flybywire

A32NX

NORMAL PROCEDURES

GLOSSARY

COCKPIT PREPARATION

Location/Item	Status	Comment
Cockpit		
EMER EQPT	CHECK	
RAIN REPELLENT	CHECK	INOP
C/B PANELS	CHECK	INOP
GEAR PINS and COVER	CHECK ONBOARD and STOWED	
GRAVITY GEAR EXTN	CHECK STOWED	
Pedestal		
PARK BRK	OFF	
SPD BRK	CHECK RET AND DISARMED	
WEATHER RADAR	CHECK OFF	
FLAPS	CHECK RETRACTED	
ENG MASTERS 1, 2	CHECK OFF	
ENG MODE SELECTOR	CHECK NORM	
THRUST LEVERS	CHECK IDLE	
Main panel		
L/G LEVER	CHECK DOWN	
Overhead		
Both WIPERS selectors	CHECK OFF	
EXT PWR pb-sw	CHECK AVAIL, then ON	
BAT 1 & 2	ON/ON	The correct position is: Not Lighted (AUTO)

CREW SUPPLY	ON	(Crew emergency oxygen bottles)
GND CTL	ON	INOP
ADIRS	SET to NAV (1,2 then 3)	Check ON BAT
OVH INTEG LIGHT	SET AS REQUIRED	
NAV LIGHTS	ON	
STROBE LIGHT	AUTO	
OTHER EXTERIOR LIGHTS	OFF	
SEAT BELTS SIGN	ON	
NO SMOKING SIGN	ON	
EMER EXIT	ARM	
PROB/WINDOW HEAT	AUTO	
LDG ELEV	AUTO	
PACK FLOW	NORM	(LOW if under 147 PAX, HI if OAT High or Low)
AIR COND TEMP	AS REQUIRED	(Set to 12 O'clock position)
HYD PÄNEL	AS REQUIRED	(no white lights)
FUEL PANEL	AS REQUIRED	(no white lights, Fuel Pumps ON)
APU FIRE test	PERFORM	5 Seconds minimum All lights ON
ENG FIRE 1 & 2 test	PERFORM	5 Seconds minimum All lights ON
AUDIO SWITCH	NORM	INOP
CARGO FIRE test	PERFORM	
VENT panel	CHECK (no white lights)	

ACP 3 panel	PA (Volume ON and set at 12' o clock position)	INOP
MAINT panel	CHECK	(no white or blue lights)
Center instrument Panel		
ISIS	CHECK	(Set QNH and Brightness)
CLOCK	SET	Flight Time on OFF
A/SKID & N/W STRG sw	CHECK ON	
ECAM RCL	PRESS	
SWITCHING PANEL	CHECK ALL NORM	
OXY PRESS (DOOR PAGE)/ HYD QTY (HYD PAGE)/ ENG OIL QTY (ENG PAGE)	CHECK	INOP
RMP 1	SET	(ATIS Frequency on ACTIVE and GND Frequency on STBY)
ACP 1	SET (VHF 1)	
RMP 2	SET	
ACP 2	SET (VHF2)	
ATC	SET CODE to 2000 and AUTO	
TCAS Mode	STBY	
ATIS	OBTAIN	
Glareshield		
BARO REFERENCE	SET (EFIS and ISIS)	
FD	ON	
LS	OFF	
VOR /ADF switches	AS REQUIRED	(Usually VOR 1/VOR2)
EFIS ND Mode Display	ARC/10/CSTR	(Both sides)

FCU	CHECK	Set Initial clearance Alt
ND/PFD	CHECK/ADJUST	Adjust Displays Brightness Crosscheck both PFD/ND
Lateral Console		
LOUDSPEAKER	ADJUST	INOP
OXYGEN MASKS	CHECK	INOP
Pedestal		
FUEL QUANTITY	CHECK and REFUEL AS REQUIRED	Call the Fuel truck if needed (Action Specific to the flight sim)
LOADSHEET	CHECK	Modify and verify LMC Compute T/O Performance again if ever LOAD is changed
FMGC Preparation	DATA INSERT	

