



A350 MANUAL

Microsoft *Flight*
Simulator

Preface

FOR SIMULATION USE ONLY - DESIGNED FOR SINGLE-PILOT OPERATIONS

This guide is designed to help provide a straightforward set of instructions to aid in operating the iniBuilds A350 Airliner. It has been produced using multiple real-world A350 operator manuals from various dates and sources with modifications to various procedures to make them more manageable under single-pilot operations.

PHOTOSENSITIVE SEIZURE WARNING

A very small percentage of people may experience a seizure when exposed to certain visual images, including flashing lights or patterns that may appear in video games. Even people who have no history of seizures or epilepsy may have an undiagnosed condition that can cause these “photosensitive epileptic seizures” while playing video games.

Immediately stop playing and consult a doctor if you experience any symptoms.

These seizures may have a variety of symptoms, including light-headedness, altered vision, eye or face twitching, jerking, or shaking of arms or legs, disorientation, confusion, or momentary loss of awareness. Seizures may also cause loss of consciousness or convulsions that can lead to injury from falling down or striking nearby objects.

Parents should watch for or ask their children about the above symptoms. Children and teenagers are more likely than adults to experience these seizures.

You may reduce risk of photosensitive epileptic seizures by taking the following precautions:

- Play in a well-lit room.
- Do not play if you are drowsy or fatigued.

If you or any of your relatives have a history of seizures or epilepsy, consult a doctor before playing video games.

Copyright

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About the iniBuilds A350 Airliner

The A350 is a revolutionary wide-body aircraft that has redefined the standards of efficiency, comfort, and sustainability in modern aviation. This state-of-the-art aircraft was introduced to the global market in 2015, quickly becoming a symbol of innovation and excellence in the industry. Airlines around the world have embraced the A350 for its ability to deliver outstanding operational performance, reduce environmental impact, and enhance the passenger experience on long-haul flights.

One of the most remarkable aspects of the A350 is its advanced design and engineering. The aircraft incorporates more than 70% advanced materials in its construction, including carbon-fibre-reinforced polymers, titanium, and new aluminium alloys. These materials not only make the A350 significantly lighter but also improve its aerodynamic efficiency. The lightweight design is complemented using the Rolls-Royce Trent XWB engines, which are among the most efficient engines ever developed for commercial aviation. Together, these innovations result in a 25% reduction in fuel consumption and greenhouse gas emissions compared to previous-generation aircraft of similar size, making the A350 a leader in sustainable aviation.

The A350's spacious and thoughtfully designed cabin is another key feature that sets it apart. The aircraft's wider fuselage allows for flexible seating configurations, making it suitable for a variety of airline needs, from luxurious first-class suites to efficient economy cabins. Additionally, the cabin is equipped with advanced air circulation and pressurization systems that maintain optimal humidity and reduce fatigue during long-haul journeys. These features, combined with significantly quieter engines, ensure a more comfortable and relaxing experience for travellers.

Airlines and passengers alike also appreciate the A350's cutting-edge technology. The aircraft is equipped with the latest in-flight entertainment systems, offering passengers a wide range of options to stay entertained throughout their journey. Its innovative LED lighting system can be customized to mimic natural light cycles, helping to reduce the effects of jet lag by promoting better sleep and wake patterns. These thoughtful touches underline the commitment to creating a superior flying experience.

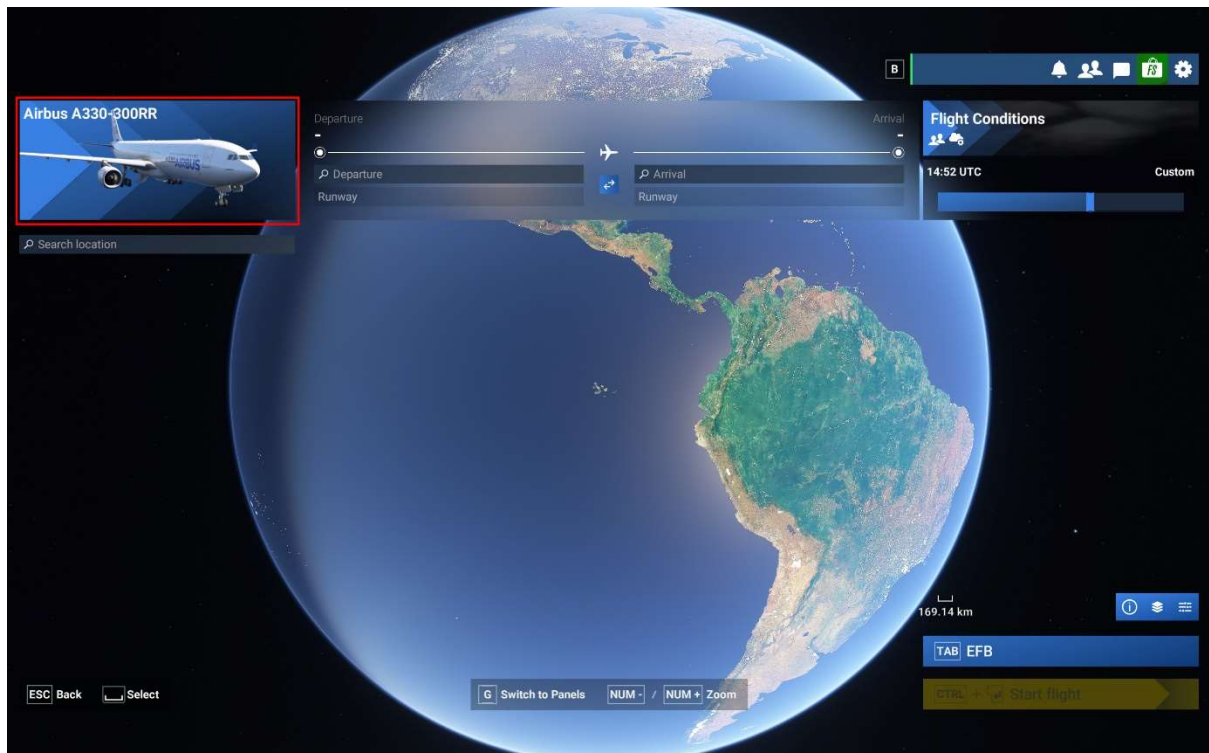
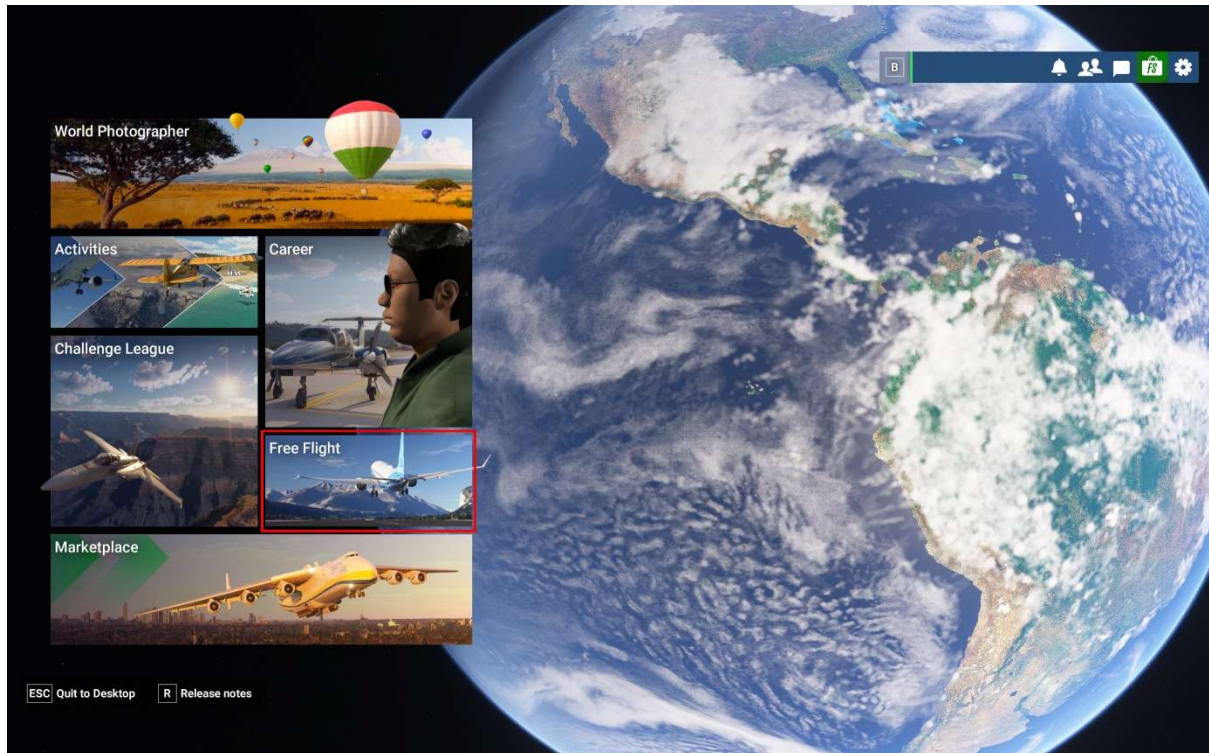
The iniBuilds A350 Airliner family includes multiple variants, such as the A350-900 and the larger A350-1000, which offer airlines the flexibility to optimize their fleets for different route structures and passenger capacities. With a range of over 8,000 nautical miles, the A350 is ideally suited for ultra-long-haul routes, enabling direct flights between distant cities and reducing the need for stopovers. This capability enhances operational efficiency while providing passengers with more convenient travel options.

