

FBW A380X

STANDARD OPERATING PROCEDURES

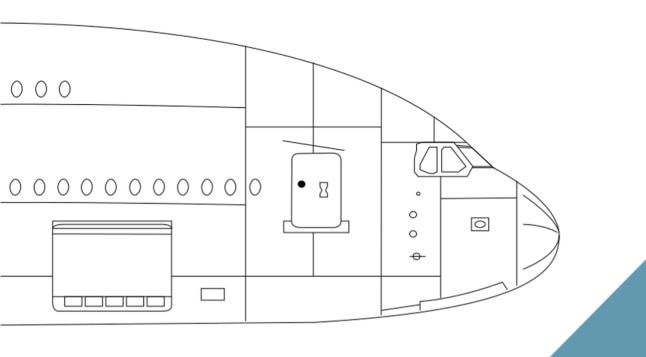




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PRELIMINARY COCKPIT PREPARATION

FOR SIMULATION PURPOSES



Initial Power Up

Engines
FO ENGINE MASTER SWITCHES 1, 2, 3, 4
FO ENGINE STARTER
<u>Wipers</u>
FO BOTH WIPERS
<u>Batteries</u>
FO ALL BATTERIES (BATTERY 1, ESSENTIAL BATTERY, BATTERY 2, AUXILIARY POWER UNIT BATTERY)
External power
• If the AVAIL lights illuminate on the overhead panel:
If the AVAIL lights illuminate on the overhead panel: FO EXTERNAL POWER (2, 3, 1, 4)
FO EXTERNAL POWER (2, 3, 1, 4)
FO EXTERNAL POWER (2, 3, 1, 4)
FO EXTERNAL POWER (2, 3, 1, 4)
FO EXTERNAL POWER (2, 3, 1, 4)

Cockpit lighting



Initial Onboard Information System Power Up

<u>Laptops startup</u>
BOTH CAPTAIN & FIRST OFFICER LAPTOPS
FO BACKUP LAPTOP
Keyboard and Cursor Control Unit (KCCU)
BOTH CONTROL DEVICE AND KEYBOARDs 1 AND 2
Onboard Information System Applications Initialization
BOTH ONBOARD INFORMATION TERMINAL
BOTH ONBOARD INFORMATION TERMINAL SIDE
BOTH LOGIN AS PILOT
BOTH ONBOARD INFORMATION TERMINAL SIDE
BOTH LOGIN AS PILOTPERFORM
BOTH NAV CHARTSSTART You will be able to access NavBlue Chart+ here or Navigraph's charts.
BOTH OPS LIBRARYSTART
Company communications initialization
FO OIT SIDE
FO INITIAL DATA
Note: Send Initialization after checking the input data and display data.
Note: Check Uplink message: CAT Recency, Full Thrust Recency And Statement Of Work Index Range.
Note: Statement Of Work Index Range is included for a month only if it is changed.
FLT OPS application status
FO OIT SIDE FLT OPS



Aircraft Status Verification

Previous ECAM alerts
CAPT RCL
CAPT CLEARED or CANCELLED ALERTS
Logbook verification
CAPT OIT SIDE
Minimum Equipment List (MEL)/Configuration Deviation List (CDL) items check
CAPT OIT SIDE
Aircraft acceptance
CAPT OIT SIDE
Note: The aircraft acceptance can be signed later but has to be before the end of the Cockpit Preparation.
Fire tests and APU startup
Radio management panels (RMP) startup
FO RMP 1 and 2
FO STANDBY RADIO NAVIGATION
FO COMMUNICATION FREQUENCIES
BOTH INT RECEPTION



Auxiliary Power Unit and Engine fire test

Note: The pilots should perform the fire tests when the auxiliary power unit is available. FO APU FIRE
FO APU AGENT
FO ENGINE 1(2)(3)(4) FIRE
FO ENGINE 1(2)(3)(4) AGENT 1 and 2
FO FIRE TEST
Verify that the fire detection systems and extinguishing systems are functional by checking the following items: a constant repetitive chime sound, the master warning light flashes on the glareshield, the ECAM displays the engine fire alert messages (ENG 1(2)(3)(4) FIRE, APU FIRE, MLG BAY FIRE), All engine fire pushbutton and the auxiliary power unit fire pushbutton displays in red, the squib light of the engine and apu agent pushbuttons are illuminated, the disch light of the engine and auxiliary power unit agent pushbuttom illuminates and all fire lights on the engine master panel illuminates.
Auxiliary Power Unit start
FO APU MASTER SWITCH
FO APU START
Electrical supply
FO EXTERNAL POWER



Flight Plan Preparation

Flight Management System / Onboard Information System FLT OPS system

The pilot initializes the onboard information system entering the following information: departure and arrival airport (FROM/TO) and flight number. Please note, the onboard information system can be initialized automatically from the flight management system. This also enables the automatic initialization of the FLT OPS application (Performance and navigation charts), the aeronautcal operation control (AOC), and the logbook.