BEFORE PUSHBACK

APU MASTER	ON	
APU START	ON	
When APU Avail: APU BLEED	ON	
EXT POWER	OFF check Avail, then disconnect	(Use ATC menu for disconnect)
PUSHBACK & START CLEARANCE	OBTAIN	(Set ATC GND Freq. on RMP1)
ATC	SET CODE and AUTO	
WINDOWS/DOORS	CHECK CLOSED	
SLIDES	CHECK ARMED	(ECAM DOOR Page: No AMBER, No DOORS OPEN)
CLOCK	SET	Elapsed time

BEFORE START

FMS	MCDU PERF TO page	On PF Side
FMS	MCDU FPLN page	On PM side
FMS T/O DATA	CHECK / REVISE AS RQRD	If the Clearance has changed the departure runway/conditions, the calculations have to be redone and the new speeds inserted in the FMGS
BEFORE START C/L down to the the line		
BEACON	ON	
THRUST LEVERS	IDLE	
PARK BRAKE	RELEASE	
BRAKE PRESS	CHECKED ZERO	Triple brake indicator: Both brake press needles should display 0PSI
BEFORE START Checklist below the line		

ENGINE START

ENG MODE SELECTOR	IGN/START	
ENG MASTER 2	ON	CHECK UPPER ECAM AND SEE THE AVAIL MESSAGE AROUND N1 19.2%
ENG MASTER 1	ON	

AFTER START

ENG MODE SELECTOR	NORMAL	
GROUND SPOILERS	ARM	
RUDDER TRIM	ZERO	
FLAPS	SET	Usually Set to Flaps 1 position
PITCH TRIM	SET	Set Trim Wheel to the computed THS position (UP/DOWN)
ECAM STATUS	CHECK	
APU BLEED	OFF	
ANTI-ICE	AS RQRD	In case of Icing conditions on the ground, Use WINGS ANTI-ICE and ENG A-ICE
APU MASTER SW	OFF	
AFTER START Checklist		

TAXI

NOSE sw	TAXI	
RWY TURN OFF sw	AS REQRD	By night during taxi
PARKING BRAKE HANDLE	OFF	
BRAKES PRESSURE TEST	CHECK AT ZERO	Apply Brakes as soon as the aircraft is moving: Triple brake indicator: Both brake press needles should display 0 PSI
FLIGHT CONTROLS CHECK	PERFORM	• Full Up/Down/Neutral • Full Left/right/neutral

		(With the RUDDER DISC Button Pressed on the Tiller): • Rudder Full Left/Right/Neutral (Not implemented ATM)
RADAR	AS RQRD	SYSTEM 1
PREDICTIVE WINDSHEAR SYSTEM	ON	
ATC CODE/MODE	CONFIRM/SET FOR TAKEOFF	TCAS Mode set to TA/RA
TERR ON ND	AS REQRD	In mountainous areas, consider displaying terrain on ND.
AUTO BRK	MAX	
T.O CONFIG	TEST	
T.O MEMO	CHECK NO BLUE	
CABIN REPORT	PRESS CALL ALL	(OVERHEAD) ONLY IN SIM
BEFORE TAKEOFF Checklist down to the line		

BEFORE TAKEOFF

BRAKE TEMP	CHECK	Check Wheel temp on the ECAM Wheel page. If Temp >300°C delay departure
NOSE sw	T.O	
STROBE sw	ON	
LAND LIGHTS sw	ON	Setting the RWY TURN OFF LAND LIGHTS & NOSE sw to ON/T.O minimizes bird strike hazard during takeoff.
BEFORE TAKEOFF Checklist below the line		

TAKEOFF

TAKEOFF	PERFORM	
FMA	ANNOUNCE	From left to right all the Modes that appear on the PFD: MAN FLEX or TOGA /SRS/RUNWAY/A/THR Blue
100 KTS	ANNOUNCE	
V1	ANNOUNCE	
VR	ORDER THEN PERFORM	Rotate smoothly up to +15° Nose UP (12.5° When One engine inoperative)

WHEN POSITIVE CLIMB

POSOTIVE CLIMB	ANNOUNCE	
L/G UP	ORDER	
L/G LEVER	SELECT UP	
AUTOPILOT	AS RQRD	Above 100 ft AGL, AP 1 or 2 may be engaged.

