

# Vol en duO



**VolenduO** : Groupe pratiquant le vol en cockpit partagé

Site : Cliquez sur l'image au dessus ([http://serv-rv.eu/agora\\_vpi](http://serv-rv.eu/agora_vpi))

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**VolenduO** : Group practicing shared cockpit flight

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## PROCEDURES Airbus A320 FF

### PRE REQUIS :

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

#### Note :

PF = Pilot Flying PNF Pilot Not Flying

Les procédures sont réalisées de mémoire :-)

Le PF appelle la checklist qui est lue par le PNF

Le PF vérifie et confirme les items de la checklist

Les zones en vert clair définissent des actions réalisées en parallèle.

Annexes : Panels description

#### Note:

PF = Pilot Flying PNF Pilot Not Flying

The procedures are carried out from memory :-)

The PF calls the checklist which is read by the PNF

The PF checks and confirms the checklist items

Light green areas define actions performed in parallel.

Annexe : Panels description

PF

PNF

**PRELIMINARY COCKPIT PREPARATION**

--	--

COCKPIT LIGHTS	AS RQRD
ECAM	CHECK
RCL pb	PRESS 3 s

--	--

ENG MASTERS 1, 2	OFF
ENG MODE selector	NORM
WEATHER RADAR	OFF
L/G lever	DOWN
Both WIPER selectors	OFF
<b>BAT</b>	<b>CHECK / AUTO</b>
<b>CHOCKS</b>	<b>ON</b>
<b>EXT PWR</b>	<b>AS RQRD</b>
<b>AIR STARTER UNIT (ASU)</b>	<b>AS RQRD</b>
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
	CHECK RET AND
SPD BRK lever	DISARMED
<b>PARKING BRAKE handle</b>	<b>OFF</b>
	CHECK AND PRESSURIZE
ACCU/BRAKES PRESS	IF NECESSARY

## FUEL AND PAYLOAD

FUEL TRUCK (EFB)	CALL		
POWER	ON		
PRESELECTED (FUEL QUANTITY]	SET		
CTL	ON		
Then when done : CTL	OFF		
POWER	OFF		
FUEL PANEL (EFB) MASTER PUSH SET ... THEN ... SLAVE PUSH GET			
FUEL TRUCK (EFB)	REMOVE		
PAX PANEL (EFB)			
PAX (EFB) AIRSTAIRS	CALL		
CABIN A B C	SET		CABIN A B C SET
VALIDATE (MASTER AND SLAVE) SET BUTTON			
PAX PANEL (EFB) AIRSTAIRS	REMOVE		
CARGO PANEL			
CARGO (EFB) BAGAGE LOADER	CALL		
CARGO 1 3 4 5 (CARGO 5 MAX)	SET		CARGO 1 3 4 5 (CARGO 5 MAX) SET
VALIDATE (MASTER AND SLAVE) SET BUTTON			
EFB Cross check the PERF DATA Tab			

## COCKPIT PREPARATION

<b>ALL WHITE LIGHTS</b>	<b>EXTINGUISH</b>		
<i>RCDR GND CTL pb-sw (NI)</i>	<i>ON</i>		
<i>CVR TEST pb (NI)</i>	<i>PRESS</i>		
<i>CAPT &amp; PURS / CAPT sw (NI)</i>	<i>AS RQRD</i>		
<b>ALL IR MODE selector</b>	<b>NAV</b>		
<b>EXTERIOR LIGHTS</b>	<b>SET</b>		
<b>SIGNS</b>	<b>SET</b>		
<b>PROB/WINDOW HEAT</b>	<b>AUTO</b>		
LDG ELEV	AUTO		
<b>PACK FLOW :</b>			
<b>LO = less than 115 pax</b>			
<b>NORM = 115 pax or more</b>	<b>AS RQRD</b>		
<b>HI = abnormal hot and humid conditions</b>			
ELEC panel	CHECK		
BAT	CHECK		
ENG FIRE	CHECK / TEST		
<i>AUDIO SWITCH (NI)</i>	<i>NORM</i>		
VENT panel	CHECK		
MAINTENANCE panel	CHECK		
ISIS	CHECK		
CLOCK	CHECK / SET		
<b>A/SKID &amp; N/W STRG sw</b>	<b>ON</b>		
ACP	CHECK		
SWITCHING PANEL	NORM		
<b>THRUST LEVERS</b>	<b>CHECK IDLE</b>		
ENG MASTERS	CHECK OFF		
ENG MODE selector	CHECK NORM		
GRAVITY GEAR EXTN	CHECK STOWED		
ATC	STBY	ATC	STBY
RMP	SET		
NAV CHARTS CLIPBOARD	PREPARE	NAV CHARTS CLIPBOARD	PREPARE
		<b>REQUEST CLEARANCE</b>	<b>OBTAIN</b>
		<b>TRANSPONDER</b>	<b>SET</b>
		<b>MCDU</b>	<b>CHECK</b>
<b>MCDU</b>	<b>PREPARE</b>		
•When both flight crewmembers are seated:			
<b>BAROMETRIC REFERENCE</b>	<b>SET</b>	<b>BAROMETRIC REFERENCE</b>	<b>SET</b>
<b>FD</b>	<b>CHECK ON</b>	<b>FD</b>	<b>CHECK ON</b>
LS/ILS	AS RQRD	LS/ILS	AS RQRD
ND mode and range	AS RQRD	ND mode and range	AS RQRD
VOR / ADF selector	AS RQRD	VOR / ADF selector	AS RQRD
<b>FCU</b>	<b>SET</b>		
OXY MASK	TEST	OXY MASK	TEST
PFD-ND brightness	AS RQRD	PFD-ND brightness	AS RQRD
LOUDSPEAKER knob	SET	LOUDSPEAKER knob	SET
PFD-ND	CHECK	PFD-ND	CHECK
LDG ELEV (ECAM)	CHECK AUTO	IRS ALIGN	CHECK
<b>ECAM STATUS</b>	<b>CHECK</b>		
<b>TAKEOFF BRIEFING</b>	<b>PERFORM</b>		
<b>CALL BEFORE START CHEKCLIST</b>			