 If the company flight plan is received via ACARS:
FO AIRCRAFT STATUS
FO RECEIVED COMPANY FLIGHT PLAN
FO FLIGHT NUMBER and DEPARTURE/ARRIVAL
BOTH OIT SIDEFLT OPS
BOTH FLT OPS STSSELECT
BOTH FLT OPS STS
• If the company flight plan is not received via ACARS:
BOTH OIT SLIDEFLT OPS
BOTH FLT OPS STSSELECT
FO FLIGHT NUMBER and DEPARTURE/ARRIVAL
FO FLT OPS STS page
Preliminary takeoff performance determination
It is recommended to consider the environmental conditions as well as the aircraft condition when computing the performance data.
BOTH T.O PERF
BOTH AIRFIELD DATA



If dispatch under MEL or CDL and in accordance with the logbook:
BOTH MINIMUM EQUIPMENT LIST ITEMS
BOTH CONFIGURATION DEVIATION LIST ITEMS
BOTH ONBOARD INFORMATION SYSTEM PRELIMINARY TAKEOFF PERF

COCKPIT PREPARATION

FOR SIMULATION PURPOSES



Overhead Panel

White lights

When scanning the overhead panel:
FO ALL WHITE LIGHTS
 Note: - This procedure may be based on operator policy. During cockpit preparation, the GND CONNECTION and the REMOTE C/B CTL on the maintenance and maintenance electrical panel respectively can be kept ON as long as maintenance personnel are on site using the portable maintenance access terminal (PMAT) for maintenance purposes. - While scanning the overhead panel during this procedure, check that the only amber lights are the GEN FAULT lights.
Recorder
FO RCDR GND CTL
EVAC
FO CAPT/CAPT & PURS
Probe & window heat
FO PROBE & WINDOW HEAT
Air Data Inertial Reference System (ADIRS)
FO ALL IR MODE
Note: It is recommended ensuring that at least one inertial reference system remains operative when a refuel operation is in progress.
Emergency Locator Transmittor (ELT)
FO ELT



Reset panel

FO RESET BUTTONS (Left side)
Exterior lighting
FO STROBE AUTO
FO BEACON
FO NAV
FO REMAINING EXTERIOR LIGHTS
Passenger signs
FO SEAT BELTS
FO NO SMOKING
FO EMER EXIT LightARM
Engine starter
FO ENGINE STARTNORM
Air conditioning
PF APU BLEED
PF XBLEED
FO AIR FLOW
FO CKPT
FO CABIN



the **NORM** position.

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<u> </u>
Electrical systems
FO ELEC DC SD PAGE
FO ALL BATTERY (BATTERY 1, ESSENTIAL BATTERY, BATTERY 2, and APU BATTERY) .
Verify that after resetting all the batteries to ON , the current charge of each battery is below 60 A. It should also decrease.
<u>Fuel system</u>
FO TRIM TK FEED
Maintenancepanel
FO ALL LIGHTS
Cargo air conditioning
FO CARGO AIR COND selectors AS REQUIRED
Radio management panel (RMP) 3
FO RADIO MANAGEMENT PANEL 3
FO STBY RAD NAV key
Cockpit voice recorder (CVR)
FO CVR TEST
Reset panel
FO RESET BUTTONS (Right side)
Main Instrument Panel
Switching
FO CWITCHING as lastors

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Integrated Standby Instrument System (ISIS)

FO INTEGRATED STANDBY INSTRUMENT SYSTEM
Landing gear gravity system
FO L/G GRVTY OFF
Clock
FO CLOCK
Anti-Skid
FO A-SKID
Pedestal
Parking brake
FO PARKING BRAKE
Body accumulators pressure
FO BODY ACCUMULATORS PRESSURE
Engines settings
FO THRUST LEVERS. IDLE FO THRUST REVERSER LEVERS. STOWED FO ENGINE MASTER 1, 2, 3 AND 4. OFF
Cockpit door lock
FO COCKPIT DOOR SWITCHNORM



Air Traffic Control Communication

• On the MFD ATC COM/MSG RECORD page:
FO MESSAGE RECORD
 On the MFD ATC COM/CONNECT/CONNECTION STATUS page: If ADS services are expected:
FO ADSCHECK ARMED
Air Traffic Control Clearance
FO ATC CLEARANCE
FO NAVIGATION CHARTS CLIPBOARD
MultiFunction Display Surveillance
BOTH SURV DEFAULT SETTINGS
Flight Management System Initialization
Flight plan
FO FLIGHT PLAN INITIALIZATION
Winds predictions
WINDS



Inertial Reference System

- If the GPS is available: FO IRS 1, 2, and 3
Navaids
PF NAVAIDS
PF NAVAID DESELECTION
Fuel and payload
FO ZFW/ZFWCG
If the data is not available yet, the pilot can insert the expected values to enable performance predictions and the optimal fuel distribution.
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FO THRUST REDUCTION/ACCELERATION ALTITUDE SET or CHECK
FO NOISE PROCEDURE ACKNOWLEDGE
FO TRANS ALTITUDE AS APPROPRIATE
FO EO ACCEL ALTITUDE SET or CHECK
<u>Climb performance</u>
FO DERATED CLIMB
Speed preselection
On the climb and cruise panel of the active performance page of the flight management system: FO PRESEL SPEEDS
Active flight plan verification
FO COMPUTERIZED FLIGHT PLAN
It is recommended the use of the computerized flight plan from the electronic flight folder as reference fro the route and fuel predictions.
FO ACTIVE FLIGHT PLAN
Secondary flight plan
FO SECONDARY FLIGHT PLANS
Route summary
FO ROUTE SUMMARY
Flight Management System
CAPT FMS INITIALIZATION
Navigation charts clipboard
CAPT NAV CHARTS CLIPBOARD



Glareshield

Cockpit lighting
BOTH INTEGRAL LIGHTS AS REQUIRED
<u>Loudspeaker</u>
BOTH LOUDSPEAKER
Barometric reference
BOTH BAROMETRIC REFERENCE
Note: The pilot may notice a difference of 0.01 inHg between the QNH value for the primary flight displays and the integrated standby instrument system. However, this does not impact the altitude computation.
Electronic Flight Instrument System Control Panel
BOTH NAVIGATION DISPLAY MODE AND RANGE
BOTH WEATHER RADAR
BOTH OTHER EFIS OPTIONS
Auto Flight System Control Panel
FO FLIGHT DIRECTOR
FO SPD/MACH, HDG / TRK, V/S / FPA windows
CAPT AUTO FLIGHT SYSTEM CONTROL PANEL



the takeoff. It should also outline any other operational risks.