AT THRUST REDUCTION ALTITUDE

THRUST LEVERS	CL	Move the thrust levers to the CL detent, when the flashing LVR CLB prompt appears on the FMA. A/THR is now active.

AT ACCELERATION ALTITUDE

Check the target speed, it should be equal to V2+10 when the CLB prompt appears on the FMA.

ABOVE ACCELERATION ALTITUDE (OR IN CLIMB PHASE)

At S speed : FLAPS 0	ORDER THEN RETRACT	
GND SPLRS	DISARM	
NOSE sw	OFF	
RWY TURN OFF sw	OFF	
AFTER TAKEOFF / CLIMB Checklist down to the line		

CLIMB

FMS	MCDU PERF CLB	*PF MCDU should be showing the PERF CLB page (allowing PF to monitor when the aircraft will reach the FCU selected altitude) but he may select other pages such as F-PLN page as may be tactically necessary.*
FMS	MCDU F-PLN	*PM MCDU should be showing the F-PLN page (allowing him to enter any ATC long-term revisions to the lateral or vertical flight plan).*

At Transition Altitude

BAROMETRIC REFERENCE	SET STD/CROSSCHECK	*At transition altitude (baro setting flashing on PFD) set STD on the EFIS control panel and standby altimeter. Cross-check baro settings and altitude readings.*
AFTER TAKEOFF/CLIMB Checklist below the line		
RADAR	AS APPROPRIATE	
ENGINE ANTI ICE	AS RQRD	*Engine anti-ice must be set to ON when icing conditions exist or are anticipated, except during climb when the SAT is below - 40 °C (-40 °F).*

At 10 000 ft

LAND LIGHT selector	RETRACT	
Seat BELTS sw	AS RQRD	*In case of good weather turn off in turbulence condition keep it on.*
EFIS option	AS RQRD	*Select CSTR on one side and ARPT on the other side.*
ECAM MEMO	REVIEW	
NAVAIDS	CLEAR	*Clear manually tuned VORs from MCDU RAD NAV page.*
SEC F-PLN	AS RQRD	*Recopy the active flight plan in the secondary if an immediate return flight plan has been constructed previously.*
OPT / MAX ALT	CHECK	

CRUISE

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

DESCENT PREPARATION

WEATHER AND LANDING INFORMATION	OBTAIN	*Check weather reports at ALTERNATE and DESTINATION airports. Airfield data should include runway in use for arrival.*
NAV CHARTS	PREPARE	
EFB LDG PERFORMENCE	CHECK	Perform an in-flight landing performance assessment if the landing conditions changed compared with the landing computation at dispatch, or with a previous computation (e.g. runway, weather conditions, in-flight failure affecting performance, diversion).
FMS	PREPARE	
FMS PREPARATION	CHECK	
GPWS LDG FLAP 3 pb-sw	AS RQRD	*If the pilot plans on landing in FLAPS 3 configuration, the GPWS LDG FLAP 3 pb-sw should be set to ON.*
LDG ELEV	CHECK	*Check that the LDG ELEV AUTO green is displayed on the ECAM CRUISE page, and check the associated value.*
AUTO BRAKE	AS RQRD	*Use of autobrake is preferable.* *Use of MAX mode is not recommended at landing.* *On short or contaminated runways, use MED mode.* *On long runways, LO mode is recommended*
APPROACH BRIEFING	PERFORM	
TERR ON ND	AS RQRD	*- In mountainous areas, consider displaying terrain on ND.* *- If use of radar is required, consider selecting the radar display on the PF side, and TERR ON ND on the PM side only.* *- If NAV ACCURACY is LOW, do not use TERR on ND.*
RADAR	ADJUST AS APPROPRIATE	