In summary, the A350 is much more than just an aircraft; it is a testament to what is possible when cutting-edge technology meets a commitment to sustainability and passenger well-being. From its innovative materials and fuel-efficient engines to its focus on comfort and environmental stewardship, the A350 has set a new benchmark for the aviation industry. As airlines continue to modernize their fleets and prioritize both performance and sustainability, the A350 stands out as a pioneering solution for the future of air travel.

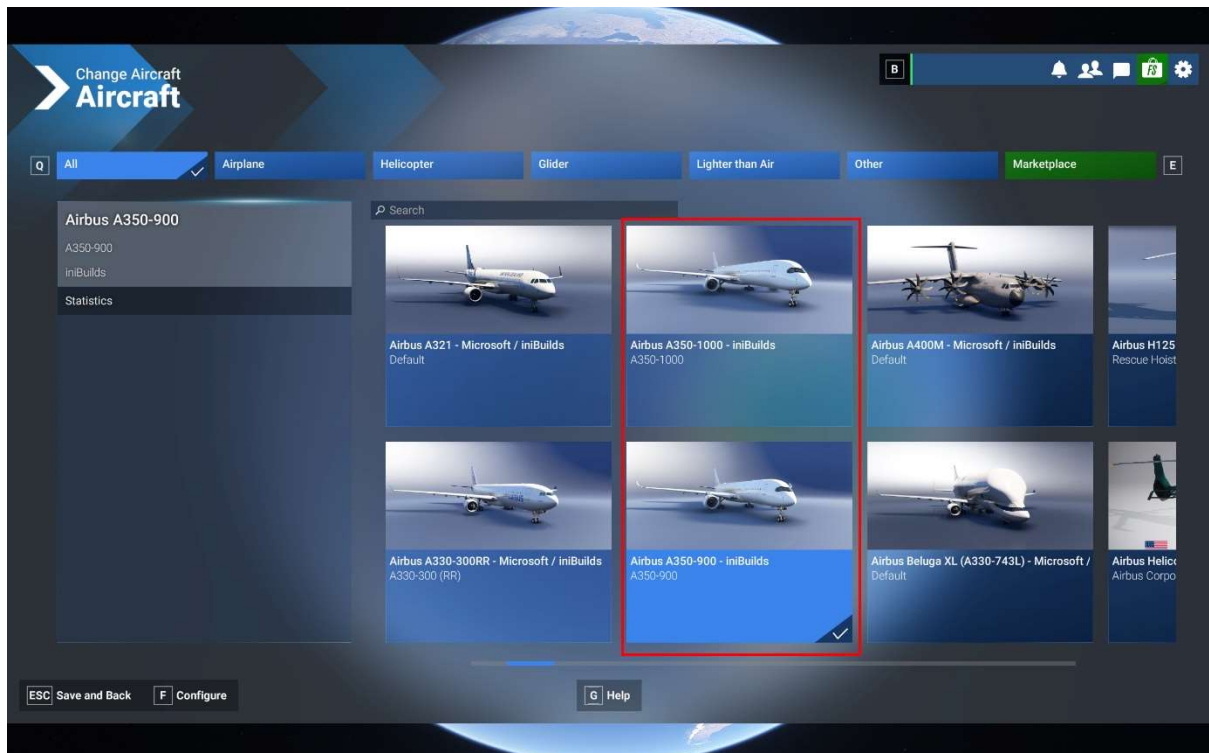


Aircraft Selection and Liveries

To fly the iniBuilds A350 Airliner, you will need to select it from the Aircraft Selection menu. Click on FREE FLIGHT in the Main Menu and click the AIRCRAFT SELECTION icon on the top left.



Scroll until you see the A350 or type “A350” in the search bar and select the aircraft.



Click on Configure to select the model variant (with or without cabin) and select the Livery.



Cockpit Interaction

Some knobs within the cockpit have interaction where you can push, pull, or scroll them for their functionality.

This functionality will vary depending on your simulator's specific settings under FLIGHT INTERFACE > COCKPIT CAMERA > COCKPIT INTERACTION SYSTEM.

If a control is set to "Lock," left click (and hold the left mouse button) the knob and push the mouse for "push" interaction and pull the mouse for "pull" interaction. Some functions also may have a middle-mouse button "scroll" or "push" and right-mouse click "set" functions.

If it is set to "Legacy," you will see an icon appear to the left, right, above, or below, which you use the middle-mouse wheel to scroll as if a circular arrow, and left click to "set" as if an up or down arrow icon.

On the Xbox, press **A** to interact with the knob and use **A** to "push," **X** to "pull," Right Stick to "scroll," and **B** to finish the control input.



Checklists

While this guide offers comprehensive operational instructions, iniBuilds has incorporated procedural checklists within the simulator. These can be accessed via the native EFB.

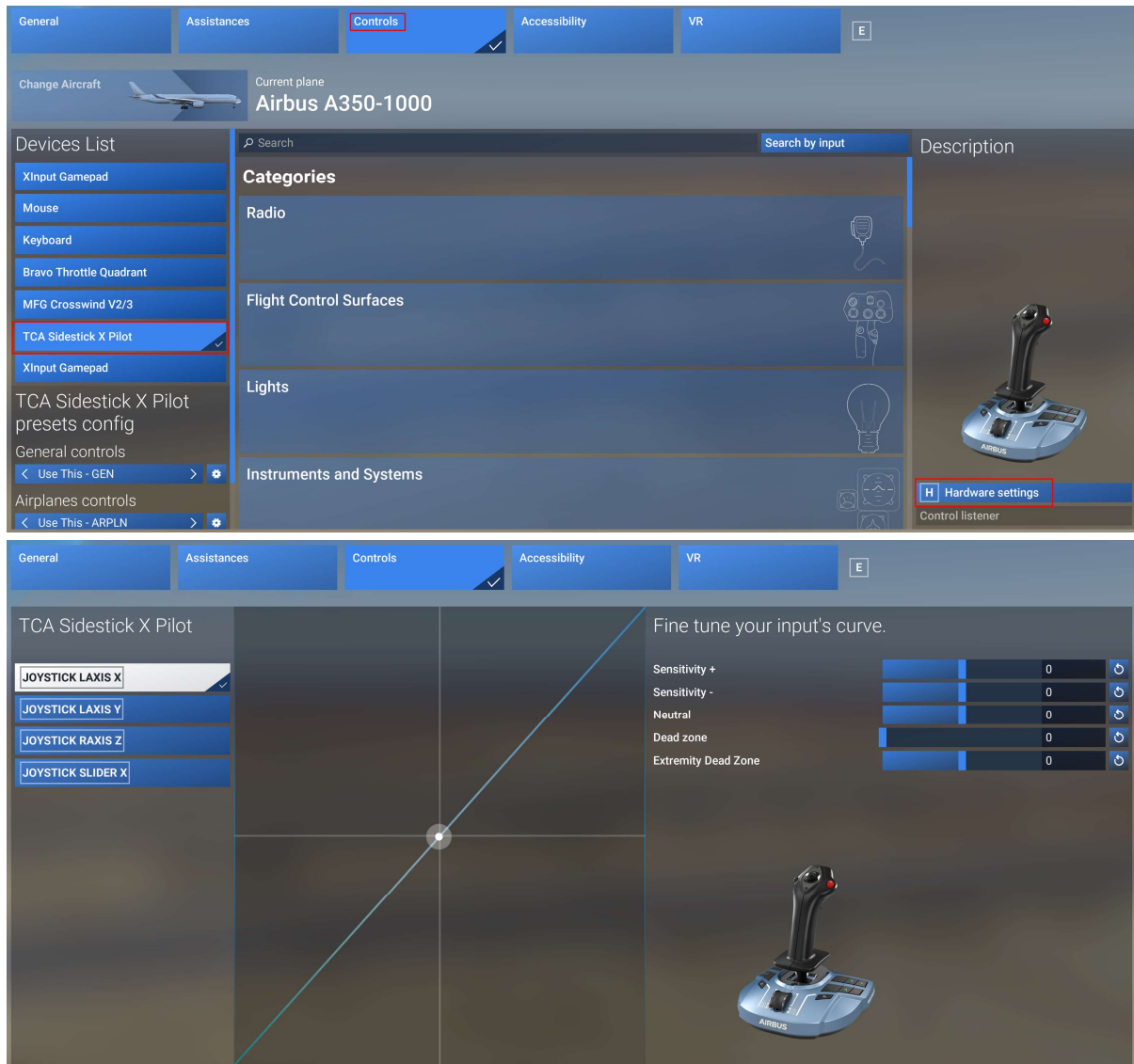


There are also checklists included on the MFD via the C/L MENU button.



Recommended Control Sensitivity Settings

Our aircraft are best used with linear sensitivity settings for your axis, with deadzones as necessary for your hardware. To set this, go to your Settings > Controls > Select your controller > Hardware settings.



Limitations

Weight Limits

	A350-900		A350-1000	
Limitation	KG	Lbs	KG	Lbs
Maximum Take-off Weight (MTOW)	283,000	623,900	322,000	709,880
Maximum Landing Weight	207,000	456,350	236,000	520,290
Maximum Zero Fuel Weight (MZFW)	195,700	431,440	223,000	491,630
Operating Empty Weight (OEW / DOW)	140,000	308,640	155,000	341,710

Under exceptional conditions, an immediate landing is permitted at any weight below MTOW provided the overweight landing procedure is followed.

