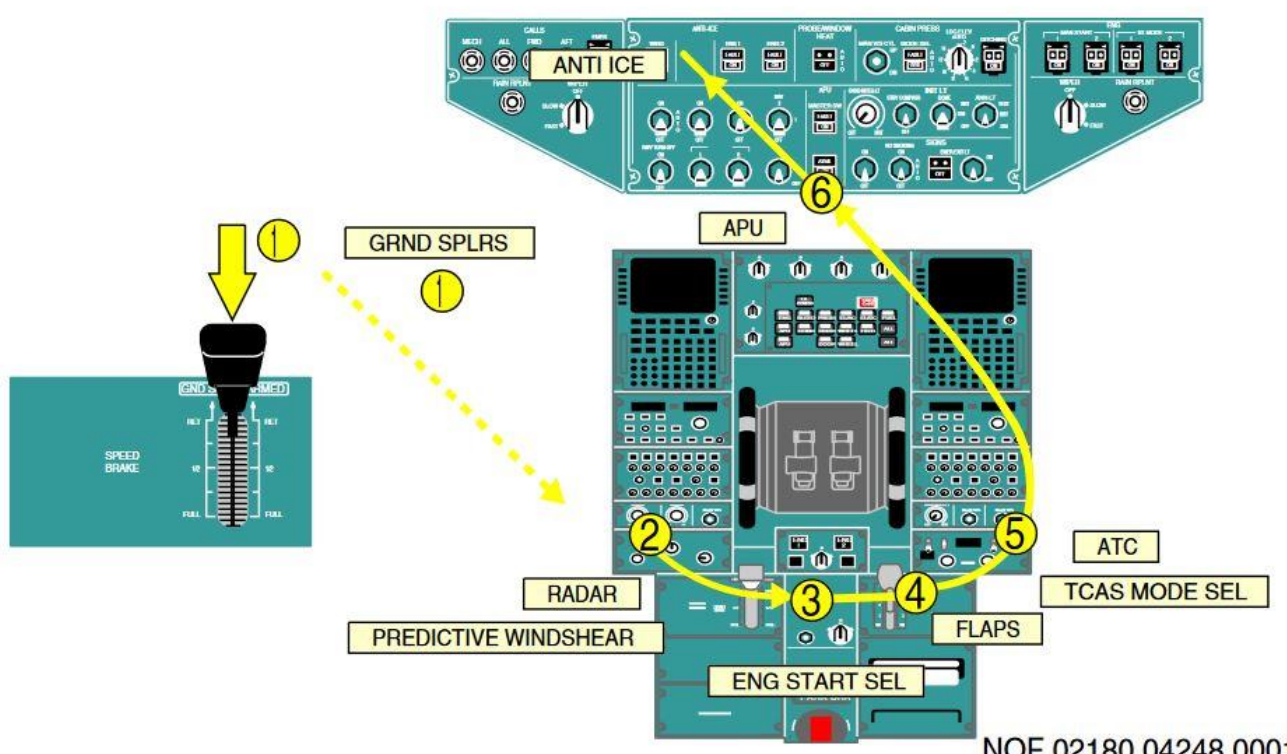
NOF 02080 04204 0001



taxi_in_flow_pattern

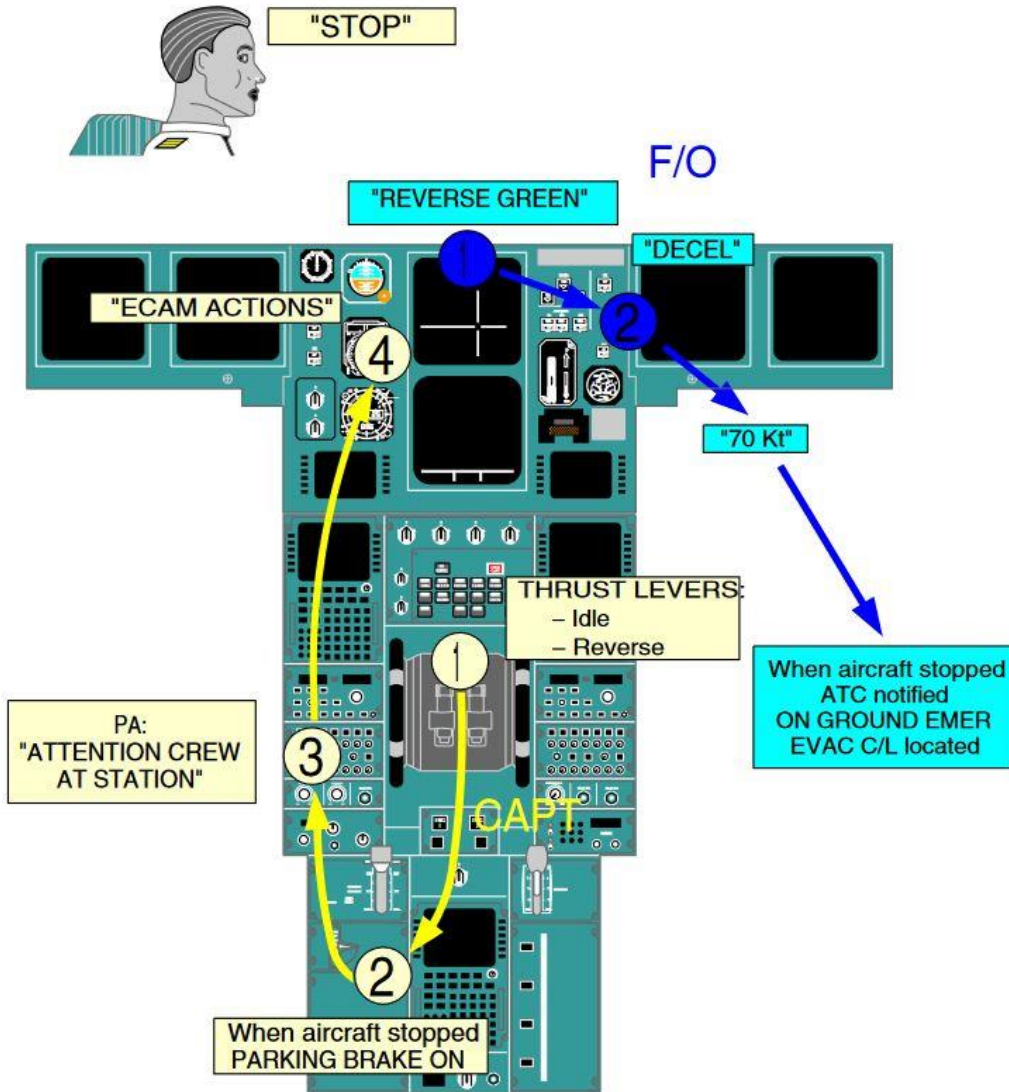