Lateral Consoles

Oxygen mask test

It is mandatory to test the oxygen masks. To do it, simply verify that the oxygen mask blinker turns yellow, and that you can hear a flow of oxygen via the loudspeaker.

	_	On the RMP:
		BOTH INT/RAD
	_	On the mask stewage box:
		BOTH OXYGEN MASK TEST PERFORM
	_	On the DOOR SD page:
		REGUL PR LO indication
S]	<u>Slidir</u>	ng windows
		TH SLIDING WINDOWS
		Takeoff Briefing
		TAKEOFF BRIEFINGPERFORM takeoff briefing should contain information over the planned course for normal and abnormal operations during

BEFORE PUSHBACK OR START

FOR SIMULATION PURPOSES



Loadsheet Verification

<u>Loadsheet</u>
BOTH FINAL LOADSHEET
BOTH FUEL ON BOARD
FO ZFW/ZFWCG
CAPT ZFW/ZFWCG
BOTH LOADSHEET TOCG AND ECAM GWCG
BOTH ECAM GWCG
If within the operational limits: FO THS FPR_ in FMS ACTIVE/PERF page
CAPT THS FOR_ in FMS ACTIVE/PERF page
CAPT FINAL LOADSHEET SIGN and EXPORT
If the ECAM GWCG is not within the operational limits: FO AUTO GND XFR. The ground transfer will automatically acttivate to obtain the ground center of gravity target in accordance of the ZFW / ZFWCG values inserted in the flight management system. It is recommended waiting the automatic ground transfer (AGT) until the ECAM message "FUEL AUTO GND XFR COMPLETED" appears. However, it limited by time, you can manually stop the automatic ground transfer, if the ECAM center of gravity is within operational limits.
Note: The Loadsheet application shows the amount of fuel that should be transferred to be within the operational limits.
Note: It is not recommended to launch the automatic ground transfer when the aircraft is moving.
FO AUTO GND XFR MONITOR
FO THS FOR
CAPT THS FOR _ in FMS ACTIVE/PERF page
CAPT FINAL LOADSHEETSIGN and EXPORT



Takeoff data

BOTH OIS FINAL TAKEOFF PERFORMANCE
FO FMS TAKEOFF DATA
CAPT REVISED FMS TAKEOFF DATA
 In accordance with airlines policy or if required by operational regulation:
FO FINAL TAKEOFF PERFORMANCESTORE IN CURRECT ELECTRONIC FLIGHT FOLDER
Seating position
BOTH SEATS, SEAT BELTS, HARNESSES, RUDDER PEDALS, ARMRESTS ADJUST The pilot eyes should be in line with the red and white ball.
Head up display
CAPT HEAD UP DISPLAY
CAPT HEAD UP DISPLAY knob
CAPT DISPLAY MODE
Multi function display
BOTH MFD
External power
BOTH EXTERNAL POWER
CAPT EXTERNAL POWER DISCONNECTION
Low pressure ground cart
BOTH LOW PRESSURE GROUND CARTS
Before start checklist down to the line
BOTH BEFORE START CHECKLIST down to the line



When Cleared for Start

At pushback or start up clearance		
FO PUSHBACK/START UP CLEARANCE		
Video camera		
BOTH TAXI VIDEO		
Windows and doors		
BOTH WINDOWS AND DOORS		
CAPT SLIDESCHECK ARMED		
Exterior lights		
CAPT BEACON		
Thrust levers settings		
CAPT THRUST LEVERS		
Parking brake and nosewheel steering		
If pushback is not required: CAPT PARK BRAKE		
CAUTION In the case of the ECAM not displaying the ECAM message "N/W STEER DISC" memo, but		
the ground crew confirms that the tow pin is in the towing position, do not proceed to the pushback		
Follow the instructions of the ground crew. Set the parking brake when needed.		
Before start checklist below the line		
BOTH BEFORE START CHECKLIST below the line		

ENGINE START

FOR SIMULATION PURPOSES



Engine Start

The eng	ENGINE START selector			
– If n	 If no "ENG 2(3) REVERSER FAULT ECAM" ECAM alert appears: 			
CAPT <u>Note:</u>	START ENGINES 1 and 2			
It is reco	ENGINE MASTER 1, then 2			
Note:	It is recommended to monitor the engine parameters. However, callouts are not mandatory.			
Note:	The engine vibrates at the start. The tolerance of excess for the N2 vibrations are 5 units over the limit. However, this is only tolerated on a short amount of time and only during the start sequence. This is due to thermal stabilization of the engine.			
<u>Note:</u> when the	The full authority direct engines control (or FADEC) will automatically crank the engine for 20 seconds N2 level reaches 20 %			
• Wh	nen the engine reaches idle (I.e. AVAIL appears on the engine warning display):			
Verify the approxin	ENGINE IDLE PARAMETERS			
	START ENGINES 3 and 4			
	ENGINE MASTER 3 then 4			
– If I	ENG 2(3) REVERSER FAULT ECAM alert appears:			
By	PT ENGING START selector			
	When XX appears on ENG parameters: CAPT ENG START selector			
•	If ENG 2(3) REVERSER FAULT ECAM alert no longer appears after 10 s:			
	CAPT ENGINES 1 and 2START It is recommended to apply the same procedure as indicated for the engine start sequence.			
	CAPT ENGINES 3 and 4			