BEFORE START CHEKCLIST

COCKPIT PREP	COMPLETE (BOTH)
SIGNS	ON / AUTO
ADIRS	NAV
FUEL QUANTITY	XX KG. / BALANCED
MCDU (TO DATA)	SET
BARO REF	SET
WINDOWS / DOORS	CLOSED / ARMED (BOTH)
BEACON	ON
THRUST LEVERS	IDLE
PARKING BRAKE	SET

### BEFORE START POWER AUTONOMOUS

FINAL LOADSHEET	CHECK	FINAL LOADSHEET	CHECK
FOB	CHECK	FOB	CHECK
MCDU PERF TO page	SELECT	MCDU F-PLN page	SELECT
		<b>APU FIRE</b>	<b>CHECK / TEST</b>
		<b>APU</b>	<b>START</b>
		<b>APU BLEED</b>	<b>ON</b>
		<b>EXT PWR DISCONNECTION</b>	<b>REQUEST</b>
		<b>ASU DISCONNECTION</b>	<b>REQUEST</b>
		<b>PUSHBACK / START CLEARANCE</b>	<b>OBTAIN</b>
		<b>ATC</b>	<b>SET FOR OPERATION</b>
<b>WINDOWS / DOORS</b>	<b>CHECK CLOSED</b>	<b>WINDOWS / DOORS</b>	<b>CHECK CLOSED</b>
<b>SLIDING TABLES</b>	<b>STOWED</b>	<b>SLIDING TABLES</b>	<b>STOWED</b>
<b>EXTERIOR LIGHTS</b>	<b>SET</b>		
<b>THRUST LEVERS</b>	<b>IDLE</b>		
<b>ACCU PRESS</b>	<b>CHECK</b>		
<b>NW STRG DISC</b>	<b>AS RQRD</b>		
<b>PARK BRK</b>	<b>ON</b>		
<b>ASU</b>	<b>OFF</b>		
<b>CHOCKS</b>	<b>OFF</b>		

### ENGINE START POWER AUTONOMOUS

ENG MODE selector	IGN/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 AUTONOMOUS

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		

## BEFORE START POWER ASSISTED

FINAL LOADSHEET	CHECK
FOB	CHECK
MCDU PERF TO page	SELECT
WINDOWS / DOORS	CHECK CLOSED
SLIDING TABLES	STOWED
<b>EXTERIOR LIGHTS</b>	<b>SET</b>
THRUST LEVERS	IDLE
ACCU PRESS	CHECK
NW STRG DISC	AS RQRD
<b>PARK BRK</b>	<b>ON</b>
<b>CHOCKS</b>	<b>OFF</b>

FINAL LOADSHEET	CHECK
FOB	CHECK
MCDU F-PLN page	SELECT
<b>PUSHBACK / START CLEARANCE</b>	<b>OBTAIN</b>
<b>ATC</b>	<b>SET FOR OPERATION</b>
WINDOWS / DOORS	CHECK CLOSED
SLIDING TABLES	STOWED

## ENGINE START POWER ASSISTED

<b>BLEED SELECTOR</b>	<b>START OPEN</b>
ENG MODE selector	IGN/START
ENG N 2 START	ANNOUNCE
ENG MASTER N 2 ON ENG IDLE PARAMETERS	CHECK
ENG 2 START	ANNOUNCE
BLEED SELECTOR	AUTO
ENG N 1 START	ANNOUNCE
ENG MASTER N 1 ON ENG IDLE PARAMETERS	CHECK
ENG 1 START	ANNOUNCE

ENG MASTER N 2 ON ENG IDLE PARAMETERS	MONITORING
ENG MASTER N 1 ON ENG IDLE PARAMETERS	MONITORING

## AFTER START POWER ASSISTED

ENG MODE selector	NORM
ASU	DISCONNECT
ENG ANTI ICE pb-sw	AS RQRD
WING ANTI ICE pb-sw	AS RQRD
GRD PWR	DISCONNECT
ECAM STATUS	CHECK
N/W STEER DISC MEMO	CHECK NOT DISPLAYED