PF

PNF



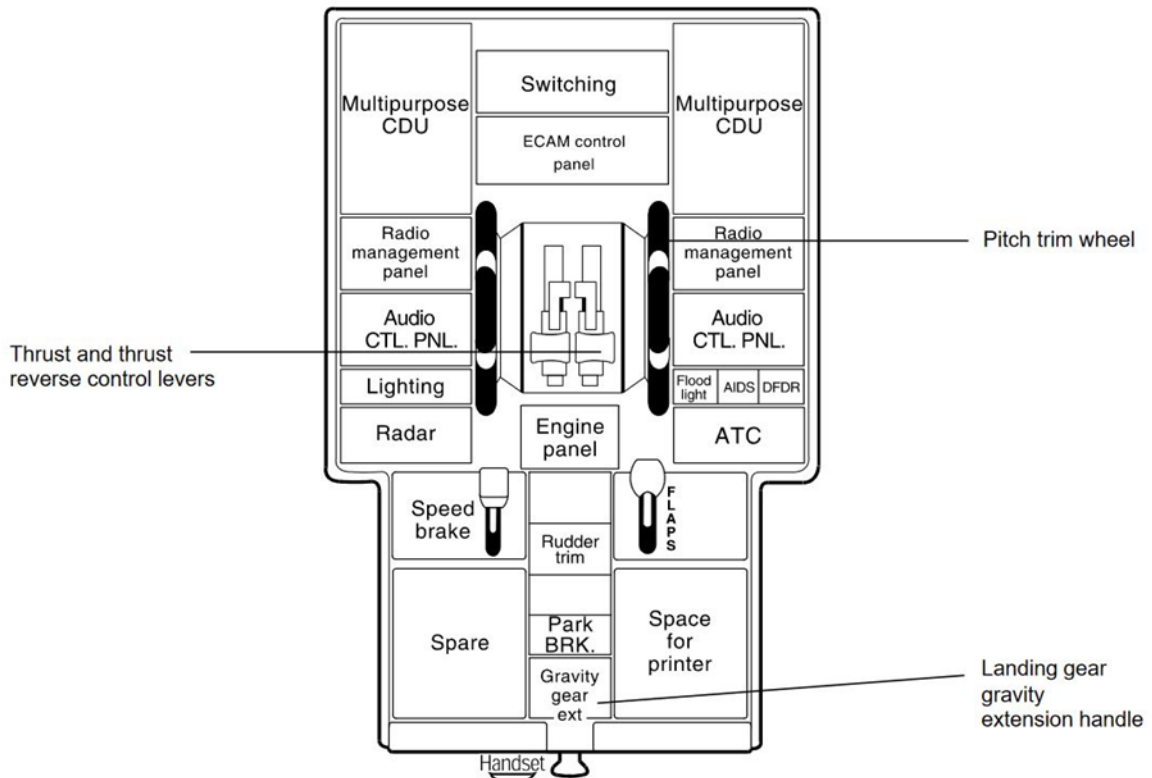
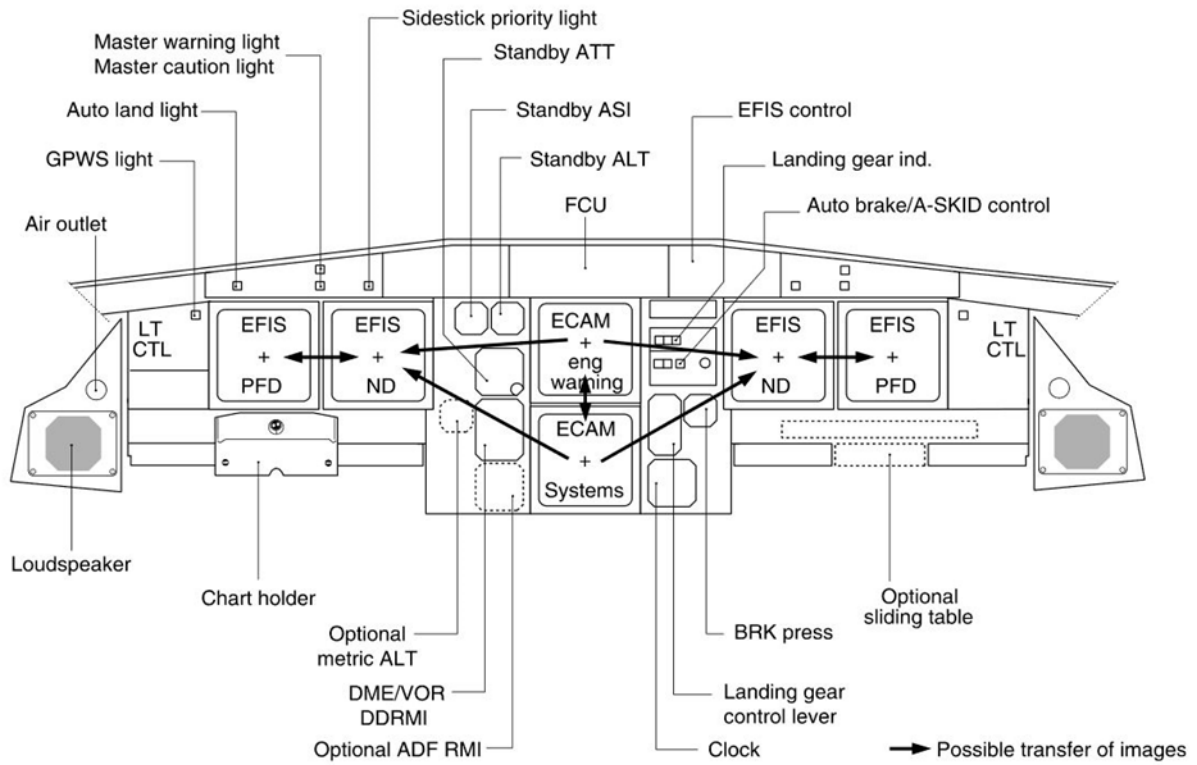