AFTER START

FOR SIMULATION PURPOSES



After Start

Engine start selector
CAPT ENGINE START selector
Note: It is recommended to wait 3 minutes before taking off to prevent thermal shock.
Bleed system
CAPT AUXILIARY POWER UNIT BLEED
Engine Anti-Ice system
CAPT ALL ENGINE ANTI-ICE
The pilot must perform the ice shedding procedure. So, engine run-up must be performed at least every 30 minutes of the taxi time, and before taking off. To make an engine runup, set the parking brake to ON, then increase the thrust to 60% of N1 on two symmetric engines. Then, proceed to the last two engines.
CAUTION If the aircraft start to move, abord the engine run-up procedure. Then, when the aircraft is stationary, redo the procedure, but only one engine at the time.
Auxiliary Power Unit
CAPT APU MASTER SWITCH
Ground spoilers
FO GROUND SPOILERS
Rudder trim
FO RUDDER TRIM
<u>Flaps</u>
FO FLAPS



Pitch trim

FO PITCH TRIM		
ECAM STATUS		
BOTH ECAM STATUS		
Ground crew		
CAPT CLEAR TO DISCONNECT		
"N/W STEER DISC" ECAM message		
CAPT N/W STEER DISC MEMO		
Flight controls verification		
BOTH FLIGHT CONTROLS		
After start checklist		
BOTH AFTER START CHECKLIST		

TAXI

FOR SIMULATION PURPOSES



TAXI

To acknowledge a ramp coordinator signal, turn the turnoff lights ON then OFF.

Air Traffic Control Clearance
FO TAXI CLEARANCE
External and taxi aid camera system (ETACS)
BOTH TAXI
Airport navigation
It is recommended to always have direct external visuals to taxi around an airport.
BOTH NAVIGAT DISPLAY RANGE selector
Exterior lights
CAPT NOSE LIGHTS
CAPT RWY TURN OFF & CAMERA
Parking brake
CAPT PARKING BRAKE
Thrust Levers
CAPT THRUST LEVERS
<u>Brakes</u>
CAPT BRAKES
CAUTION The first brake application when the aircraft was parked in a wet condition for an extended period may affect effectiveness.

It is recommended to verify the brakes by pressing smoothly the brake pedals and release. It is recommended to have a taxi speed between 10 to 20 knots in a straight line. If the speed is exceeded, brake until it reaches 10 knots, than let the aircraft accelerate again. It is recommended to be between 8 and 10 knots in a sharp turn.



Nosewheel steering

CAPT NOSEWHEEL STEERING	
It is recommended smooth and progressive input. Please note that the maximum steering a	angle is 70°.
Air traffic control clearance	
FO ATC CLEARANCE	CONFIRM
Takeoff data	
Update the takeoff data if the runway has been changed.	
TAKEOFF DATA COMPUTATION	
 If multiple runway selection was used: 	
FO T.O PERF	ACCESS
FO SELECTED RUNWAY AND INPUT DATA	
FO TAKEOFF DATA	CHECK
• If takeoff conditions have changed:	
FO T.O PERFORMANCE	ACCESS
FO NEW RUNWAY/NEW CONDITIONS	SELECT/ENTER
FO TAKEOFF PERFORMANCE	COMPUTE
CAPT TAKEOFF PERFORMANCE RESULTS	CROSSCHECK
IN THE FMS ACTIVE/PERF PAGE	
• In the case of ATC clearance or takeoff change:	
FO TAKEOFF PERFORMANCE DATA	erformance nanagement system, as er, if the pilot created a
FO V1, VR AND V2	UPDATE
FO FLEX TAKEOFF TEMPERATURE	
FO FLAPS	UPDATE
CAPT FLIGHT MANAGEMENT SYSTEM UPDATES	CROSSCHECK
CAPT FLAPS LEVER	AS APPROPRIATE



Auto Flight System/Flight instrument

 If runway change or different air traffic control clearance:
FO FLIGHT PLAN (SID, TRANS)
FO INITIAL CLIMB SPEED AND SPEED LIMIT
FO CLEARED ALTITUDE
FO HEADING
FO FLIGHT DIRECTOR
BOTH PRIMARY FLIGHT DISPLAY / NAVIGATION DISPLAY
BOTH Multi Funciton Display
Takeoff briefing
PF TAKEOFF BRIEFING
Autobrake
FO RTO
Air Traffic Control
FO ATC CODE
Final verification
FO TO CONFIG
FO T.O MEMO



Verify on the engine warning display the display of the message "CABIN READY" or obtain the report from the

chief flight attendant "Cabin ready for takeoff".

Before takeoff checklist down to the line

The checklist can be found in the document "FBW A380X Checklist"

BEFORE TAKEOFF

FOR SIMULATION PURPOSES



Before Takeoff

Takeoff or line-up clearance
FO TAKEOFF OR LINE UP CLEARANCE
<u>Cabin crew</u>
FO CABIN CREW
<u>Packs</u>
FO PACKS 1 and 2
Exterior lights
FO EXTERIOR LIGHTS
ETACS
- If the ETACS was used during the taxi: BOTH TAXI
Electronic Flight Instrument System Control Panel
BOTH NAVIGATION DISPLAY RANGE
BOTH ELECTRONIC FLIGHT INSTRUMENT SYSTEM CONTROL PANEL OPTIONS
It is recommended setting the weather radar on the pilot in command side, and the terrain radar on the pilot monitoring side.
BOTH TRAF
Before entering the runway
BOTH APPROACH PATH
FO STROBE
BOTH TAKEOFF RUNWAY



Sliding table

BOTH SLIDING TABLE
<u>TCAS</u>
FO TA
Before takeoff checklist below the line
BOTH BEFORE TAKEOFF CHECKLIST below the line