<b>GND SPOILERS</b>	<b>ARM</b>
RUD TRIM	ZERO
<b>FLAPS</b>	<b>SET</b>
<b>PITCH TRIM</b>	<b>SET</b>
ECAM STATUS	CHECK

**CALL AFTER STARTUP CHECKLIST WITHOUT PUSHBACK**

### AFTER STAR CHECKLIST

ANTI ICE	AS RQRD
ECAM STATUS	CHECKED
PITCH TRIM	% SET
RUDDER TRIM	ZERO

## TAXI

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

## BEFORE TAKEOFF

		BRAKE TEMP (if brake fan running)	CHECK
		BRAKE FAN pb-sw (if brake fan running)	OFF
		<b>TAKEOFF / LINE UP CLEARANCE</b>	<b>OBTAIN</b>
<b>EXTERIOR LIGHTS</b>	<b>SET</b>		
		<b>TCAS Mode selector</b>	<b>TA or TA/RA</b>
APPROACH PATH	CLEARED OF TRAFFIC	APPROACH PATH	CLEARED OF TRAFFIC
		<b>ENG MODE selector</b>	<b>AS RQRD</b>
SLIDING TABLE	STOW	SLIDING TABLE	STOW
THRUST BUMP	AS RQRD		
TAKEOFF RUNWAY	CONFIRM	TAKEOFF RUNWAY	CONFIRM
		PACKS 1hN	AS RQRD

**CALL BEFORE TAKE OFF CHECKLIST**



**BEFORE TAKE OFF CHECKLIST**

FLT CTL	CHECKED (BOTH)
FLT INSTRUMENTS	CHECKED (BOTH)
BRIEFING	CONFIRMED
<b>FLAPS SETTING</b>	<b>CONF (BOTH)</b>
<b>V1. VR. V2./FLX TEMP</b>	<b>X CHECK</b>
<b>TRANSPONDER</b>	<b>SET</b>
ECAM MEMO	TAKEOFF NO BLUE
TAKEOFF RWY	CONFIRMED
CABIN	SECURED FOR TAKEOFF
<b>ENG MODE</b>	<b>SEL AS RQRD</b>
<b>TCAS</b>	<b>TA / RA</b>
PACKS	AS RQRD

**TAKEOFF**

TAKEOFF	ANNOUNCE		
<b>BRAKES :RELEASE THRUST LEVERS</b>	<b>FLX or TOGA</b>		<b>CHRONO START</b>
The Captain places hand on thrust levers until V1			
DIRECTIONAL CONTROL	USE RUDDER		
FMA	ANNOUNCE		PFD/ND MONITOR
<b>•BELOW 80 kt:</b>			<b>N1 (EPR) CHECK</b>
			<b>THRUST SET ANNOUNCE</b>
			<b>PFD and ENG indications MONITOR</b>
<b>•AT 100 kt:</b>			<b>ONE HUNDRED KNOTS ANNOUNCE</b>
100 kt	CHECK		
<b>•AT V1:</b>			<b>V1 ANNOUNCE</b>
<b>•AT VR:</b>			<b>ROTATION ORDER</b>
ROTATION	PERFORM		
<b>WHEN POSITIVE CLIMB:</b>			<b>POSITIVE CLIMB ANNOUNCE</b>
L/G UP	ORDER		<b>L/G SELECT UP</b>
AP	AS RQRD		
<b>•AT THR RED ALT:</b>			<b>PACK 1hN (if applicable) ON</b>
THRUST LEVERS	CL		
<b>•AT F SPEED:</b>			<b>FLAPS 1 SELECT</b>
FLAPS 1	ORDER		
<b>•AT S SPEED:</b>			<b>FLAPS 0 SELECT</b>
FLAPS 0	ORDER		
			<b>GND SPLRS DISARM</b>
			<b>EXTERIOR LIGHTS SET</b>

## AFTER TAKEOFF

		APU BLEED pb-sw	AS RQRD
		APU MASTER SW	AS RQRD
		ENG MODE selector	AS RQRD
		TCAS Mode selector 8	TA/RA
		<b>ANTI ICE pb-sw</b>	<b>AS RQRD</b>

CALL AFTER TAKEOFF CHECKLIST

### AFTER TAKEOFF CHECKLIST

LANDING FLAPS PACKS BARO REF	GEAR UP RETRACTED ON STANDARD SET
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## CLIMB

MCDU	PERF CLB	MCDU	F-PLN
FCU / FMGS	SET IF AP ON	FCU / FMGS	SET IF AP OFF
•At transition altitude:			
<b>BAROMETRIC REFERENCE</b>	<b>SET STD / XCHECK</b>	<b>BAROMETRIC REFERENCE</b>	<b>SET STD / XCHECK</b>
RADAR	ADJUST AS APPROPRIATE	ENG ANTI ICE	AS RQRD
•At 10 000 ft:			
		<b>LAND LIGHTS selector</b>	<b>RETRACT</b>
		<b>SEAT BELTS sw</b>	<b>AS RQRD</b>
EFIS OPTION	AS RQRD	EFIS OPTION	AS RQRD
		ECAM MEMO	REVIEW
		NAVAIDS	CLEAR
		<b>SEC F-PLN</b>	<b>AS RQRD</b>
		OPT / MAX ALT	CHECK

## CRUISE

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

## DESCENT PREPARATION

NAV CHARTS CLIPBOARD	PREPARE
LDG PERFO	CONFIRM
<b>FMS</b>	<b>PREPARE</b>
LDG ELEV	CHECK
<b>AUTO BRK</b>	<b>AS RQRD</b>
APPR BRIEFING	PERFORM
TERR ON ND 8	AS RQRD
RADAR	ADJUST AS APPROPRIATE
<b>CLEARED ALTITUDE ON FCU</b>	<b>SET</b>