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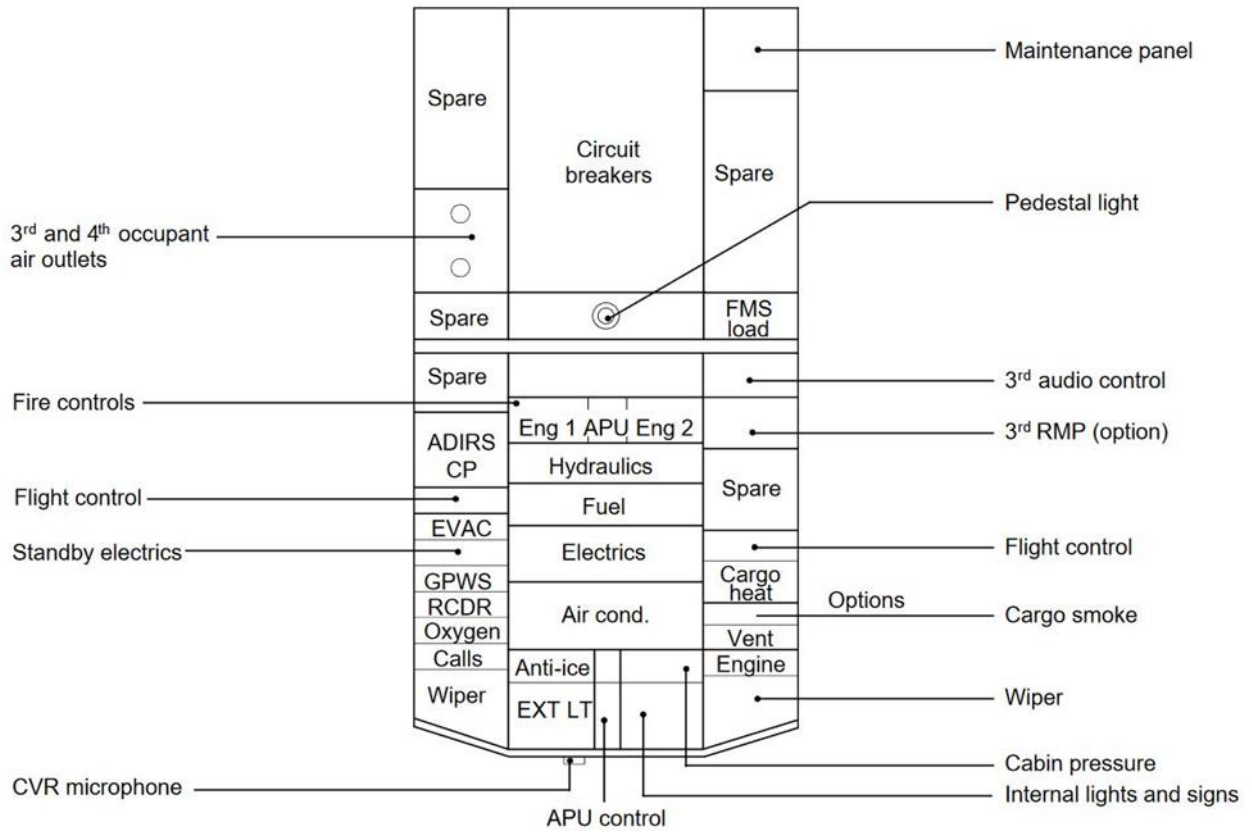
takeoff_stop_flow_pattern






