Fuel Capacity

	A350-900		A350-1000	
Limitation	KG	Lbs	KG	Lbs
Maximum Quantity	112,800	248,680	124,651	274,800

Speeds & Performance Limits

Minimum Control Speeds

	A350-900	A350-1000
Minimum Control Speed on Ground (VMCG) [CONF 1+F]	131 KTS	131 KTS
Minimum Control Speed in Air (VMCA)	131 KTS	134 KTS

Gear Operating Speeds

Maximum Gear Operation Speed extension & retraction VLO	250 KT	M 0.55
Maximum Gear Locked Down Speed VLE	250 KT	M 0.55



Miscellaneous Speeds

	A350-900	A350-1000
Maximum Tire Ground Speed	204 KTS	213 KTS
Maximum Windshield Wiper Operation Speed	230 KTS	230 KTS

Flight Manoeuvring g-Load Limits

Clean Configuration	+2.5 g	-1 g
Slats Extended Configuration	+2 g	0 g

Airport Operation Limitations

Mean Runway Slope	± 2 %
Maximum Runway Altitude (Non-Autoland)	12,500 ft AMSL



Maximum Slats/Flaps Speeds (VFE)

Note: Max FL for slats and flaps FL200

A350-900						
Flight Phase	CONF	Slats	Inner Flaps	Outer Flaps	Ailerons	Max Speed (IAS)
Approach	1	18	0	0	0	255 KTS
Take-off and Approach	1+F	18	16	16	10	220 KTS
Take-off and Approach	2	18	20	20	10	212 KTS
Take-off	3	18	26	26	10	195 KTS
Approach and Landing	3	24	26	26	0	195 KTS
Landing	FULL	24	37.5	37.5	0	186 KTS

A350-1000						
Flight Phase	CONF	Slats	Inner Flaps	Outer Flaps	Ailerons	Max Speed (IAS)
Approach	1	18	0	0	0	260 KTS
Take-off and Approach	1+F	18	14.5	14	10	231 KTS
Take-off and Approach	2	18	21	20	10	219 KTS
Take-off	3	18	27	26	10	206 KTS
Approach and Landing	3	25.5	27	26	0	206 KTS
Landing	FULL	25.5	36	36	-5	192 KTS



Wind Speed Limitations

	A350-900	A350-1000
Maximum Tailwind Component (Take-off)	15 KTS	15KTS
Maximum Tailwind Component (Landing)	10 KTS	10 KTS
Maximum Certified Crosswind for Take Off (Dry Runway)	35 KTS	35 KTS
Computed Demonstrated Crosswind for Landing	40 KTS	40 KTS
Maximum Wind for Passenger and Cargo Door Operation	40 kts	40 KTS

Autoland Limitations

	A350-900	A350-1000
Maximum Headwind Component	40 KTS	30 KTS
Maximum Crosswind Component	30 KTS	30 KTS
Maximum Tailwind Component	10 KTS	10 KTS
Maximum Altitude	9,200 ft	
Glide Slope	-2.5 to -3.5 degrees	



A350 Specifications

	A350-900	A350-1000
Cruise Speed	488 KTAS	
Max Altitude	43,100 ft	41,450 ft
Max Weight	283,000 kg (623,900 lb)	322,000 kg (709,880 lbs)
Range	8,500 NM	8,900 NM
Fuel Capacity	140,500 L (37,110 gal)	155,260 L (41,010 gal)
Length	66.61 m (218 ft 6 in)	75.59 m (248 ft)
Wingspan	64.75 m (212 ft 5 in)	



Important notes about the A350

The A350 is operated by two pilots, however, we have written the procedures for our simulated version for a single pilot.

These aircraft are operated using several core concepts and design philosophies, explained below.

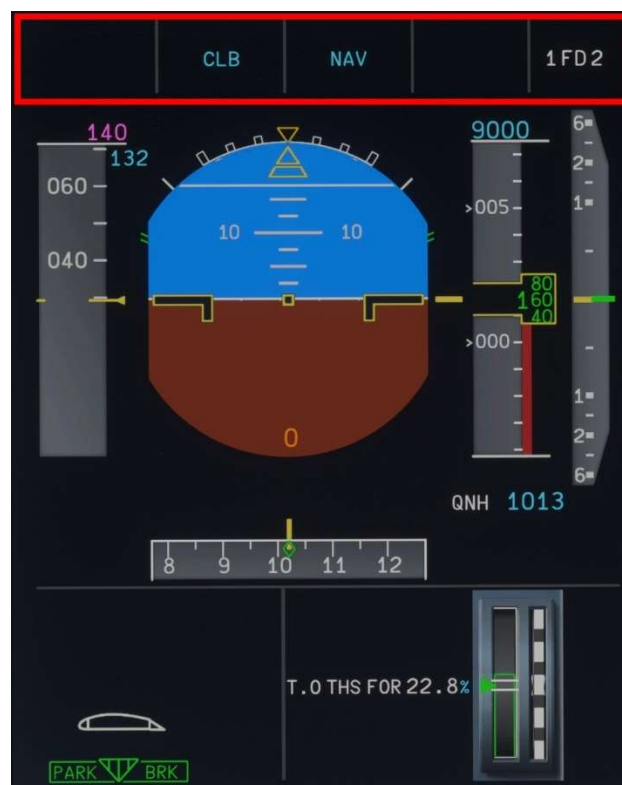
Flying Management Rules

1. Aviate, navigate and communicate: This basic rule of flying still applies to airliners.
2. Always use the appropriate level of automation for the phase of flight and situation.
3. Always understand what the aircraft is doing, know your Flight Mode Annunciator (FMA).
4. Take over if the situation is not developing as you expect, remember that you are always in control of the aircraft.

The FMA (Flight Mode Annunciator)

The FMA is one of the most critically important systems on any aircraft. It indicates the lateral, vertical and thrust mode engagement and status. Important messages in connection with flight guidance, FMS and flight controls are also displayed at the bottom of the FMA.

The FMA is located at the top of the PFD.



The colours present in the FMA indicate the **status** of the modes.

Blue indicates **armed**

Green indicates **engaged**

Magenta is displayed in connection with **altitude constraints**

White indicates **Approach and Landing capability, Autopilot, Auto-Thrust engagement status**

Each column on the FMA shows what the Autopilot (AP) or Auto Thrust (A/THR) is undertaking.



Orange = Auto thrust operation

Indicates the aircraft's thrust setting.

Red = Vertical mode

Indicates the vertical mode the Flight Director and Autopilot are following.

Grey = Lateral mode

Indicates the lateral mode the Flight Director and Autopilot are following.

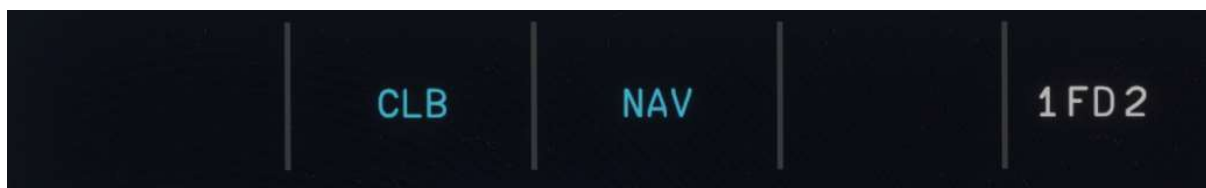
Blue = Approach capability

Indicates the Autopilot's current maximum approach and landing capability.

Pink = Autopilot, flight director and A/THR state

Indicates the currently engaged Autopilot and Flight Directors, as well as Auto thrust engagement.

In the image below we can see a typical indication present on the ground. CLB (Climb) and NAV (Lateral navigation) modes are armed. 1FD2 indicates that both Flight Director 1 and Flight Director 2 are engaged.

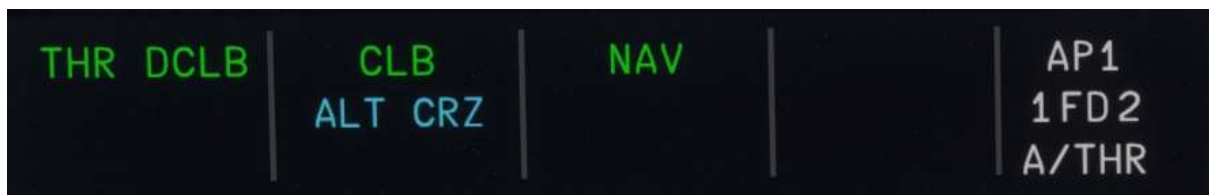


The FMA highlights a mode change by displaying a white box for 10 seconds around the mode that has changed.



In certain conditions, a mode will change automatically from a previously engaged mode. This is called a mode reversion. This is followed by a flashing white box highlighting the mode change and a triple click aural to draw attention to the FMA.

Take a look at the second and third column in the FMA below. CLB and NAV are engaged (in green). The aircraft is following the vertical and lateral path as it climbs.



Assume now that Air Traffic Control gives you a heading to follow, or there is weather ahead and you need to deviate laterally. The required heading will be set and the HDG knob pulled to engage Heading mode. Note in the FMA below that NAV has changed to HDG, also note that CLB has changed to OP CLB. This is a mode reversion, you have not changed the vertical guidance of the aircraft but the system has automatically changed the guidance from a managed climb to an open climb.