ENG ANTI-ICE pb-sw	AS RQRD	*Engine anti-ice must be set to ON before and during descent, even if the SAT is below -40 °C (-40°F).* *When ENG ANTI ICE is ON, the FADEC selects a higher idle thrust which gives better protection against flame-out.*
WING ANTI-ICE pb-sw	AS RQRD	*When icing conditions are encountered:* *- The flight crew may turn on the wing anti-ice to prevent ice accretion on the wing leading edge.* *- The flight crew must turn on the wing anti-ice if there is evidence of ice accretion, such as ice on the visual indicators, or on the wipers, or with the SEVERE ICE DETECTED alert. This is to remove any ice accumulation from the wing leading edge.* *ANTI ICE ON reduces the descent path angle (when the engines are at idle). The pilot can compensate for this by increasing the descent speed, or by extending up to half speedbrakes*
DESCENT CLEARANCE	OBTAIN	
CLEARED ALTITUDE ON FCU	SET	*When clearance is obtained, set the ATC-cleared altitude (FL) on the FCU (also considering what is the safe altitude).* *If the lowest safe altitude is higher than the ATC-cleared altitude, check with the ATC that this constraint applies.* *If it is confirmed, set the FCU altitude to the safe altitude, until it is safe to go to the ATC-cleared altitude.*

DESCENT

DESCENT	INITIATE	*The normal method of initiating the descent is to select DES mode at the FMGS calculated top of descent (T/D).*
MCDU	PROG/ PERF DESCENT	
DESCENT	MONITOR/ADJUST	

When the aircraft approaches the transition level, and when cleared for an altitude

BAROMETRIC REFERENCE	SET/XCHECK	*Set QNH on the EFIS control panel and on the standby altimeter, when approaching the transition level and when cleared for an altitude. Crosscheck BARO settings and altitude readings.*
ECAM STATUS	CHECK	

At 10 000 ft

LAND LISGHT sw	SET	
SEAT BELTS sw	ON	
EFIS option pb	CSTR	
LS pb	AS RQRD	*Select LS, if an ILS, GLS or LOC approach is intended.*
RAD NAVAIDS	SELECTED/IDENTIFIED	*Ensure that appropriate radio NAVAIDS are tuned and identified. For NDB approaches, manually select the reference NAVAID.*
APPROACH Checklist		

Approach

INITIAL APPRAOCH

F-PLN SEQUENCING	ADJUST	*- The NAV mode will be available after GO AROUND if the F-PLN is properly sequenced. A good cue to monitor the proper F-PLN sequencing is the TO waypoint on the upper right side of the ND, which should remain meaningful.* *- In NAV mode, the F-PLN will sequence automatically.* *- In HDG/TRK mode, the F-PLN will sequence automatically only if the aircraft flies close to the F-PLN route.*
APPRAOCH PHASE	CHECK/ACTIVATE	*- If the aircraft overflies the DECEL pseudo waypoint in NAV mode, the APPR phase activates automatically.* *- If the aircraft is in HDG/TRK mode, approximately 20 NM from touchdown, activate and confirm APPROACH phase on the MCDU (PERF DES page).*
MANAGED SPEED	CHECK	*- If ATC requires a particular speed, use selected speed. When the ATC speed constraint no longer applies, return to managed speed.*
SPEED BRAKES lever	AS RQRD	*If the flight crew uses the speed brakes to increase the rate of deceleration or to increase the rate of descent, the VLS will increase as well:* *• The flight crew should ensure that appropriate speed margin exists before the extension of the speed brakes* *• If the speed brakes are extended, the flight crew should ensure that appropriate speed margin exists before the beginning of a turn.* *This will avoid the activation of the Alpha-Floor protection.* *Note: In clean configuration, the VLS with speed brakes fully extended may be higher than green dot speed or VFE FLAP 1.*
RADAR	ADJUST AS APPROPRIATE	

Intermediate/final approach

AT GRENN DOT SPEED

FLAPS 1	SELECT	*- FLAPS 1 should be selected more than 3 NM before the Final Descent Point.* *- Check deceleration toward "S" speed.* *- For decelerated approaches, the aircraft must reach or be established on the final descent with FLAPS 1 and "S" speed at or above 2 000 ft AGL.* *- If the aircraft does not decelerate on the flight path or aircraft speed is significantly higher than "S" speed, extend the landing gear in order to slow down. The use of speedbrakes is possible.* *The flight crew should be aware that the use of speedbrakes causes an increase in VLS.*
TCAS Mode selector	TA or TA/RA	*- FAA recommends to select TA only mode:* *• In case of known nearby traffic which is in visual contact* *• At particular airports and during particular procedures identified by an Operator as having a significant potential for unwanted or inappropriate resolution advisories (closely spaced parallel runways, converging runway, low terrain along the final approach, etc.).*