<b>WEATHER AND LANDING INFORMATION</b>	<b>OBTAIN</b>
NAV CHARTS CLIPBOARD	PREPARE
LDG PERFO	CHECK
<b>FMS PREPARATION</b>	<b>CHECK</b>
GPWS LDG FLAP 3	AS RQRD
TERR ON ND 8	AS RQRD
<b>ENG ANTI ICE pb-sw</b>	<b>AS RQRD</b>
WING ANTI ICE pb-sw	AS RQRD
<b>DESCENT CLEARANCE</b>	<b>OBTAIN</b>

## DESCENT

MCDU	PROG / PERF DESCENT
DESCENT	MONITOR / ADJUST
•When the aircraft approaches the transition level, and when cleared for an altitude:	
<b>BAROMETRIC REFERENCE</b>	<b>SET / XCHECK</b>
•At 10 000 ft:	
EFIS option pb	.CSTR
<b>LS pb</b>	<b>AS RQRD</b>
•If GPS PRIMARY not available:	
NAV ACCY	CHECK

MCDU	F-PLN
<b>BAROMETRIC REFERENCE</b>	<b>SET / XCHECK</b>
ECAM STATUS	CHECK
<b>LAND LIGHTS sw</b>	<b>SET</b>
<b>SEAT BELTS sw</b>	<b>ON</b>
EFIS option pb	CSTR
<b>LS pb</b>	<b>AS RQRD</b>
<b>RADIO NAV</b>	<b>SELECT / IDENT</b>
ENG MODE selector	AS RQRD

## AIRCRAFT CONFIGURATION FOR APPROACH

F-PLN SEQUENCING	ADJUST		
•Approx 15 NM from touchdown:			
<i>APPR PHASE ..... ACTIVATE or set green dot</i>			
MANAGED SPEED	CHECK		
FLIGHT PATH	MONITOR	NAV ACCURACY	MONITOR
SPEED BRAKES lever	AS RQRD		
RADAR	ADJUST AS APPROPRIATE		
INTERMEDIATE / FINAL APPROACH:			
•At green dot:			
FLAPS 1	ORDER	FLAPS 1	SELECT
<i>SPEED..... CHECK OR SET</i>			
		TCAS 8	TA or TA/RA
•At 2 000 ft AGL minimum:			
FLAPS N	ORDER	FLAPS N	SELECT
<i>F SPEED..... CHECK OR SET</i>			
When FLAPS 2:			
/G DOWN	ORDER	L/G	SELECT DOWN
		AUTO BRAKE	CONFIRM
		GRND SPLRS	ARM
		EXTERIOR LIGHTS	SET
•When LIG down:			
FLAPS 3	ORDER	FLAPS 3	SELECT
		ECAM WHEEL PAGE	.CHECK
•When FLAPS 3:			
FLAPS FULL	ORDER	FLAPS FULL	SELECT
<i>SPEED TARGET..... CHECK OR SET</i>			
		A/THR	CHECK SPD or OFF
		WING A. ICE (if not required)	OFF
SLIDING TABLE	STOW	SLIDING TABLE	STOW
ALL EFB (with no mounted equipment)	STOW	ALL EFB (with no mounted equipment)	STOW
		LDG MEMO	CHECK NO BLUE
CABIN REPORT	RECEIVE		
ANNOUNCE ANY FMA MODIFICATION		FLT PARAMETERS	MONITOR
		Announce any deviation in excess of:	
		• 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 °	
CALL APPROACH CHECKLIST			

**AFTER APPROACH CHECKLIST**

BRIEFING	CONFIRMED
ECAM STATUS	CHECKED
SEAT BELTS	ON
BARO REF	SET
MDA / DH	SET (BOTH)
ENG MODE SEL	AS RQRD

**APPROACH USING LOC GIS GUIDANCE**

DESCENT PREPARATION:		
APPROACH MINIMUM	DETERMINE	
APPROACH BRIEFING	PERFORM	
INITIAL / INTERMEDIATE APPROACH:		
APPR pb on FCU	PRESS	
BOTH AP	ENGAGE	
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:
		• 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:		
<b>CONTINUE OR GO-AROUND</b>	ANNOUNCE	<b>MONITOR OR ANNOUNCE</b>
For CATIII with no DH approach:		
•At 100 ft RA:		
If no failure detected		
<b>CONTINUE</b>	<b>ANNOUNCE</b>	

## APPROACH USING FINAL APP GUIDANCE

DESCENT PREPARATION:	
F-PLN A Page	CHECK
PROG Page	COMPLETE
GO AROUND STRATEGY	REVIEW
DESCENT:	
•At 10 000 ft:	
NAV ACCURACY	CHECK
•For RNAV(GNSS):	
GPS PRIMARY	CHECK
BARO REF	SET
INITIAL / INTERMEDIATE / FINAL APPROACH:	
POSITION	MONITOR
<b>APPR pb on FCU</b>	<b>PRESS</b>
<b>APP NAV</b>	<b>CHECK ARMED or ENGAGED</b>
<b>FINAL</b>	<b>CHECK ARMED</b>
•At Final Descent Point:	
FINAL APP	CHECK ENGAGED

WEATHER AND LANDING INFO	OBTAIN
F-PLN A Page	CHECK
PROG Page	COMPLETE

GO AROUND ALT..... SET

At minimum h100 ft:	
•At minimum:	
<b>CONTINUE OR GO-AROUND</b>	<b>ANNOUNCE</b>

FLT PARAMETERS	MONITOR
Announce any deviation in excess of:	
• XTK > 0.1 NM	
• V/DEV > ½ dot	
ONE HUNDRED ABOVE	MONITOR OR ANNOUNCE
<b>MINIMUM</b>	<b>MONITOR OR ANNOUNCE</b>