TAKEOFF



Takeoff

Thrust settings

It is recommended performing rolling takeoff.	
PF TAKEOFF	
 If the crosswind is at, or below 23 kt, and there is no tailwind: 	
PF BRAKES	
PF THRUST LEVERS	
 If the crosswind is above 23 kt, and/or in the case of tailwind: 	
PF BRAKES	
PF THRUST LEVERS	
• At 20 kt ground speed:	
PF THRUST LEVERS	
PM CHRONOMETER	
PF DIRECTIONAL CONTROL	
PM PRIMARY FLIGHT DISPLAY / NAVIGATION DISPLAY	
Note: The lateral mode isn't displayed until the aircraft lifts off, unless an ILS is tuned with the associated departure runway.	
<u>Note:</u> If the message "GPS PRIMARY LOST" appears, verify on the navigation display the flight management system the position (As exemple, on the runway centerline).	
PM TAKEOFF THRUST	
Before reaching 80 knots	
PM THRUST SET	
PM PRIMARY FLIGHT DISPLAY and ENGINE indications	
At 100 knots	
PM ONE HUNDRED KNOTS	

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It is recommended rejecting the takeoff under 100 knots. However, rejecting takeoff above 100 knots is a more serious case.

Serious case. At V1 speed
At V1 speed
PM V1
At VR speed
PM ROTATION
PF ROTATION
When positive climb
PM POSITIVE CLIMB
PF LANDING GEAR UP
PM LANDING GEAR
PF AUTOPILOT
At the thrust reduction altitude
PF THRUST LEVERS
PM PACKS 1 and 2 (IF APPLICABLE)
Above the acceleration altitude
- At F speed:
Note: For takeoffs in CONFIG 1+F, F speed does not appear.
PF FLAPS 1 ORDER
PM FLAPS 1
- At S speed:
PF FLAPS ZERO ORDER
PM FLAPS ZERO
PM EXTERIOR LIGHTS
PM GROUND SPOILERS

AFTER TAKEOFF



After Takeoff

Auxiliary Power Unit
 If the auxiliary power unit was used to supply the air conditioning: PM AUXILIARY POWER UNIT BLEED
<u>TCAS</u>
• If the takeoff was performed with TA ONLY mode:
PM TA Mode
Anti-Ice protection
PM ANTI-ICE
Sliding table
BOTH SLIDING TABLE
After takeoff/climb checklist down to the line
BOTH AFTER TAKEOFF/CLIMB CHECKLIST down to the line

CLIMB



Climb

Initial clim	<u>ıb</u>
PF Cruis	se Flight Level
At the air tr	MB SPEED MODIFICATIONS
<u>Note:</u>	If required the use of the best speed and best rate of climb for long term situation, the speed must be between the green dot speed and the econ speed. When flying at high altitude, an acceleration can take some time.
<u>Note:</u>	The airspeed can be below the green dot at high altitude, depending on the mach speed selected or computed by the flight management system.
After taked	off/climb checklist below the line
	FTER TAKEOFF/CLIMB CHECKLIST below the line
Anti-Ice pi	<u>cotection</u>
It is recomr	TI-ICE
At 10 000 f	<u>Seet</u>
PM LAN	DING LIGHT
	EAT BELTS SIGNS
BOTH E	lectronic Flight Instrument System OPTIONS
PM ECA	MM MEMO
On pi	lot in command request or approved by the pilot in command:
	NAVAIDS
· ·	IMAL/MAXIMUM ALTITUDE
At the tran	asition altitude
When the a	AROMETRIC REFERENCE

integrated standby instrument system.

CRUISE



Cruise

Cruising altitude	
PF ALT CRZ on flight mode annunciator	
Note: The pilot will need to change the cruise altitude on the flight management system active performance page is the selected auto flight system control panel altitude is below the flight management system cruise flight level.	
ECAM	
BOTH ECAM MEMO	
BOTH SD PAGES	
Note: In cruise, due to variation of temperature, the oil quantity can decrease rapidly. This happens particularly at the start of the flight.	
It is recommended to monitor the bleed system page and the electrical system display page.	
Flight progress	
BOTH FLIGHT PROGRESS	
Step flight level	
BOTH STEP FLIGHT LEVEL	

DESCENT PREPARATION



Descent Preparation

Landing information	
It is recommended to start the preparation 80 nautical miles before the top of descent.	
PM WEATHER AND LANDING INFORMATION	
PF LANDING ELEVATION	K
Barometric reference	
BOTH BAROMETRIC REFERENCE	ΞT
Electronic Centralized Aircraft Monitor	
STATUS PAGE/STATUS MORE PAGE	
Landing performance	
PM SYNCHRO ECAM BUTTON	K
PM LANDING PERFORMANCE	
Flight Management System	
PM FMS ACTIVE/F-PLN/ARRIVAL PAGE	K
PM DES panel of the FMS ACTIVE/PERF PAGE	K
Note: The managed speed profile has as default value of speed limit of 250 knot below 10 000 feet. The pilot can alter this speed limit on the VERT REV page of the flight management system.	



PM APPR panel of the FMS ACTIVE/PERF page
It is recommended to use of the managed speed when the landing configuration and the configuration selected on the APPR panel are exactly the same. If an in-flight failure occurred that affects the landing performace, compute the new value in the landing performance application for the approach speed, then insert the new value in the approach panel of the active performange page of the flight management system.
PM GA panel of the FMS ACTIVE/PERF page
PM FMS POSITION/NAVAIDS page
PM SEC pages
PF FMS
Onboard Airport Navigation System
PM RUNWAY SHIFT
Brake To Vacate system
It is recommended the use of the BTV autobrake system when the runway is in dry or wet conditions.
CAUTION It is not recommended to use of the brake to vacate system when the runway is contaminated, an inoperative engine thrust reverser, or any aircraft failure affecting the landing performance.
PM Navigation Display MODE
PM Navigation Display RANGE
THE RECOGNITION OF THE PART TO SELECT THE AVIT IN SECONDARION WITH THE KINNING FOR AND THE RECOMMENDED TO SELECT AN AVIT

It is recommended to select the exit in accordance with the runway conditions. It is recommended to select an exit after the wet line to anticipate any changes of runway condition, as well as a smoother deceleration for passenger

comfort. It is also recommended to take into account arrival gate, the ground circulation, the runway exit

configuration, and the predicted turn around time, which is displayed on the navigation display.