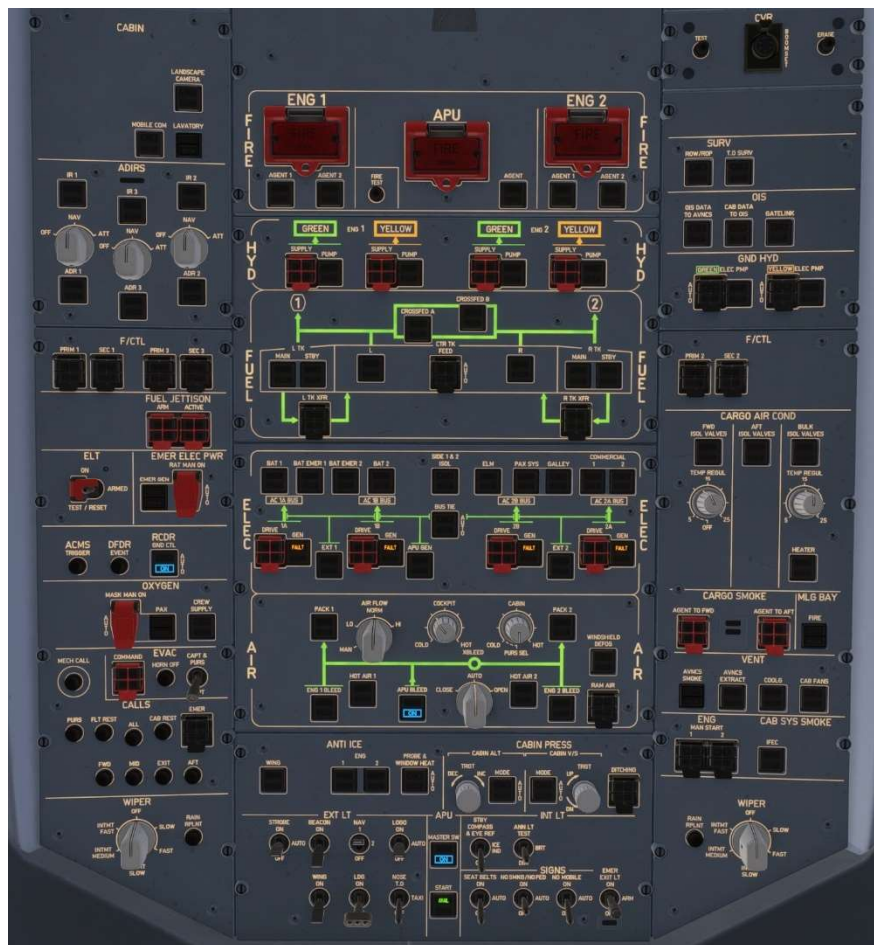


Climb mode only works if you are following the planned lateral route inserted in the Flight Management System (FMS). When you are on heading mode, the FMS can not guide you along the planned vertical profile and instead engages an unrestricted climb mode in which thrust is set to climb thrust and the elevator controls the speed of the aircraft. Altitude constraints along the flight plan will be ignored and the aircraft will continue to climb until it reaches the altitude set in the Flight Control Unit.



Lights out concept

When configuring the aircraft during the cockpit setup phase, **all white lights should be selected off**. The normal in-flight configuration has no white lights shown at all.



Cockpit light colour guide:

Blue = Temporary selection

Some examples include engine and wing anti-ice, APU, and External power. These are not normally selected for the entire flight, they are “temporarily” selected.

Amber = Caution

Red = Warning

To alert the pilot to abnormal and emergency conditions, the relevant system push button light will be highlighted.

Note – on the ground, before engine start, some lights will indicate **amber** abnormal status. This is normal.



Fly by wire concept

Many modern aircraft are fitted with a sophisticated Fly-By-Wire (FBW) system.

The system is based on maintaining a specified G force (acceleration force). During normal, level flight, the FBW system will hold the force (1G – level, no bank turns, no acceleration) if the flight controls are released from manual actuation. The iniBuilds A350 Airliner FBW will not hold pitch or bank angles; it will hold the aircraft to a G force (regardless of pitch or bank) with auto trim and elevators.



Cockpit Layout



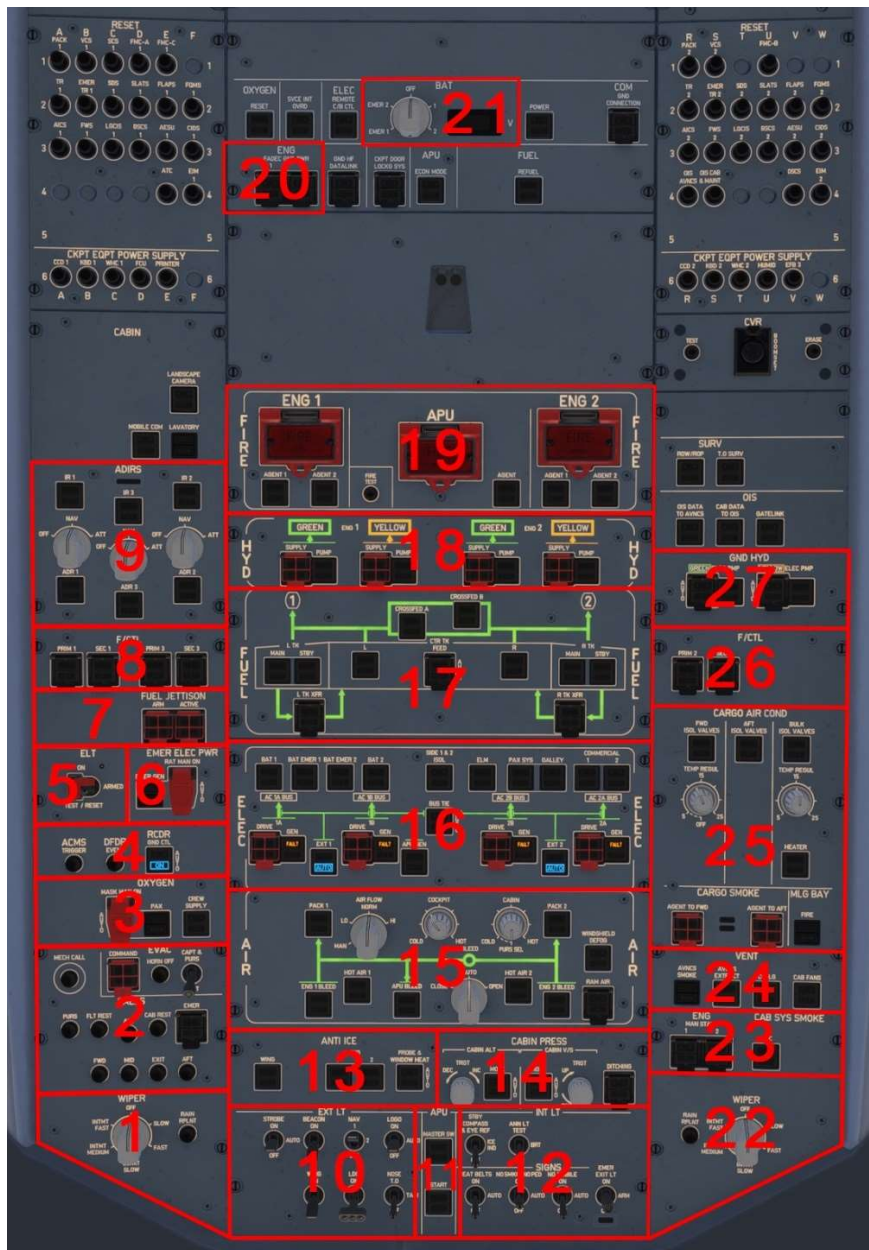
1. Loudspeaker knob
2. ATC message attention getter
3. Autoland warning light
4. Chronometer
5. Sidestick priority light
6. CPT Master Warning / Caution lights
7. CPT EFIS
8. Flight Control Unit (FCU)
9. CPT Pedal lights
10. CPT Console light
11. CPT Map light
12. OIS View Offside button
13. OIS Avionics <> EFB toggle
14. CPT Outer Display Unit (DU)
15. CPT Inner Display Unit (DU)
16. FMS Selector
17. Centre Upper Display Unit (DU)
18. Gear Indicator / Auto Brake panel
19. Landing Gear Lever
20. CPT Footrest
21. CPT Tray Table
22. Integrated Standby Instrument System (ISIS)
23. Centre Lower DU and CPT Outer DU toggles
24. Centre Lower Display Unit (DU)
25. Standby Navigation Display (SND)
26. Centre Lower DU and FO Outer DU toggles





- | | |
|--|---|
| 1. CPT Keyboard and Cursor Control Unit (KCCU) | 11. Flaps Lever |
| 2. Thrust Levers | 12. Parking Brake and Accumulator indicator |
| 3. FO Keyboard and Cursor Control Unit (KCCU) | 13. Landing Gear Gravity Extension |
| 4. Radio Management Panel 1 (RMP) | 14. Cockpit Lighting |
| 5. Engine Master switches and Start Selector | 15. Pitch Trim switches |
| 6. Radio Management Panel 2 (RMP) | 16. Rudder Trim |
| 7. ECAM Control Panel (ECP) | 17. Cockpit Door controls |
| 8. Emergency Descent button | 18. Printer |
| 9. Speed Brake Lever | 19. Radio Management Panel 3 (RMP) |
| 10. Surveillance Panel | |