## APPROACH USING FPA GUIDANCE

DESCENT PREPARATION:			
F-PLN A Page	CHECK	F-PLN A Page	CHECK
PROG Page	COMPLETE	PROG Page	COMPLETE
GO AROUND STRATEGY	REVIEW		
DESCENT:			
•At 10 000 ft:			
NAV ACCURACY	CHECK		
•For RNAV(GNSS):			
GPS PRIMARY	CHECK		
INITIAL / INTERMEDIATE / FINAL APPROACH:			
LATERAL GUIDANCE MODE	SET FOR APPROACH		
•For LOC ONLY and ILS GIS OUT			
<b>LOC pb-sw</b>	<b>PRESS</b>		
<b>LOC</b>	<b>CHECK ARMED</b>		
•For back course localizer approaches:			
<b>TRK FPA MODE</b>	<b>USE FOR APPROACH</b>		
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:			
<b>CONTINUE OR GO-AROUND</b>	<b>ANNOUNCE</b>	<b>MINIMUM</b>	<b>ANNOUNCE</b>

## MANUAL LANDING

<ul style="list-style-type: none"> <li>•In stabilized approach conditions, at approx. 30 ft:</li> </ul>		
FLARE	PERFORM	ATTITUDE
THRUST LEVERS	IDLE	MONITOR
•At touchdown:		
DEROTATION	INITIATE	
BOTH THRUST LEVERS	REV MAX or REV IDLE	GRND SPLRS
		CHECK / ANNOUNCE
DIRECTIONAL CONTROL	ENSURE	REVERSERS
BRAKES	AS RQRD	CHECK / ANNOUNCE
•At 70 kt:		DIRECTIONAL CONTROL
BOTH THRUST LEVERS	REV IDLE	MONITOR
•At taxi speed:		DECELERATION
BOTH THRUST LEVERS	FWD IDLE	CHECK / ANNOUNCE
•Before 20 kt:		
AUTOBRK	DISENGAGE	SEVENTY KNOTS
		ANNOUNCE
<b>CALL LANDING CHECKLIST</b>		

### LANDING CHECKLIST

<p>CABIN</p> <p><b>A / THR SPEED /</b></p> <p><b>AUTOBRAKE</b></p> <p><b>GO-AROUND</b></p> <p>ECAM MEMO LDG NO BLUE</p> <p>. L/G DOWN</p> <p>. SIGNS ON</p> <p>. SPLRS ARM</p> <p>. FLAPS SET</p>	<p>SECURED FOR LANDING</p> <p><b>OFF</b></p> <p><b>AS REQ</b></p> <p><b>ALT FT SET</b></p>
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## AUTOLAND

<p>•At 350 ft RA</p> <p>ILS/GLS 8 /MLS 8 COURSE ON PFD      CHECK</p>	
	Monitor auto callout
<p>•At 40 ft RA</p>	
	FLARE mode      CHECK ENGAGED / ANNOUNCE
<p>•At 30 ft RA</p>	
	THRUST IDLE mode      CHECK
<p>•At 10 ft RA : autocalloout "RETARD"</p>	
BOTH THRUST LEVERS      IDLE	
LATERAL GUIDANCE      MONITOR	
<p>•At TOUCH DOWN</p>	
	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
<p>•At 70 kt :</p>	
	SEVENTY KNOTS      ANNOUNCE
BOTH THRUST LEVERS      REV IDLE	
<p>•Before 20 kt:</p>	
AUTO BRK      DISENGAGE	
<p>•End of roll out</p>	
BOTH THRUST LEVERS      FWD IDLE	
AP      OFF	
<b>CALL LANDING CHECKLIST</b>	

### LANDING CHECKLIST

<p>CABIN</p> <p>A / THR SPEED /</p> <p>AUTOBRAKE</p> <p>GO-AROUND</p> <p>ECAM MEMO LDG NO BLUE</p> <p>. L/G DOWN</p> <p>. SIGNS ON</p> <p>. SPLRS ARM</p> <p>. FLAPS SET</p>	<p>SECURED FOR LANDING</p> <p>OFF</p> <p>AS REQ</p> <p>ALT FT SET</p>
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## GO AROUND

<b>THRUST LEVERS</b>	<b>TOGA</b>
ROTATION	PERFORM
GO-AROUND	ANNOUNCE
FMA	ANNOUNCE
<b>L/G UP</b>	<b>ORDER</b>
AP	AS RQRD
NAV or HDG mode	AS RQRD
•AT GA THR RED ALT:	
<b>THRUST LEVERS</b>	<b>CL</b>
•AT GA ACCEL ALT:	
SPEED	MONITOR
•AT F SPEED:	
<b>FLAPS 1</b>	<b>ORDER</b>
•AT S SPEED:	
<b>FLAPS 0</b>	<b>ORDER</b>

FLAPS lever	SELECT AS RQRD
POSITIVE CLIMB	ANNOUNCE
L/G	UP
<b>FLAPS 1</b>	<b>SELECT</b>
<b>FLAPS 0</b>	<b>SELECT</b>
<b>GND SPLRS</b>	<b>DISARM</b>
<b>EXTERIOR LIGHTS</b>	<b>SET</b>