NOF 03020 04281 0001




EMERGENCY EVACUATION





INDICATION	DESCRIPTION
	Position where the aircraft will level-off at the FCU selected altitude. The same symbol will indicate a level-off from a managed climb (CLB) or selected climb (OP CLB).
	Position where the aircraft will level-off at the constrained altitude entered in the MCDU. The managed CLB mode must be engaged for the altitude constraint symbol to appear and be honored.
	Position where the aircraft will level-off at the FCU selected altitude. The same symbol will indicate a level-off from a managed descent (DES) or selected descent (OP DES).
	Position where the aircraft will level-off at the constrained altitude entered in the MCDU. The managed DES mode must be engaged for the altitude constraint symbol to appear and be honored.
	Start of climb with the CLB mode armed.
	Start of climb with the CLB mode <u>not</u> armed.
	Top of Descent or continue descent with DES armed.
	Top of Descent or continue descent with DES <u>not</u> armed.
	Intercept point where the aircraft is predicted to intercept the FMGS computed vertical descent profile. The indicator is blue indicating the DES mode is engaged.
	Intercept point where the aircraft will meet the FMGS computed vertical profile. The indicator is white indicating the DES mode is not engaged.
  	<ul style="list-style-type: none"> Flight Plan Waypoint FMGC Database Waypoint: Displayed when the waypoint pb is pressed on the EFIS control panel. "TO" Waypoint.
	Speed Change <ul style="list-style-type: none"> Indicates the point where the aircraft will initiate an automatic acceleration or deceleration from current speed to new computed speed in case of SPD LIM, SPD CSTR, or HOLDING SPD (including 250 knots below 10,000).
	Deceleration Point <ul style="list-style-type: none"> Indicates where the aircraft will initiate an automatic deceleration toward V_{APP}. Managed NAV mode and managed speed must be engaged.