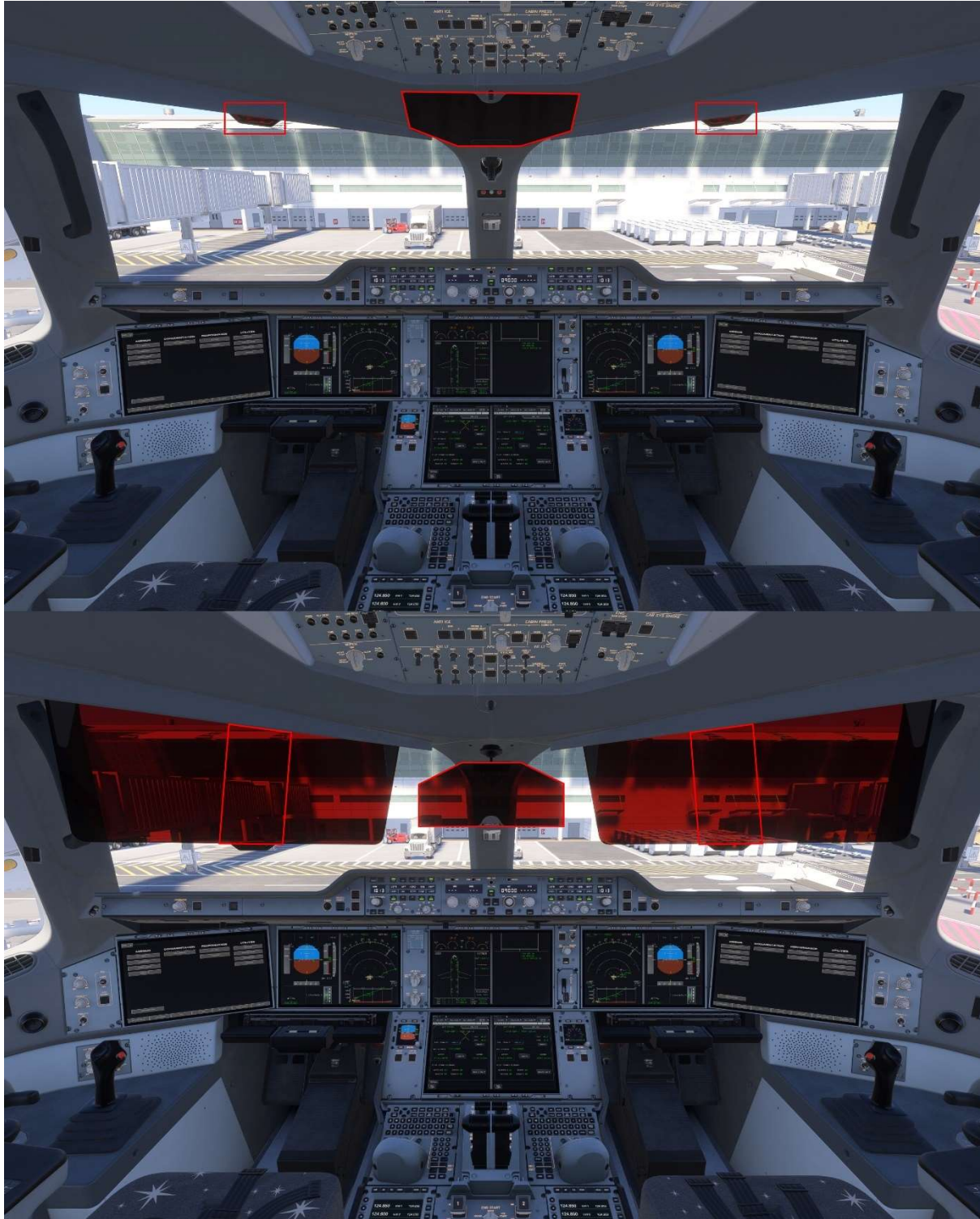


- | | |
|---|----------------------------------|
| 1. CPT Windscreen Wiper | 15. Air Conditioning Panel |
| 2. Cabin Call System and Evacuation Panel | 16. Electrical Control Panel |
| 3. Crew and Passenger Oxygen Supply | 17. Fuel Control Panel |
| 4. Recorder Ground Control | 18. Hydraulic Panel |
| 5. Emergency Locator Transmitter (ELT) | 19. Engine and APU Fire Panel |
| 6. Emergency Electrical Power button | 20. FADEC Ground Control |
| 7. Fuel Jettison buttons | 21. Battery Panel |
| 8. Flight Control Panel | 22. FO Windscreen Wiper |
| 9. ADIRS Switches | 23. Manual Engine Start Panel |
| 10. Exterior Lighting Panel | 24. Ventilation Panel |
| 11. APU Master and APU Start buttons | 25. Cargo Air Conditioning Panel |
| 12. Interior Lighting Panel and Passenger Signs | 26. Flight Control Panel |
| 13. Anti-ice Panel | 27. Ground Hydraulic Panel |
| 14. Cabin Pressurization Panel | |



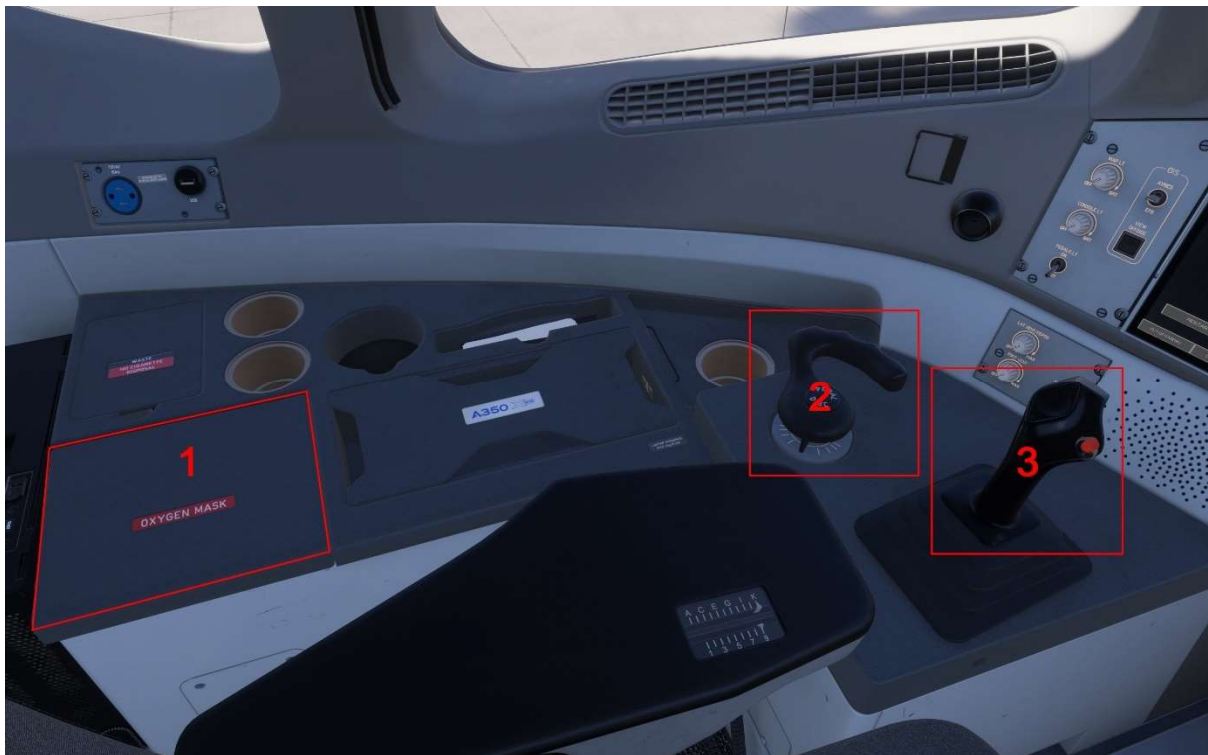
Other Controls

Sun visors click spots





Captain left side



1. Oxygen Mask

2. Tiller and Nose Wheel Steering Disconnect
Button

3. CPT Sidestick

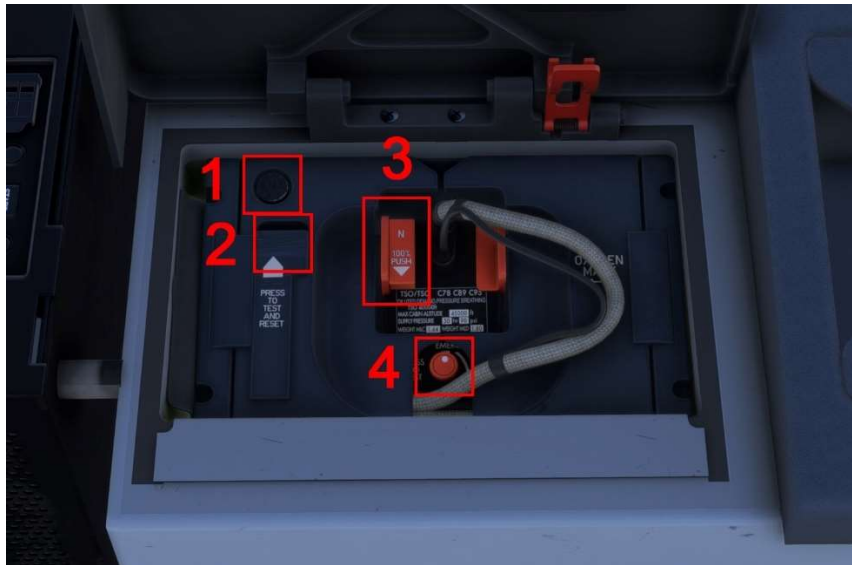


Avionics bay access door

Note: The jumpseat behind the avionics access door must be in the retracted position in order to open the door.