## AFTER LANDING

<b>GRND SPLRS</b>	<b>DISARM</b>		
<b>EXTERIOR LIGHTS</b>	<b>SET</b>		
		<b>RADAR</b>	<b>OFF</b>
		<b>ENG MODE selector</b>	<b>NORM</b>
		<b>FLAPS</b>	<b>RETRACT</b>
		<b>TCAS</b>	<b>STBY</b>
		<b>ATC</b>	<b>AS RQRD</b>
		<b>APU</b>	<b>START</b>
		<b>ANTI ICE</b>	<b>AS RQRD</b>
		<b>BRAKE TEMP</b>	<b>CHECK</b>

### CALL AFTER LANDING CHECKLIST

<b>AFTER LANDING CHECKLIST</b>	
FLAPS	RETRACTED/1+F
SPOILERS	DISARMED
APU	AS REQ
RADAR	OFF
PREDECTIVE RADAR WINSHEAR SYSTEM	OFF

## PARKING

<b>ACCU PRESS</b>	<b>CHECK</b>	<b>ANTI-ICE</b>	<b>OFF</b>
<b>PARKING BRAKE handle</b>	<b>ON</b>	<b>APU BLEED pb-sw</b>	<b>ON</b>
<b>ALL ENG MASTERS</b>	<b>OFF</b>		
SLIDES	CHECK DISARMED		
<b>SEAT BELTS sw</b>	<b>OFF</b>	<b>FUEL PUMPS</b>	<b>OFF</b>
<b>EXTERIOR LIGHTS</b>	<b>SET</b>	<b>ATC</b>	<b>STBY</b>
GROUND CONTACT	ESTABLISH	IRS PERFORMANCE	CHECK
		FUEL QTY	CHECK
		STATUS	CHECK
PARKING BRK	AS RQRD	BRAKE FAN	OFF
Dus	DIM	Dus	DIM
ALL EFB TRANSMITTING MODE	AS RQRD	ALL EFB TRANSMITTING MODE	AS RQRD

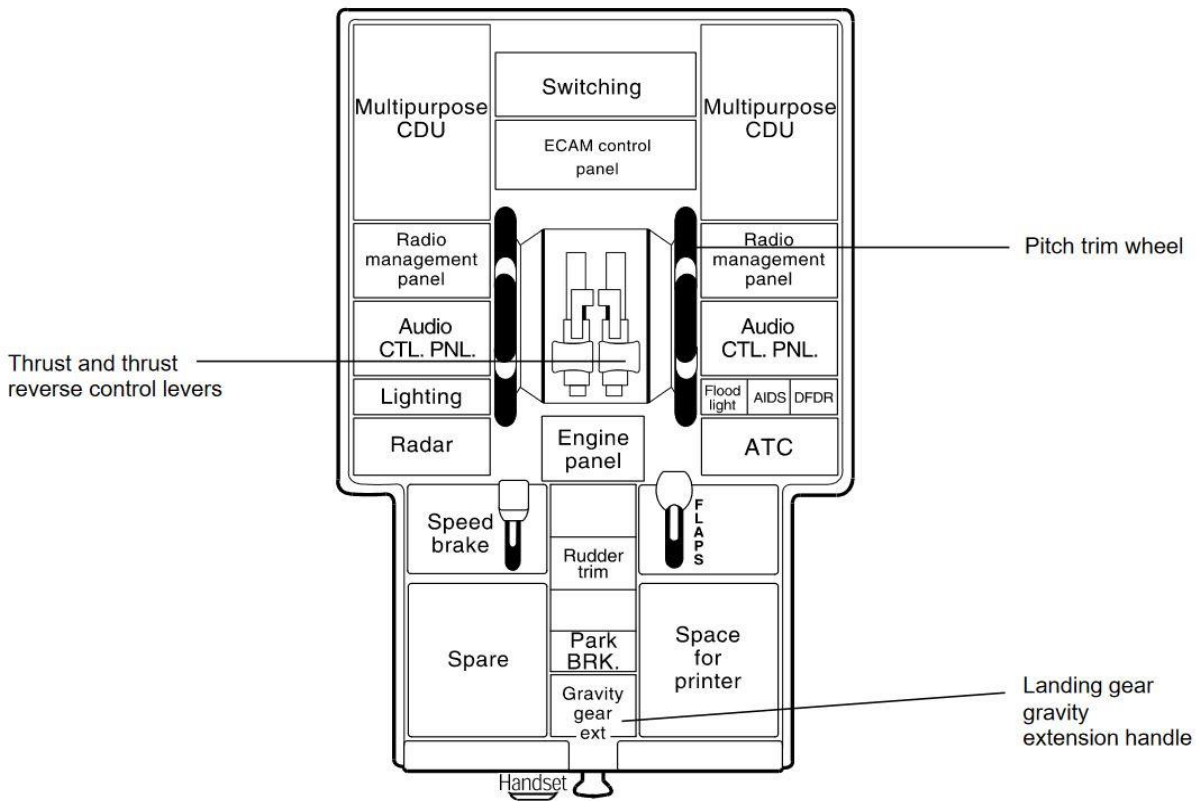
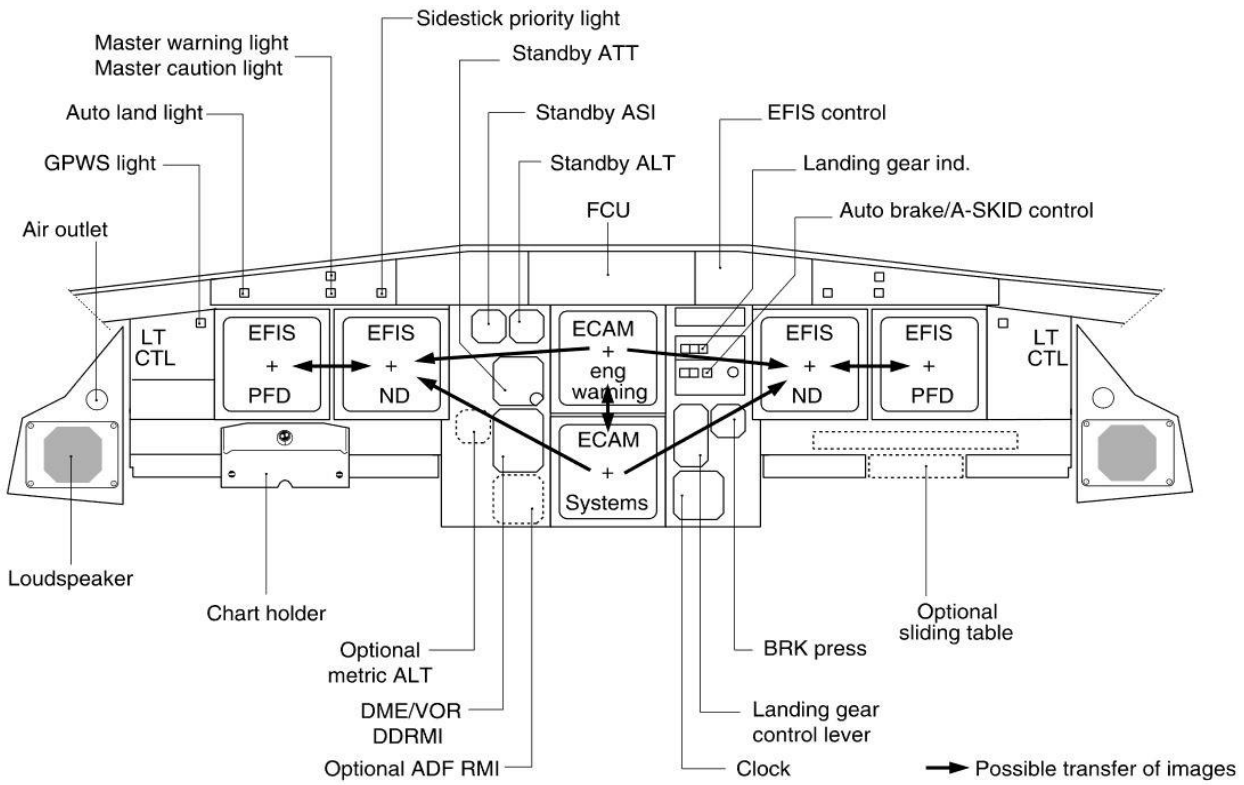
### CALL PARKING CHECKLIST