	<p>Altitude Constraints</p> <ul style="list-style-type: none"> • Constraint is predicted to be met when the aircraft is in managed lateral and vertical modes. • Constraint is predicted to be missed. In this situation the aircraft is in the managed lateral and vertical modes; however, the FMGC will not be able to meet the altitude constraint. • Constraint is not being considered by the FMGC.
	<p>Flight Plan Routes</p> <ul style="list-style-type: none"> • The NAV modes can display the following flight plans. <ul style="list-style-type: none"> • A green line represents the Active Flight Plan. <ul style="list-style-type: none"> • Managed Mode: The course line will be continuous and depict the waypoints in range that are yet to be overflown. <ul style="list-style-type: none"> • When the range selector is set to 160 or 320 NM, only the first waypoint of a SID or the last waypoint of a STAR will be depicted. • A continuous blue line depicts the Missed Approach Procedure. • A dashed blue line depicts the Alternate Flight Plan until activated. Once activated, the alternate flight plan is displayed in green. • If a flight plan offset is entered, the original flight plan course will be a dashed green line and the offset course will be depicted as a continuous green line. • Note: When flying an ILS approach the ND course will be depicted as a continuous green line; however, course guidance is being provided by the localizer signal. The FMA must be referenced to determine the active navigation mode. • Selected Mode: If HDG is selected (FCU HDG knob pulled) the active flight plan line will be dashed. <ul style="list-style-type: none"> • When the HDG mode active with NAV armed to intercept the FMGC course, the ND will display the new active flight plan as a continuous green line once the FMGC has computed the intercept. The portion of the flight plan before the intercept, that will not be flown will be shown as a dashed line. • A continuous white line depicts the Secondary Flight Plan. The ND will continue to display the active flight plan and where common legs occur, the course line will be a continuous green line. • A dashed yellow line represents the Temporary Flight Plan.
	<p>Airports</p> <ul style="list-style-type: none"> • Airports included in flight plan: <ul style="list-style-type: none"> • If the runway is specified in the flight plan (departure or destination) it is represented by the oriented runway symbol in white. • If the runway is not specified in the flight plan it is represented by a star and the identification is displayed in white. • The magenta star represents the airports that are displayed by pressing the APRTS pb on the EFIS control panel.
	<p>ILS Marker Beacon (Diamond Shape)</p> <ul style="list-style-type: none"> • Outer marker • Middle marker • Inner marker

	<p>Nav aids The ND can display:</p> <ul style="list-style-type: none"> • TACAN/DME • VOR • VOR/DME • NBD nav aids from the database. <ul style="list-style-type: none"> • The color of the symbols will vary depending on its current status: <ul style="list-style-type: none"> • Green if the nav aid is a current waypoint on the flight plan. • White if it is the TO waypoint. • Blue when the nav aid is tuned for display either automatically by the FMGC or manually through the MCDU. • Magenta when the nav aid is not part of the flight plan and is displayed by selecting the appropriate pb on the EFIS control panel.
	<p>Holding Pattern</p> <ul style="list-style-type: none"> • The ND will display the holding pattern circuit when the hold is part of the active or next leg. The holding pattern will be displayed with right or left turns as appropriate. • The ND will display an arc representing the holding pattern and the direction of the hold when the hold is <u>not</u> part of the active or next leg.
	<p>Energy Circle This symbol indicates the radius corresponding to the required distance to land from present position. This symbol will be centered on the aircraft position and oriented to the current track line and is only displayed in DES and APPR phase when a selected lateral mode is engaged (i.e. heading).</p>