Oxygen Mask



- 1. Blinker
- 2. Test button

- 3. Normal / 100% Oxygen selector
- 4. Overpressure selector

Glareshield & FCU Lighting



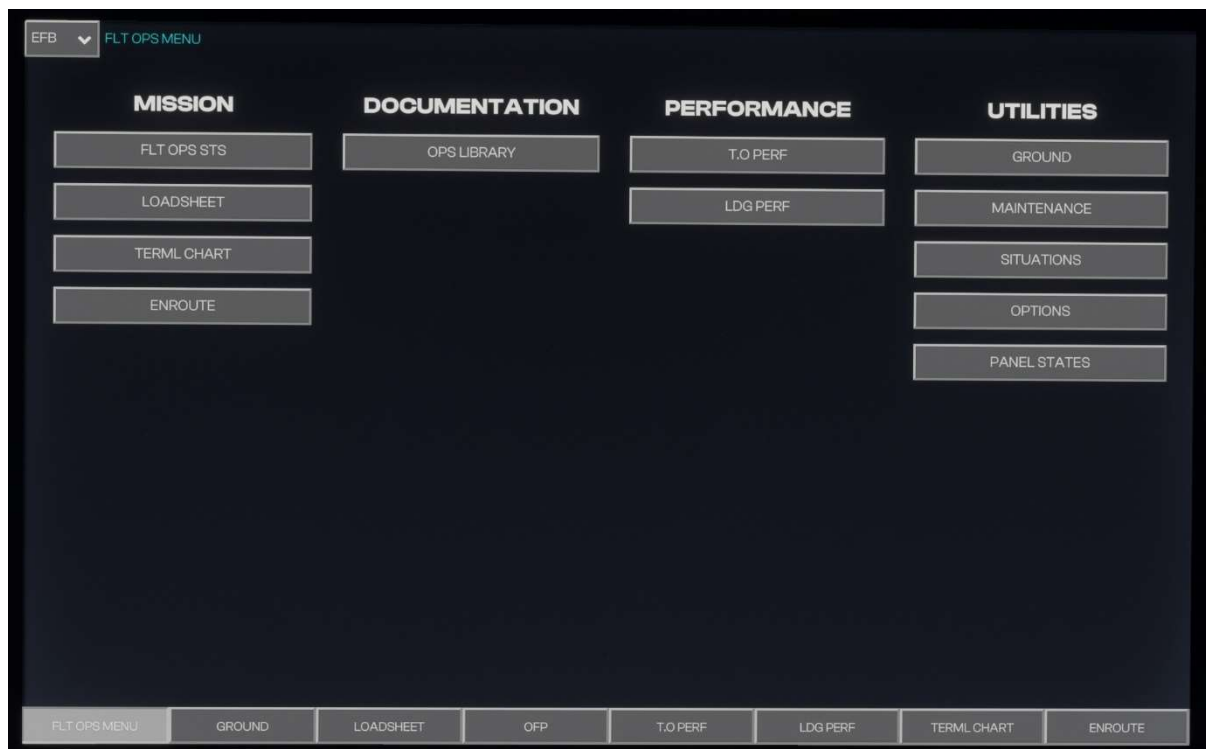
- 1. Tray table light knob
- 2. FCU Display Brightness knob
- 3. Glareshield Integral Lighting knob



Onboard Information System (OIS)

The Outboard Display Unit located on either side of the cockpit (Captain and First Officer) displays the Onboard Information System (OIS). The OIS provides access to important functions such as

- Mission
- Documentation
- Performance
- Utilities



FLT OPS MENU – The OIS will start up on this screen. This is the home page from where a multitude of options are accessible. At the bottom of the screen there is a shortcut bar which is always visible and allows quick access to the most frequently used functions.



Mission

EFB ▼ FLT OPS STS

SIMBRIEF IMPORT

ACFT TYPE: A350-900

ACFT REG.: 00000000

FLT NBR: 00000000 CALLSIGN: 00000000

FROM: 0000 TO: 0000

FLT OPS MENU GROUND LOADSHEET OFF T.O PERF LDG PERF TERML CHART ENROUTE

FLT OPS STS – Flight details can be manually inserted or imported from Simbrief. Your Simbrief user ID must be set within the Options Page for this feature to work.

EFB ▼ LOADSHEET

SIMBRIEF IMPORT

FIRST	PREMIUM ECONOMY	FWD ECONOMY	AFT ECONOMY	TOTALS
0 / 20 PAX	0 / 24 PAX	0 / 133 PAX	0 / 133 PAX	0 / 310 PAX
0 KG	0 KG	0 KG	0 KG	0 KG

FWD BAGGAGE	AFT BAGGAGE	BULK BAGGAGE	ZFW
0 KG	0 KG	0 KG	KG

SET ZFW

FUEL LOAD

KG

SET FUEL

LOAD CG

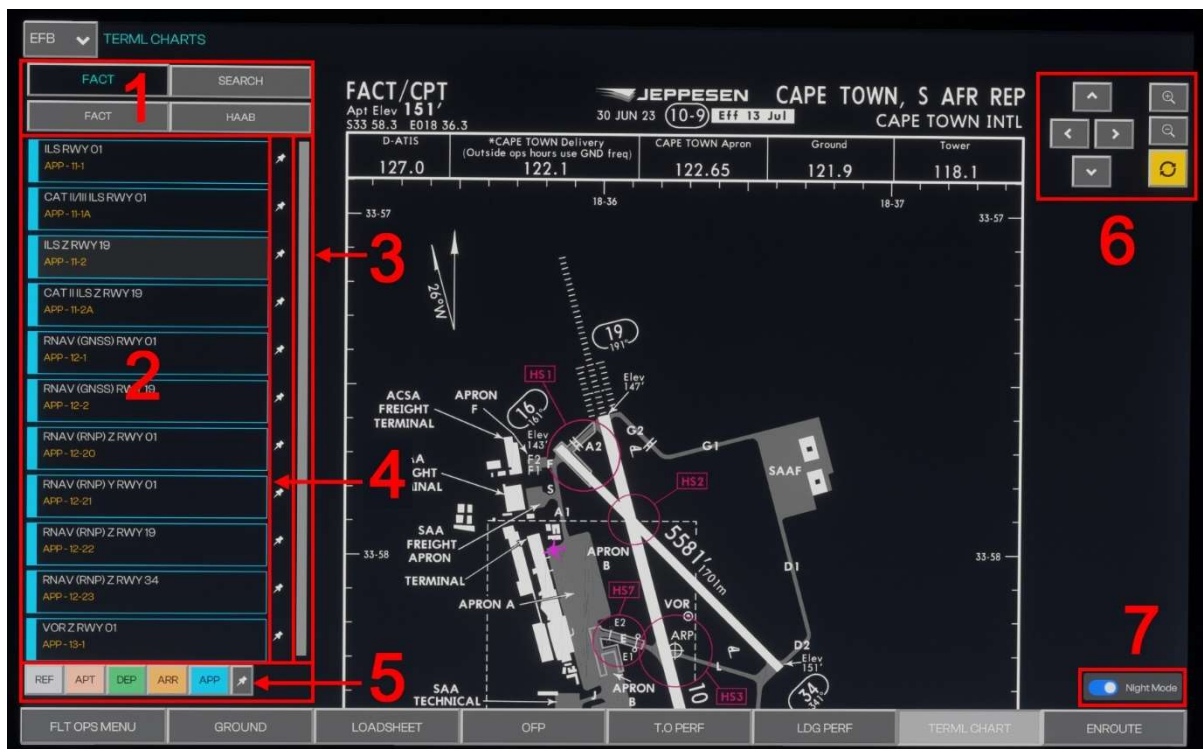
0 % ZFWCG

26.79 % GWCG

FLT OPS MENU GROUND LOADSHEET OFF T.O PERF LDG PERF TERML CHART ENROUTE

LOADSHEET – This page allows you to set the fuel and load on the aircraft manually or import it from Simbrief