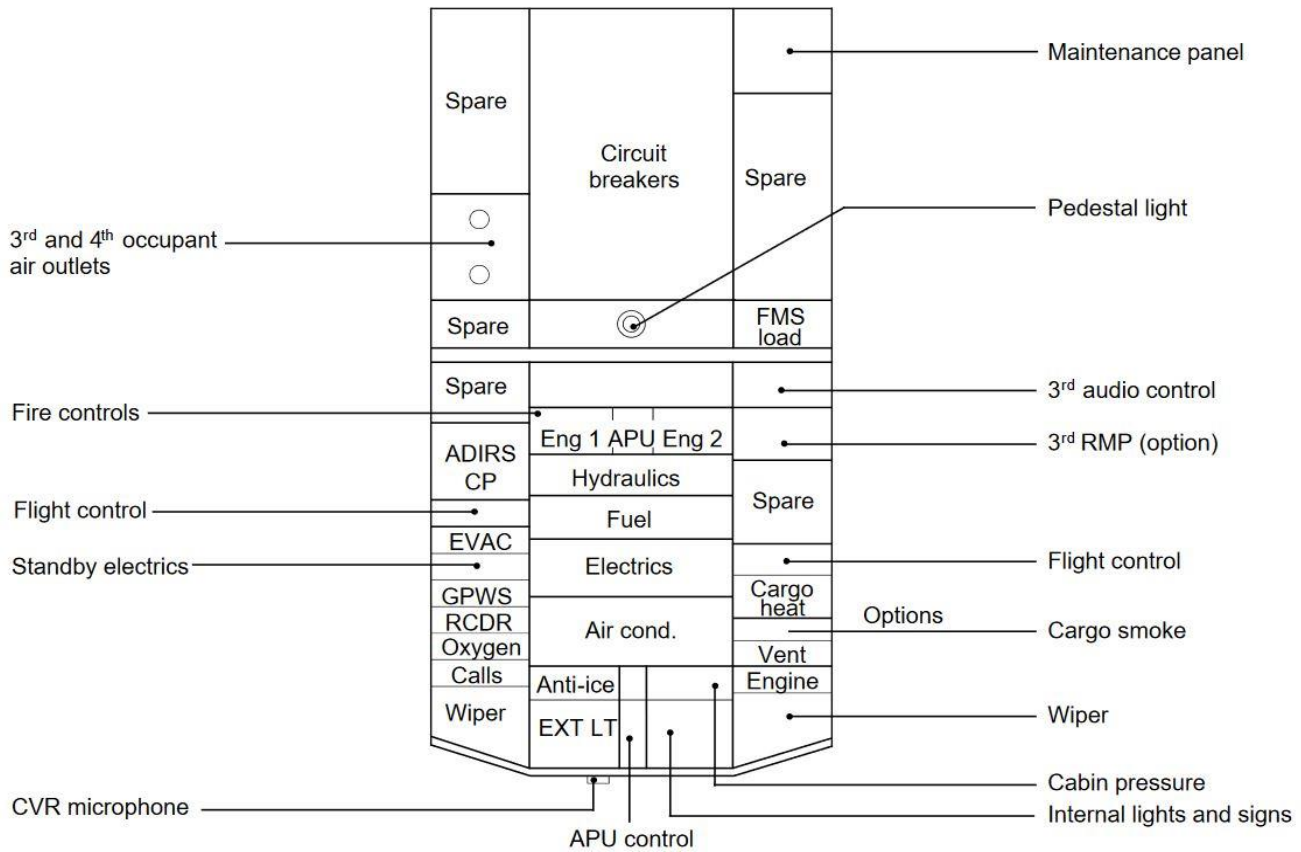
<b>PARKING CHECKLIST</b>	
APU BLEED	AS RQRD
Y ELEC PUMP	OFF
ENGINES	OFF
SEAT BELTS	OFF
EXT LT	AS RQRD
FUEL PUMPS	OFF
PARK BRK and CHOCKS	AS RQRD
TRANSPONDER	STBY