<u>Autobrake</u>

PM AUTO BRAKE/BTV
• If the pilot selected BTV:
BOTH OANS RUNWAY LENGTH VERSUS CHARTS RUNWAY LENGHT
In order to verify the onboard airport navigation display, verify the runway length corresponds to the active charts. The difference of length between the onboard airport navigation must not be more than 115 feet.
Landing briefing
PF LANDING BRIEFING
Descent clearance
PM DESCENT CLEARANCE
PF CLEARED ALTITUDE ON AUTO FLIGHT SYSTEM CONTROL PANEL
Anti-Ice protection
PM ANTI-ICE

DESCENT



Descent

Descent initiation
PF DESCENT
Note: The top of descent is not displayed when the heading mode or track mode is engaged.
When the aircraft reaches the top of descent
PF ALTITUDE
• If the ATC requires an early descent It is recommended to use the DES mode. This will lead to a lower vertical speed. This will ensure that the aircraft will converge with the planned descent path.
• If the ATC delays the descent It is recommended to engage the DES mode with managed speed active when cleared Beyond the T/D, the by the air traffic control.
Descent monitoring
PF DESCENT
Descent adjustment
PF RATE of DESCENT
PF SPEED BRAKES
At 20 000 feet
CAPT Cabin Crew



Terrain Avoidance Warning System and Weather Radar

BOTH TERRAIN RADAR
BOTH WEATHER RADAR
<u>At 10 000 feet</u>
PM LANDING LIGHTS
CAPT SEAT BELTS SIGN
BOTH CSTR
BOTH LS
• For Non-Precision Approach flown with the Flight management system landing system function:
PM FLS CAPABILITY
PM FLS DATA
PF NAVAIDS
Holding
PM HOLDING PATTERN
Approach checklist
BOTH APPROACH CHECKLIST

PRECISION APPROACH



Initial Approach

Initial approach

The airc	PPROACH PHASE	
It is reco	OSITIONING	ΓΕ
PF M	ANAGED SPEED	K
Note:	When in NAV, LOC*, or LOC mode is engaged, the aircraft will automatically decelerate at the DEC waypoint.	EL
PF S	PEED BRAKES AS REQUIR	ED
<u>Navigati</u>	on accuracy	
•	If GPS PRIMARY LOST:	
	PM NAVIGATION ACCURACY	



Intermediate and Final Approach

APPR mode activation

• When t	he ATC clears the aircraft for the approach :
It is reco when the the selec	PPR mode
<u>Note :</u>	The multifunction display and the primary flight display will display "CHECK APPR SEL" if the pilot selected a non-precision approach in the active flight plan, and if the pilot manually inserted an ILS frequency on the POSITION/NAVAIDS page.
LOC capture d	<u>omain</u>
Please note, the I	OC capture point represent the point of the projected LOC centerline.
	OT 1+2
The pilot can veri	MODE ANNUNCIATIOR
Approaching g	<u>een dot speed</u>
PF FLAPS 1	ORDER
It is recommende aircraft is deceler	SET d setting the flaps before being within 3 nautical mile from the final approach fix (FAF). Verify the ating toward the S speed. If the aircraft is above the glideslope, or the aircraft does not ecommended to extend the landing gear. It is not recommended the speed brakes due to limited d.
It is recommende	DDE
It is recommende deviation is within	TURE
ensu	e are international regulations for LOC beam capture. In ICAO standards, the LOC beam must re a normal capture within 10 nautical mile, at more or less 35 degrees from the centerline. ever, expect some abnormal captures at airports following minimal requirements.
Note: Plea	TURE



• If above the glideslope :
PF V/S MODE
PF AUTO FLIGHT SYSTEM CONTROL PANEL ALTITUDE
It is recommended to select an altitude above the aircraft altitude to prevent any altitude engagement.
• When G/S Capture (G/S*):
PF-PM GO-AROUND ALTITUDE
mode annunciator.
Below VFE Next, at 2 500 feet above ground level minimum
PF FLAPS 2
PM FLAPS 2
After FLAPS 2 selection, at 2 000 feet above ground level minimum
PF LANDING GEAR DOWN
PM LANDING GEAR
PM AUTO BRAKE
Note: It is recommended to land on the runway indicated on the BTV settings if using the brake to vacate system. If the aircraft lands on a different runway, the autobrake will change automatically to HI in short final.
PM GROUND SPOILERS
PM EXTERIOR LIGHTS



After landing gear down down

• Below VFE NEXT:
PF FLAPS 3
PM FLAPS 3
PM WHEEL SYSTEM DISPLAY PAGE
• Below VFE NEXT :
PF FLAPS FULL
PF AUTOTHROTTLE
BOTH SLIDING TABLE
BOTH CABIN
BOTH LANDING CHECKLIST
PF FLIGHT PARAMETERS
 At 500 ft AGL (or RA) and below and if the flight crew selected BTV autobrake mode: The pilot monitoring should adjust the navigation display range selector to display the onboard airport navigation system. This will show the dry and wet lines.
• At 350 ft AGL (or RA):
PF LAND ON FLIGHT MODE ANNUNCIATOR
PF ILS(GLS) COURSE
At minimum + 100 feet
PM ONE HUNDRED ABOVE
At minimum altitude
PM MINIMUM



It is recommended to maintain the aircraft on a stabilized flight path until the flare. At 50 feet, one dot below the glideslope means a difference of 7 feet below the glideslope. It is not recommended to duck under the glideslope.