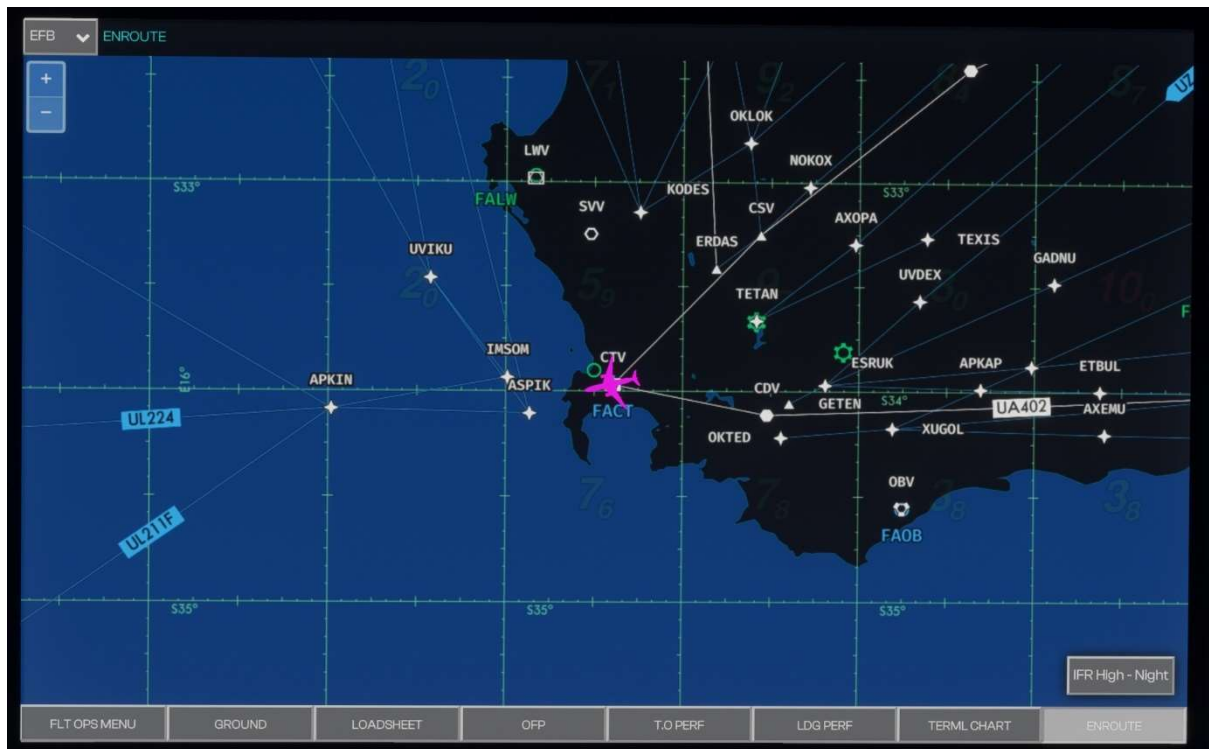


TERML CHARTS – Charts for the flight can be loaded using this page

1. Search box and Departure/Arrival airport
2. Chart list
3. Scroll bar
4. Bookmark pin
5. Chart category
6. Chart scroll controls and reset
7. Day/Night mode toggle

Using the bookmark pin allows you to bookmark the charts you intend to use for quick access. Pressing the bookmark pin to the right of the chart category displays all your bookmarked charts.





ENROUTE – A variety of Enroute charts are available, the button on the bottom right of the screen is used to alternate between the various display options.



Performance

EFB T.O PERF

CONDITIONS

WIND /kt 000/00

OAT °C 00

QNH hpa 0000

RWY COND DRY

A-ICE OFF (STD)

TOW T 000.0

CONF 1+F

AIR COND ON (STD)

THRUST FLEX (STD)

6 SYNC

DEPARTURE

1 AIRP 0000

2 RWY SELECT

3 SYNC FMGS

4 SYNC SIMBRIEF

5 TORA 0000 m

ELVN -ft

SLOPE -%

TODA -m

ASDA -m

ENTRY ANGLE -°

T.O SHIFT -m

RESULTS

RWY -

TODA -m

MTOW(perf) -T

V1 -kt

VR -kt

V2 -kt

THRUST -°C

STP MARGIN -m

FLAPS -

THS -%

T.O SHIFT -m

THR RED

EO ACCEL -ft

7 COMPUTE

FLT OPS MENU GROUND LOADSHEET OFF T.O PERF LDG PERF TERML CHART ENROUTE

T.O PERF – Take off speeds and thrust are determined using this page.

1. Manual airport input
2. Runway selection
3. Synchronizes with the entered departure airport and runway from the FMS
4. Synchronizes with the entered departure airport and runway from Simbrief
5. Take Off Run Available: allows to enter a reduced TORA for intersection departures
6. Synchronizes the weather conditions based on the latest METAR
7. Compute performance

Once all the information has been selected or entered, click the Compute button to show your performance and click the Send to FMGS button to send to the FMC.

NOTE: SYNC is unable to determine if the runway condition is DRY or WET, you must select the correct option.



EFB

LDG PERF

CONDITIONS

WIND /kt

OAT °C

QNH hpa

RWY COND

LW T

CONF

VPILOT kt

LDG TECHNIQUE

BRK MODE

REV

SYNC

ARRIVAL

AIRP

RWY

ELVN -ft

SLOPE -%

LENGTH

RESULTS

RWY -

LW -T

LD -m

LDA -m

VAPP -kt

FLD 0m

LD 0m

STOP FLD 0m

STOP LD 0m

FACTORED LD -m

STOP MARGIN / LD -m

STOP MARGIN / FLD -m

COMPUTE

FLT OPS MENU

GROUND

LOADSHEET

OPF

T.O PERF

LDG PERF

TERML CHART

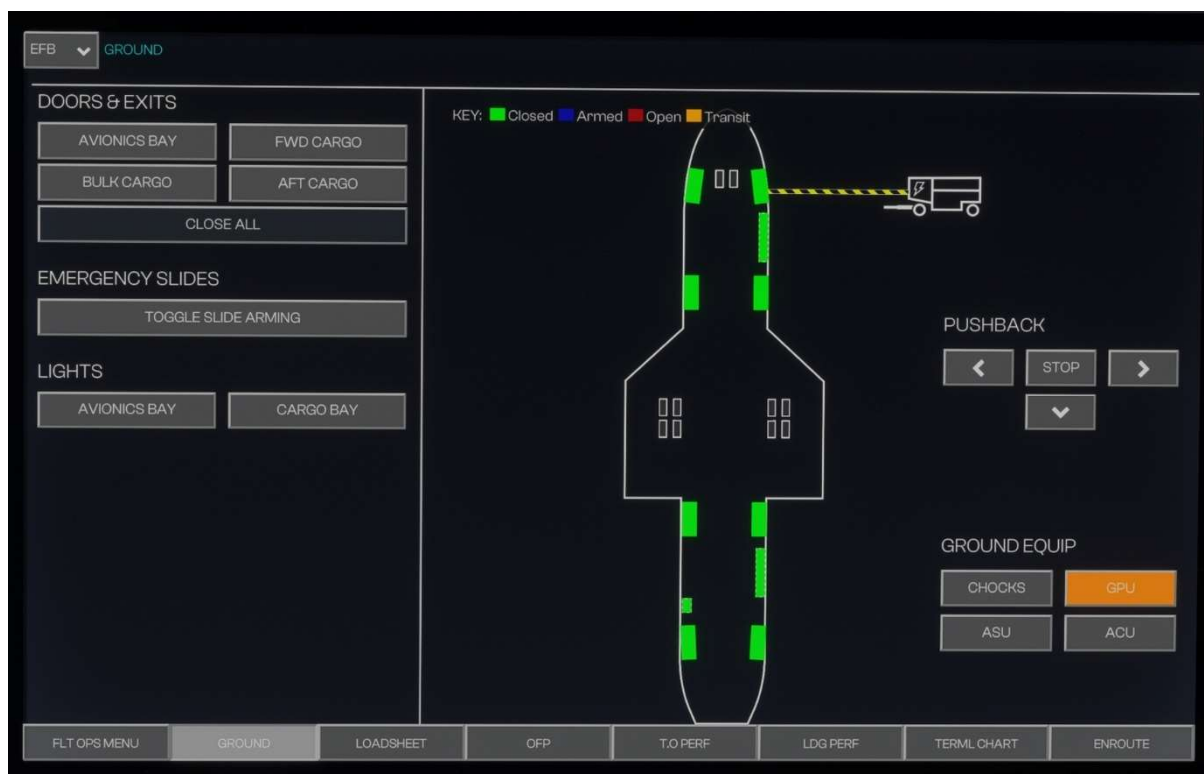
ENROUTE

LDG PERF – Landing speeds and distance required are determined using this page. The input fields work in the same manner as the T.O PERF page.

NOTE: SYNC is unable to determine if the runway condition is DRY or WET, you must select the correct option.



Utilities

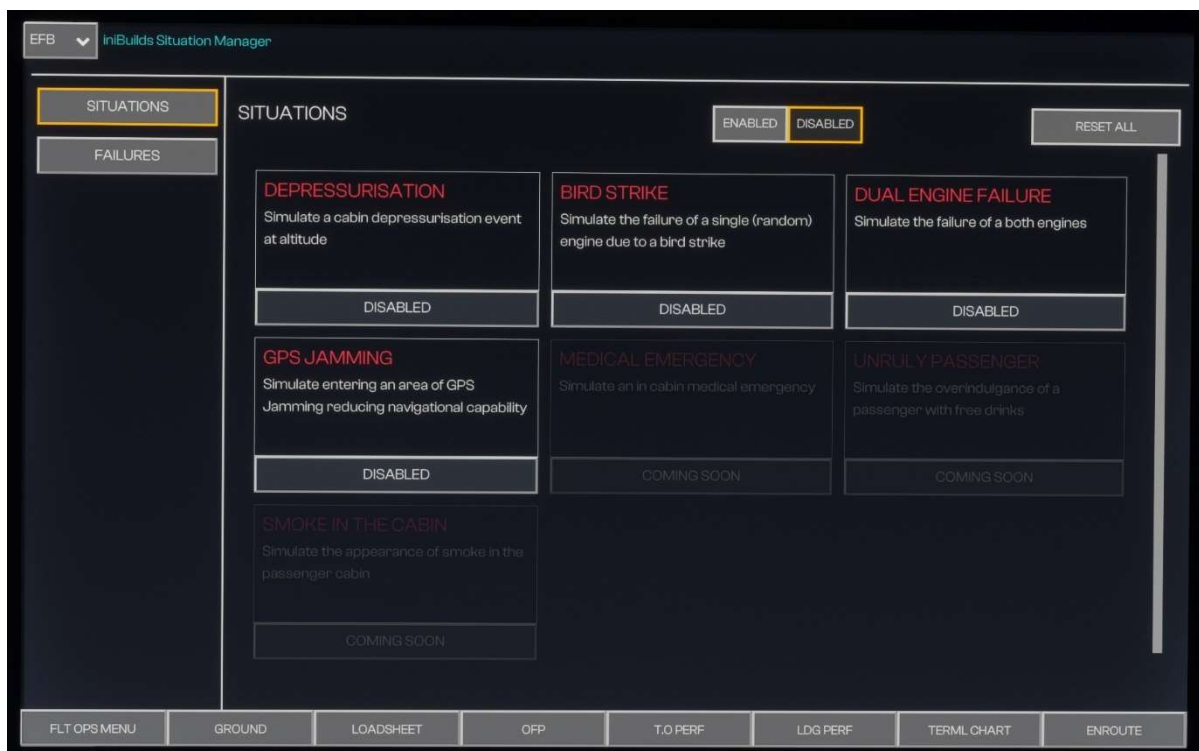


GROUND – Controls doors, slides, lights, chocks, GPU, ASU (Air Start Unit), ACU (Air Conditioning Unit) and controls GSX Integration.