AT 2 000 FT AGL MINIMUM

FLAPS 2	SELECT	*- Check deceleration toward "F" speed.* *- For ILS , if the aircraft intercepts the flight path below 2 000 ft AGL, select FLAPS 2 at one dot below the flight path.* *- If the aircraft speed is significantly higher than "F" speed on the flight path, or the aircraft does not decelerate on the flight path, extend the landing gear in order to slow down the aircraft. The use of speed brakes is not recommended.* *- When the speed brakes are deployed, extending the flaps beyond FLAPS 1 may induce a slight roll movement, and in calm conditions a small lateral control asymmetry may remain until disturbed by a control input or by an atmospheric disturbance.*

WHEN FLAPS ARE AT 2

LANDING GEAR lever	DOWN	
GROUND SPOILERS	ARM	
NOSE sw	TAXI	
RWY TURN OFF sw	ON	

WHEN LADING GEAR IS DOWN

FLAPS 3	SELECT	
ECAM WHEEL SD page	CHECK	*- Check for three green indications on the landing gear indicator panel. At least one green triangle on each landing gear strut on the WHEEL SD page is sufficient to indicate that the landing gear is downlocked.*
FLAPS FULL	SELECT	
A/THR	CHECK IN SPEED MODE OR OFF	
WING ANTI-ICE pb-sw	OFF	*- Switch the WING ANTI ICE pb-sw to ON, only in severe icing conditions.*
SLIDING TABLE	STOW	
CBAIN CALL	PRESS ON “ALL”	
LDG MEMO	CHECK NO BLUE	
LANDING Checklist		

APPROACH USING LOC G/S GUIDANCE

APPROACH MINIMUM	DETERMINE	
APPROACH BRIEFING	PERFORM	
APPR pb on FCU	ENGAGE	*Press the APPR pb when:* *• Cleared for the approach* *• On the intercept trajectory for the final approach course* *• LOC deviation is available.* *This arms the LOC and G/S modes.*
LOC	CHECK ARMED	
G/S	CHECK ARMED	
LOC CAPTURE	MONITOR	
G/S CAPTURE	MONITOR	
GO AROUND ALTITUDE	SET	
LAND mode	CHECK ENGAGED	

After Landing

GRND SPLRS	DISARM	
LAND LIGHTS	RETRACT	
RADAR	OFF	
PREDECTIVE WINDSHEAR SYSTEM	OFF	*Switching the radar and predictive windshear system to OFF after landing avoids risk of radiating persons at the gate area.*
ENG MODE selector	NORM	
FLAPS	RETRACT	
TCAS	STBY	
ATC	AS RQRD	*ATC is set in accordance with airport requirements.*
APU	START	
AFTER LANDING CHECKLIST		

Parking

ANTI-ICE	OFF	*When one brake temperature is above 500 °C (or 350 °C with brake fans ON), avoid applying the parking brake, unless operationally necessary.*
PARKING BARKE handle	ON	
ALL ENGINE MASTERS	OFF	
SEAT BELTS sw	OFF	
FUEL PUMPS / CTR XFR VALVES	OFF	
ATC	STBY	
EXTERIOR LIGHTS	OFF	*Turn off the BEACON lights, when all engines are spooled down.*
EXT PWR pb	CHECK AVAIL THEN ON	
PARKING CHECKLIST		

Securing the aircraft

PARKING BRAKE handle	CHECK ON	*To reduce hydraulic leak rate in the brake accumulator, keep the parking brake on.*
ALL IR MODE selectors	OFF	*After the shutdown of the ADIRS, the flight crew must wait 10 s before the shutdown of the electrical supply. This time ensures that the ADIRS memorize the most recent data.*
EXTORIOR LIGHTS	OFF	
APU BLEED pb-sw	OFF	
APU MASTER SW	OFF	*Switch off the APU after the passengers have disembarked.*
EMER EXIT LT sw	OFF	
SIGNS sw	OFF	
BAT 1+2	OFF	*Wait until the APU flap is fully closed (about 2 min after the APU AVAIL light goes out), before switching off the batteries. Switching the batteries off before the APU flap is closed may cause smoke in the cabin during the next flight.* *If the batteries are off while the APU is running, APU fire extinguishing is not available.*
SECURING THE AIRCARFT CHECKLIST		