NON PRECISION APPROACH



Initial Approach

PM APPROACH PHASE
PF POSITIONING
PF MANAGED SPEED
Note: The aircraft will decelerate automatically at the DECEL pseudo waypoint when on these modes: managed speed is active, and either NAV or LOC mode is engaged.
PF SPEED BRAKES
PM REQUIRED NAVIGATION PERFORMANCE on the FLIGHT MANAGEMENT SYSTEM
PF FLIGHT MANAGEMENT SYSTEM LANDING SYSTEM CAPABILITY
BOTH NAVIGATION DISPLAY MODE
BOTH VOR(ADF) NEEDLES (VOR pb (ADF pb))



Intermediate and Final Approach

Approach phase activation.
PF APPR BUTTON ON THE AUTO FLIGHT SYSTEM CONTROL PANEL
BOTH FLYING REFERENCE
PF AUTOPILOT ENGAGEMENT
PF FLIGHT MANAGEMENT SYSTEM LANDING SYSTEM CAPABILITY
Approaching Green dot speed
PF FLAPS 1
PM FLAPS 1
PM TCAS MODE
PF F-LOC, LOC, OR LOC B/C CAPTURE
PF F-G/S CAPTURE
If above the flight glideslope beam: PF FLIGHT PATH ANGLE MODE
At flight glideslope engagement: BOTH GO-AROUND ALTITUDE



Below VFE next, at 2 500 feet above ground level minimum

PF FLAPS 2
After Flaps 2 selection, at 2 000 feet above ground level minimum
PF LANDING GEAR DOWN
PM LANDING GEAR
PM AUTO BRAKE
Note: It is recommended to land on the runway indicated on the BTV settings if use of BTV. If the aircraft lands on a different runway, the autobrake will change automatically to HI in short final.
PM GROUND SPOILERS
PM EXTERIOR LIGHTS
After landing gear down selection
• Below VFE Next:
PF FLAPS 3
PM FLAPS 3
PM WHEEL SYSTEM DISPLAY PAGE
• Below VFE Next :
PF FLAPS FULL
PM FLAPS FULL
PF AUTOTHROTTLE
BOTH SLIDING TABLE



Verify on the Engine Warning Display the absence of blue lines.
BOTH CABIN
BOTH LANDING CHECKLIST
At final approach fix:
PF F-G /S MODE
PM FLIGHT PARAMETERS
• At 500 ft AGL (or RA) and below and if the flight crew selected BTV autobrake mode: The pilot monitoring should adjust the navigation display range selector to display the onboard airport navigation system. This will show the dry and wet lines.
At minimum + 100 feet
PM ONE HUNDRED ABOVE
At minimum altitude
PM MINIMUM
• If the flight array obtains appropriate visual references.
 If the flight crew obtains appropriate visual references :
CAPT LANDING or GO-AROUND



	PF LANDING SYSTEM
	PM LANDING SYSTEM
•	If the flight crew obtains appropriate visual references:
	CAPT GO-AROUND

VISUAL APPROACH



Approach

Initial / Intermediate Approach

The pilot must use external visual references for this type of approach.

At the beginning of the downwind leg
PM APPROACH PHASE
PF FLIGHT DIRECTOR OFF
PM FLIGHT DIRECTOR
PM FLYING REFERENCE
PM AUTOTHROTTLE ACTIVE
On the downwind leg When on the threshold, the pilot must extend the downwind leg by 45 seconds, including wind correction. The pilot can turn into the base leg. He must ensure the aircraft doesn't bank more than 30°. It is recommended to follow the flight path angle. • Below Vfe Next PF FLAPS 2
The pilot in command order to the pilot monitoring to set the flaps to the second step.
PM FLAPS 2

Final Approach

- When using manual thrust, the pilot can use the speed trend arrow and flight path vector to help coordinating thrust settings. It is recommended to avoid performing a descent with idle thrust. This may lead to a speed decay and altitude loss.
- The aircraft must be stabilized by 500 ft above ground level. If not, a go-around procedure must be initiated.
- It is recommended to avoid performing big corrections in the last 100 ft above ground level in order to have a smooth landing.

LANDING



Landing

For manual landing
PF AUTOPILOT
At around 40 feet radio altimeter When performing a stabilized approach, the normal flare height is 40 ft above ground level. PF FLARE
PF THRUST LEVERS
For Automatic Landing
Between 50 feet and 40 feet radar altimeter PM FLIGHT MODE ANNUNCIATOR
At approximately 30 feet radar altimeter PM FLIGHT MODE ANNUNCIATOR
At 10 feet radar altimeter
There should have an automatic "RETARD" callout triggered.
PF THRUST LEVERS
PF LATERAL GUIDANCE
At touchdown
PM FLIGHT MODE ANNUNCIATOR
If AUTO ROLL OUT: PF AUTOPILOT
Derotation
As soon as the main landing gear touches down: PF DEROTATION

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Landing Roll

PF REVERSER LEVERS
PM GROUND SPOILERS EXTENDED
<u>Note:</u> If the flight crew didn't arm the spoilers, the spoilers will automatically deploy at thrust reverser activation.
PM REVERSERS
PF DIRECTIONAL CONTROL
Verify on the flight mode annunciator the autobrake mode (BTV, BRK LO, BRK 2, BRK 3, or BRK HI). Note: The autobrake doesn't activate if the ground spoilers aren't extended.
If no autobrake: PF BRAKES
• If AUTO ROLLOUT, before 20 knots: PF AUTOPILOT
At 80 Knots
PF EIGHTY KNOTS
PF REVERSER LEVERS
REVERSE" sounds, or in an emergency situation
 For CAT II & CAT III Operations with BTV When 1 000 ft remains to the end of the runway, and the aircraft ground speed is higher
than 10 knots:
PF BTV AUTOBRAKE MODE