A

ABN - Abnormal
 ACARS - ARINC Communications and Reporting System
 ACM - Air Cycle Machine
 ACP - Audio Control Panel
 ACT - Additional Center Tank
 ADIRS - Air Data Inertial Reference System
 ADIRU - Air Data Inertial Reference Unit
 ADM - Air Data Module
 ADR - Air Data Reference
 ADV - Advisory
 AEVC - Avionics Equipment Ventilation Controller
 AFS - Auto Flight System
 AIDS - Aircraft Integrated Data System
 AIU - Audio Interface Unit
 AMU - Audio Management Unit
 ANP - Actual Navigation Performance
 APPU - Asymmetry Position Pick Off Unit
 APU - Auxiliary Power Unit
 ARPT - Airport
 ASAP - As Soon As Possible
 ASI - Air Speed Indicator
 A/SKID - Anti-Skid
 ATE - Automated Test Equipment
 A/THR - Auto Thrust
 ATS - Auto Thrust System
 ATSU - Air Traffic Service Unit
 AWY - Airway

B

B - Blue
 BARO - Barometric
 BCL - Battery Charge Limiter
 BCDS - Bite Centralized Data System
 BFO - Beat Frequency Oscillator
 BIU - Bite Interface Unit
 BMC - Bleed Monitoring Computer
 BNR - Binary
 BRK - Brake
 BSCU - Brake Steering Control Unit
 BTC - Bus Tie Contactor

C

CBMS - Circuit Breaker Monitoring System
 CFDIU - Centralized Fault Data Interface Unit
 CFDS - Centralized Fault Display System
 CHC - Cargo Heat Controller
 CHG - Change
 CIDS - Cabin Intercommunication Data System

L

LAF - Load Alleviation Function
 LAT - Latitude
 LAT REV - Lateral Revision
 LCN - Load Classification Number
 L/G - Landing Gear
 LGCIU - Landing Gear Control Interface Unit
 LGPIU - Landing Gear Position Indicator Unit
 LIS - Localizer Internal Smoothing
 LK - Lock
 LL - Latitude/Longitude
 LLS - Left Line Select Key
 LNAV - Lateral Navigation
 LONG - Longitude
 LRU - Line Replaceable Unit
 LSK - Line Select Key
 LVL - Level
 LVL/CH - Level Change
 LW - Landing Weight

M

M - Magenta, Mach, Meter
 MAG DEC - Magnetic Declination
 MAG VAR - Magnetic Variation
 MAX CLB - Maximum Climb
 MAX DES - Maximum Descent
 MAX END - Maximum Endurance
 MCDU - Multipurpose Control and Display Unit
 MCU - Modular Concept Unit
 MDA - Minimum Descent Altitude
 MECH - Mechanic
 MFA - Memorized Fault Annunciator
 MLS - Microwave Landing System
 MMR - Multi-Mode Receiver
 MN - Mach Number
 MRIU - Maintenance and Recording Interface Unit
 MSA - Minimum Safe Altitude
 MSU - Mode Selector Unit

N

N - Normal, North
 NAVAID - Navigation Aid (VOR/DME)
 ND - Navigation Display
 NW - Nose Wheel

O

OBRM - On Board Replaceable Module
 OFF/R - Off Reset
 OFST - Offset
 O/P - Output

C/L - Checklist
CO RTE - Company Route
CONF - Configuration (Flaps/Slats)
CPC - Cabin Pressure Controller
CPCU - Cabin Pressure Controller Unit
CRC - Continuous Repetitive Chime
CRG - Cargo
CSCU - Cargo Smoke Control Unit
CSM/G - Constant Speed Motor/Generator
CSTR - Constraint
CTL PNL - Control Panel
CVR - Cockpit Voice Recorder

D

DA - Drift Angle
DAR - Digital AIDS Recorder
DDRMI - Digital Distance and Radio Magnetic Indicator
DFA - Delayed Flap Approach
DIR TO - Direct To
DITS - Digital Information Transfer System
DMC - Display Management Computer
DSDL - Dedicated Serial Data Link
DU - Display Unit

E

ECAM - Electronic Centralized Aircraft Monitoring
ECB - Electronic Control Box (APU)
ECM - Engine Conditioning Monitoring
ECON - Economic
ECP - ECAM Control Panel
ECS - Environmental Control System
ECU - Engine Control Unit
EDP - Engine Driven Pump
EEC - Electronic Engine Computer
EFCS - Electronic Flight Control System
EFIS - Electronic Flight Instrument System
EFOB - Estimated Fuel On Board
EIU - Engine Interface Unit
EIS - Electronic Instruments System
ELAC - Elevator Aileron Computer
EMER GEN - Emergency Generator
EO - Engine Out