## SECURING THE AIRCRAFT





<b>PARKING BRK</b>	<b>CHECK ON</b>		
<b>ALL IR MODE selectors</b>	<b>OFF</b>		
EFB applications	CLOSE		
ALL EFB	SWITCH OFF		
<b>CALL SECURING THE AIRCRAFT CHECKLIST</b>			

<b>SECURING THE AIRCRAFT CHECKLIST</b>	
ADIRS	OFF
OXYGEN	OFF
APU BLEED	OFF
EMER EXIT LT	OFF
NO SMOKING	OFF
APU AND BAT	OFF





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"> <li>Flight Plan Waypoint</li> <li>FMGC Database Waypoint: Displayed when the waypoint pb is pressed on the EFIS control panel.</li> <li>"TO" Waypoint.</li> </ul>
	<b>Speed Change</b> <ul style="list-style-type: none"> <li>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).</li> </ul>
	<b>Deceleration Point</b> <ul style="list-style-type: none"> <li>Indicates where the aircraft will initiate an automatic deceleration toward <math>V_{APP}</math>.</li> <li>Managed NAV mode and managed speed must be engaged.</li> </ul>

	<p><b>Altitude Constraints</b></p> <ul style="list-style-type: none"> <li>• Constraint is predicted to be met when the aircraft is in managed lateral and vertical modes.</li> <li>• 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.</li> <li>• Constraint is not being considered by the FMGC.</li> </ul>
	<p><b>Flight Plan Routes</b></p> <ul style="list-style-type: none"> <li>• The NAV modes can display the following flight plans. <ul style="list-style-type: none"> <li>• A green line represents the <b>Active Flight Plan</b>. <ul style="list-style-type: none"> <li>• <b>Managed Mode:</b> The course line will be continuous and depict the waypoints in range that are yet to be overflown. <ul style="list-style-type: none"> <li>• 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.</li> </ul> </li> <li>• A continuous blue line depicts the <b>Missed Approach Procedure</b>.</li> <li>• A dashed blue line depicts the <b>Alternate Flight Plan</b> until activated. Once activated, the alternate flight plan is displayed in green.</li> <li>• 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.</li> <li>• <b>Note:</b> 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.</li> </ul> </li> <li>• <b>Selected Mode:</b> If HDG is selected (FCU HDG knob pulled) the active flight plan line will be dashed. <ul style="list-style-type: none"> <li>• 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.</li> </ul> </li> </ul> </li> <li>• A continuous white line depicts the <b>Secondary Flight Plan</b>. The ND will continue to display the active flight plan and where common legs occur, the course line will be a continuous green line.</li> <li>• A dashed yellow line represents the <b>Temporary Flight Plan</b>.</li> </ul>
	<p><b>Airports</b></p> <ul style="list-style-type: none"> <li>• Airports included in flight plan: <ul style="list-style-type: none"> <li>• If the runway is specified in the flight plan (departure or destination) it is represented by the oriented runway symbol in white.</li> <li>• If the runway is not specified in the flight plan it is represented by a star and the identification is displayed in white.</li> </ul> </li> <li>• The magenta star represents the airports that are displayed by pressing the APRTS pb on the EFIS control panel.</li> </ul>
	<p><b>ILS Marker Beacon (Diamond Shape)</b></p> <ul style="list-style-type: none"> <li>• Outer marker</li> <li>• Middle marker</li> <li>• Inner marker</li> </ul>



### Nav aids

The ND can display:

- TACAN/DME
- VOR
- VOR/DME
- NBD nav aids from the database.
  - The color of the symbols will vary depending on its current status:
    - 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.



### Holding Pattern

- 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 not part of the active or next leg.



### 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).