At taxi speed

PF REVERSER LEVERS	
CAUTION	It is recommended to avoid the use of reverse thrust on taxiways, unless in an emergency situation.
The autobrake ca	AKE

GO-AROUND



Go-around initialization

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Go-Around

Go around minimization
PF THRUST LEVERS
PF ROTATION
PF GO-AROUND
PM FLAPS
PF FLIGHT MODE ANNUNCIATOR
PM POSITIVE CLIMB
PF LANDING GEAR UP
PM LANDING GEAR
PF NAV or HDG
At go-Around thrust reduction altitude
PF THRUST LEVERS
At go-Around acceleration altitude
 If the targeted speed does not increase to the initial climb speed:
PF AUTO FLIGHT SYSTEM CONTROL PANEL ALTITUDE
PF ALTITUDE
PF FLAPS



PM FLAPS
At F speed, retract to flaps 1. At S speed, retract to flaps 0.
PM GROUND SPOILERS
PM EXTERIOR LIGHTS
Set the appropriate exterior lights.
BOTH AFTER TAKEOFF/CLIMB CHECKLIST down to the line
 If the transition altitude is reached:
BOTH BAROMETRIC REFERENCE SET STANDARD/CROSSCHECK Set the standard barometric reference, then verify the parameters on all altimeters. The altitude should be the same.
BOTH AFTER TAKEOFF/CLIMB CHECKLIST below the line
- Preparation for second approach: PM APPROACH PHASE
To divert to the alternate: PM FLIGHT MANAGEMENT SYSTEM
• When cleared to a waypoint: DIRECT TOPERFORM
PF FLIGHT MANAGEMENT SYSTEM

AFTER LANDING



After Landing

Ground spoilers
CAPT GROUND SPOILERS
<u>Flaps</u>
FO FLAPS
Auxiliary Power Unit
FO AUXILIARY POWER UNIT MASTER SWITCH
Verify on the APU SD page the FLAP OPEN message is displayed.
Engine start
FO ENGINE START SELECTOR
Anti-Ice
FO ANTI-ICE
Exterior lights
FO LANDING LIGHTS
FO STROBE
FO OTHER EXTERIOR LIGHTS
FO NOSE
FO RUNWAY TURN OFF LIGHTS & CAMERA



Airport navigation

BOTH NAVIGATION DISPLAY RANGE
Electronic Flight Information System Control Panel
BOTH TAXI
BOTH WEATHER RADAR
Brake temperature
FO BRAKE TEMPERATURE
After landing checklist
BOTH AFTER LANDING CHECKLIST

PARKING



Parking

Anti-Ice system
FO ANTI-ICE
Auxiliary Power Unit bleed
FO AUXILIARY POWER UNIT BLEED
Parking brake
CAPT PARKING BRAKE
Engine masters 1,2,3, and 4
CAPT ENGINE MASTERS SWITCHES 1, 2, 3, AND 4
Note: In the case that the APU isn't available, it is recommended the connection of the external power before the engine shutdown sequence.
When turning the engine master switches OFF , verify that the engine parameters decrease.
<u>Clock</u>
FO ELAPSED TIME (If applicable)
Seat belts sign
CAPT SEAT BELTS
<u>Slides</u>
CAPT SLIDES DISARMED



Exterior lights

CAPT BEACON
CAPR OTHER EXTERIOR LIGHTS
Ground contact
CAPT GROUND CONTACT
Fuel pumps
PM FUEL PUMPS
Head up display
CAPT HEAD UP DISPLAY
Fuel quantity
PNF FUEL QUANTITY
Parking checklist
BOTH PARKING CHECKLIST
Parking brake
CAPT PARKING BRAKE
Notes: You can leave the parking brakes set when the winds, including gust, exceed 30 knots, when the parking ramp slope is excessive, or when the surface is wet.
Onboard Information System (OIS) closure
BOTH ONBOARD INFORMATION TERMINAL SLIDE
BOTH ALL APPLICATIONS
BOTH EXIT SESSION



Logbook

BOTH ONBOARD INFORMATION TERMINAL SIDE	. NSS AVNCS
In order to access the logbook, set the Onboard Information Terminal Side switch to the NSS AVI	VCS position.
CAPT FLIGHT CLOSURE	PERFORM
Verify the VHF 3 DATA mode is active before closing the electronic flight.	

SECURING THE AIRCRAFT



Securing the Aircraft

Parking brake
CAPT PARKING BRAKE
Oxygen crew supply
FO OXYGEN CREW SUPPLY
Air Data Inertial Reference System
CAPT ADIRS (1+2+3)
Exterior lights
FO EXTERIOR LIGHTS
Ground services
CAPT GROUND SERVICING
Auxiliary Power Unit bleed
FO AUXILIARY POWER UNIT BLEED
External power
FO EXTERNAL POWER
Note: To reduce the electrical load, you can turn OFF the FANS and COOLG pushbuttons. It is however recommended to turn them ON as soon as possible.
Auxiliary Power Unit
FO AUXILIARY POWER UNIT MASTER SWITCH



Passenger signs

FO EMERGENCY EXIT LIGHTS
FO NO SMOKING
Onboard Information System (OIS)
BOTH ALL LAPTOPS
Note: The Network Server System (NSS) will automatically shuts down when the aircraft electrical supply is down.
BOTH Onboard Information Terminal
Securing the aircraft checklist
BOTH SECURING THE AIRCRAFT CHECKLIST
Battery 1, Essential, Battery 2, and Auxiliary Power Unit Battery
FO ALL BATT (Battery 1, Essential, Battery 2, APU Battery)
Cockpit way light
FO COCKPIT WAYLIGHT