OPP - Opposite
OPT - Optimum
OUTB - Outboard
OUTR - Outer
OVBD - Overboard
OVSPD - Overspeed

P

P-ALT - Profile Altitude
pb - Push Button
PBD - Place/Bearing/Distance Waypoint
PBX - Place-Bearing/Place-Bearing Waypoint
PC - Pack Controller
P-CLB - Profile Climb
P-DES - Profile Descent
PDU - Pilot Display Unit
PFD - Primary Flight Display
PHC - Probe Heat Computer
P-MACH - Profile Mach
POB - Pressure Off Brake
PPOS - Present Position
P-SPEED - Profile Speed
PPU - Position Pick-off Unit
PR - Pressure
PRED - Prediction
PROC - Procedure
PROC T - Procedure Turn
PROF - Profile
PROTEC - Protection
PRT - Printer
PT - Point
PTU - Power Transfer Unit

Q

QRH - Quick Reference Handbook
QT - Quart

R

R - Right, Red
RACC - Rotor Active Clearance Control
RAT - Ram Air Turbine
RCDR - Recorder
RCH - Small unit of measurement
RCL - Recall
RCVR - Receiver
R/I - Radio/Inertial
RLSK - Right Line Select Key
RMP - Radio Management Panel
RNG - Range
RNP - Required Navigational Performance
RPTG - Repeating

EPE - Estimated Position Error
EGPWS - Enhanced Ground Proximity Warning System
ESS - Essential
EST - Estimated
ETE - Estimated Time Enroute
ETP - Equal Time Point
EVMU - Engine Vibration Monitoring Unit
E/WD - Engine/Warning Display
EXT PWR - External Power
EXTN - Extension

F

FAC - Flight Augmentation Computer
FADEC - Full Authority Digital Engine Control
FAP - Forward Attendant Panel
FAV - Fan Air Valve
F/C - Flight Crew
FCDC - Flight Control Data Concentrator
FCU - Flight Control Unit
FD - Flight Director
FDIU - Flight Data Interface Unit
FDU - Fire Detection Unit
FF - Fuel Flow
FGC - Flight Guidance Computer
FIDS - Fault Isolation and Detection System
FLSCU - Fuel Level Sensing Control Unit
FLT CTL - Flight Control
FLX/MCT - Flex/Maximum Continuous Thrust
FMA - Flight Mode Annunciator
FMGC - Flight Management Guidance Envelope Computer
FMGS - Flight Management Guidance Envelope System
F-PLN - Flight Plan
FPA - Flight Path Angle
FPD - Flight Path Director
FPPU - Feedback Position Pick-off Unit
FPV - Flight Path Vector
FQI/FQU - Fuel Quantity Indication/Unit
FQIC - Fuel Quantity Indication Computer
FRT - Front
FRV - Fuel Return Valve
FT/MN - Feet per Minute
FU - Fuel Used
FWC - Flight Warning Computer
FWS - Flight Warning System

G

G - Green
GCU - Generator Control Unit
GLC - Generator Line Contactor
GNADIRS - Global Navigation Air Data Inertial Reference System

RQRD - Required
RSV - Reserves
RTOW - Regulatory TakeOff Weight

S

S - Slat Retraction Speed, South
SC - Single Chime
S/C - Step Climb
SD - System Display
sel - Selector
STAT INV - Static Inverter
S/D - Step Descent
SDAC - System Data Acquisition Concentrator
SDCU - Smoke Detection Control Unit
SEC - Spoiler Elevator Computer
SFCC - Slat Flap Control Computer
SLT - Slat
SPD LIM - Speed Limit
SPLR - Spoiler
SRS - Speed Reference System
STEER - Steering
STS - Status
sw - Switch
SWTG - Switching
SYNC - Synchronize

T

T - Temperature
TGT - Target
THR - Thrust
THS - Trimmable Horizontal Stabilizer
TK - Tank, Track Angle
TKE - Track Angle Error
TMR - Timer
TLA - Thrust Lever Angle
TOGW - TakeOff Gross Weight
TOW - TakeOff Weight
T-P - Turn Point
T-R - Transmitter-Receiver

GPCU - Ground Power Control Unit
GRND - Ground
GRP - Geographic Reference Point
GRVTY - Gravity

H

H - Hour, Hot
HCU - Hydraulic Control Unit
HDG/S - Heading Selected
HDL - Handle
HLD - Hold
HMU - HydroMechanical Unit
HPV - High Pressure Valve

I

IDG - Integrated Drive Generator
IGN - Ignition
IMM - Immediate
INB - Inbound
INBO - Inboard
INCREM - Increment
INIT - Initialization
INR - Inner
INTCP - Intercept
I/O - Input/Output
I/P - Input or Intercept Profile
IP - Intermediate Pressure
IPC - Intermediate Pressure Checkvalve
IPPU - Intermediate Position Pick-off Unit
ISIS - Integrated Standby Instrument System
ISOL - Isolation

J

K

TROPO - Tropopause
TRU - Transformer Rectifier Unit
TTG - Time To Go

U

UASS - Unofficial Airbus Study Site
UFD - Unit Fault Data
ULB - Underwater Locator Beacon
UNLK - Unlock
UTC - Universal Coordinated Time

V

VBV - Variable Bypass Valve
 V_C Calibrated Airspeed
V/DEV - Vertical Deviation
VEL - Velocity
 V_{FE} - Max Flaps Extended Speed
 V_{FEN} - VFE Next
 V_M - Maneuvering Speed
 V_{MIN} - Minimum Operating Speed
VNAV - Vertical Navigation
VOR-D - VOR-DME
VSC - Vacuum System Controller
VSV - Variable Stator Vane

W

W - White, West, Weight
WAI - Wing Anti-Ice
WBC - Weight and Balance Computer
WHC - Window Heat Computer
WTB - Wing Tip Brake
WXR - Weather Radar

X

XCVR - Transceiver
XFR - Transfer

Y

Y - Yellow

Z

ZC - Zone Controller
ZFCG - Zero Fuel Center of Gravity



TAKEOFF BRIEFING – PF

AIRFIELD	<ul style="list-style-type: none">• Weather• Terminal Area NOTAMS• Frequencies to be used
AIRCRAFT	<ul style="list-style-type: none">• Technical Status• FMS DATA Page ¹<ul style="list-style-type: none">○ Type and Model• FMS INIT- B Page ²<ul style="list-style-type: none">○ Block Fuel (FOB on EWD)○ Estimated TOW○ Extra Time / Fuel at Destination
STARTUP	<ul style="list-style-type: none">• ATC Procedures (push and start procedures)• A/C Procedures (engine start etc.)
TAXI	<ul style="list-style-type: none">• Routing to the anticipated runway
RUNWAY INFO	<ul style="list-style-type: none">• Dimensions (Length, Width, Stopway)• Surface Condition• Lighting
TAKEOFF	<ul style="list-style-type: none">• FMS PERF TAKEOFF Page ³<ul style="list-style-type: none">○ TO RWY○ TO CONF○ Flex / TOGA (Packs / Anti-ice – ON / OFF)○ V1, VR, V2○ Transition Altitude○ Thrust Reduction / ACC Altitude
DEPARTURE	<ul style="list-style-type: none">• Normal SID – Routing and Constraints• Engine Out SID – Routing and Constraint• Navigation Frequencies to be used (RAD NAV)• MSA
SPECIAL PROCEDURES	<ul style="list-style-type: none">• NADP• Weather• Terrain• Failure of Communication

APPROACH BRIEFING



AIRCRAFT	Technical Status
AIRFIELD (DEST & ALT)	Weather Terminal information – NOTAMS etc. Fuel – Extra Holding
STAR	<ul style="list-style-type: none">• NAV Frequencies• Routing and Constraints• Transition Level• MSA
APPRPOACH	<ul style="list-style-type: none">• NAV Frequencies• Approach and Minima• Transition Level• MSA• Obstacles• Restricted / Prohibited areas
GOAROUND	<ul style="list-style-type: none">• ATC Procedure• Aircraft Procedure
RUNWAY	D imensions (Length, Width, Distance beyond G/S) S urface Condition L ighting
TAXI	Routing and Parking
SPECIAL PROCEDURES	W eather (Circumnavigation etc.) T errain F ailures (Communication, MEL etc.)