MAINTENANCE – A variety of access panels can be opened as well as performing various maintenance actions.





SITUATIONS – Accesses the iniBuilds Situation Manager. The first page (SITUATIONS) allows enabling particular abnormal situations.



FAILURES – Single or multiple system failures can be enabled from this page.





OPTIONS – This page contains a lot of settings allowing you to customize the aircraft to your liking. Most options are self-explanatory, only a few of these options will be covered below.

AIRCRAFT

- **RUDDER CTRL TILLER**
 - Yes: it enables the Rudder Axis to control the nose wheel tiller steering as well when on the ground
 - No: nose wheel tiller steering is controlled by the separate Nose Wheel Steering Axis
- **AUTO TILLER DISCO**
 - Yes: above 70% N1 nose wheel tiller inputs are eliminated to prevent excessive steering reactions at high speed during take-off. Note that the rudder pedals do control the nose wheel steering but to a lesser extent providing smoother control
 - No: nose wheel tiller inputs are available throughout take-off



EFB

OPTIONS

AIRCRAFT

OIS SETTINGS

EQUIPMENT

EXTERNAL

THROTTLE CALIBRATION

SOUND/CABIN OPTIONS

VOLUME CONTROL

3RD PARTY

SIMULATION

AUTO EFB BRIGHTNESS

NO

YES

CHARTS TYPE

LIDO

NAVIGRAPH

AUTO DAY/NIGHT CHARTS

NO

YES

AIRCRAFT WEIGHT UNITS

LBS

KGS

EFB BOOT TIME

REAL

FAST

INSTANT

FLT OPS MENU

GROUND

LOADSHEET

OFF

T.O PERF

LDG PERF

TERML CHART

ENROUTE

OIS SETTINGS





EQUIPMENT – See below for the applicable options.



STANDBY NAV DISPLAY.





TAXI CAMERA LIGHT – Displays or hides the taxi lights (one on each side of the fuselage).

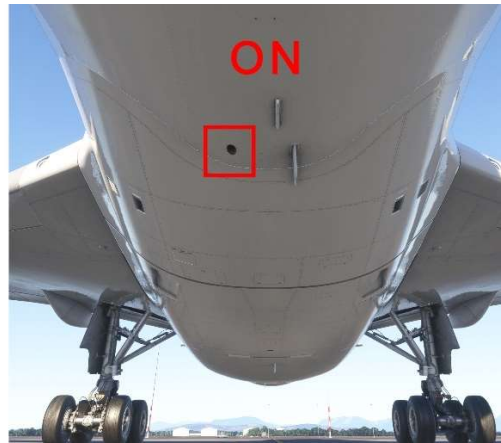


SATCOM – Satellite communications antenna, located on the aft upper fuselage.



SCS OUTLETS.





FWD LAV VENT – Displays the forward lavatory vent.



LIGHT TYPE – LED (Light Emitting Device) or HID (High Intensity Discharge). Changes Nose, Turnoff, Landing and Wing lights.





THROTTLE CALIBRATION

- Reverser on axis
 - YES: Use this setting if your controller has a reverse range, the lowest position will correspond to Maximum Reverse.
 - NO: Use this setting if your controller does not have a reverse range, the lowest position will correspond to Idle thrust.
- Use Global Deadzone
 - YES: Applies the same deadzone amount to every detent.
 - NO: Custom deadzone amounts can be entered per detent.
- Calibration procedure:
 - Start with your throttle controller at the lowest position, assuming there is no reverse thrust range this would correspond to Idle. Press IDLE to correlate this.
 - Advance your throttle until you reach a detent or a position you are comfortable in assigning the Climb detent. For example this could equate to 80% travel in your controller, press CLB to save this position.
 - Repeat for FLEX/MCT and TOGA



EFB ▼ OPTIONS

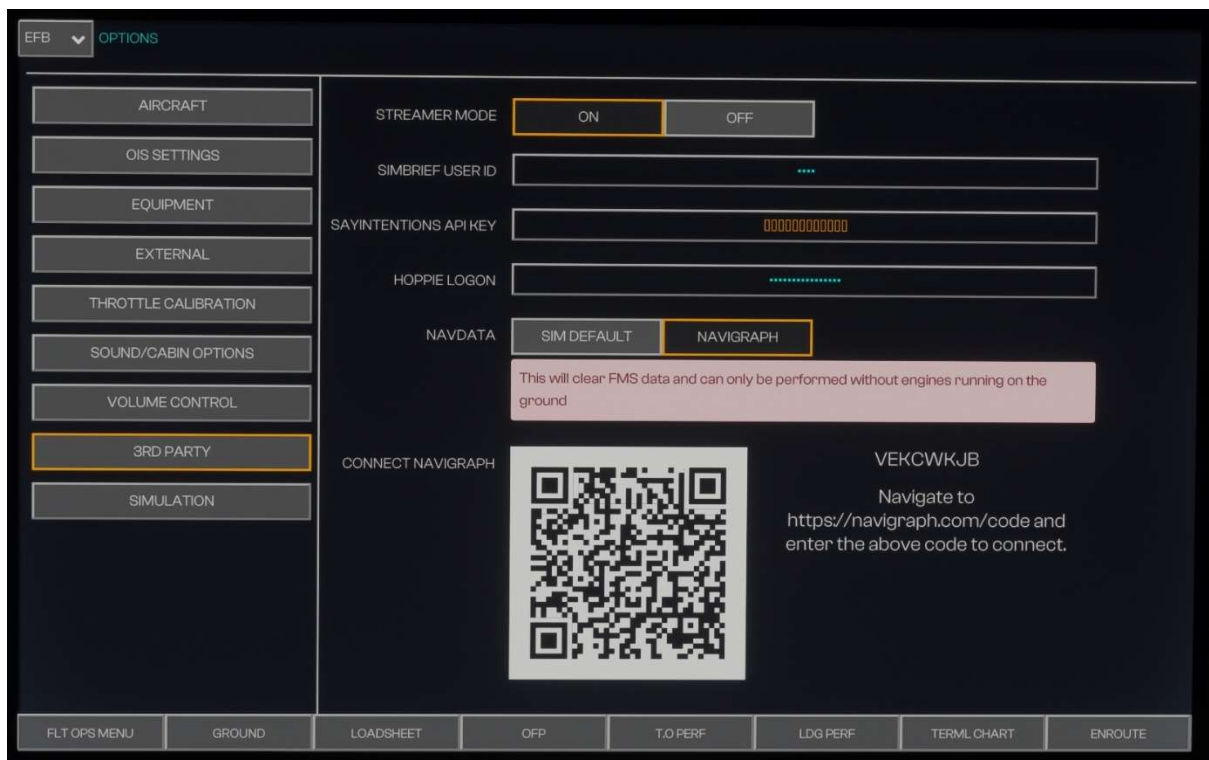
AIRCRAFT	CABIN LANGUAGE	English (US)	English (UK)	German	Japanese
OIS SETTINGS		Russian	Spanish	Portuguese (BR)	French
EQUIPMENT		Portuguese	Arabic		
EXTERNAL	NOISE CANCELLING HEADPHONES	ON	OFF		
THROTTLE CALIBRATION	ENGINE TAKE OFF WHINE	ON	OFF		
SOUND/CABIN OPTIONS	GEAR BUMP NOISE	ON	OFF		
VOLUME CONTROL	CABIN CHIMES IN COCKPIT	ON	OFF		
3RD PARTY	AUDIBLE THRUST DETENT	ON	OFF		
SIMULATION					

FLT OPS MENU
 GROUND
 LOADSHEET
 OFF
 T.O PERF
 LDG PERF
 TERML CHART
 ENROUTE

SOUND/CABIN OPTIONS

- Cabin Language: Select the preferred language for the Public Address announcements.
- Noise Cancelling Headphones: Simulates noise cancellation and greatly reduces ambient and external noise.
- Engine Take-off Whine and Gear Bump Noise: Toggle on or off as a matter of personal preference.
- Cabin Chimes in Cockpit: Makes the cabin sign chime more or less audible from the cockpit.
- Audible Thrust Detent: Increases the detent sound in order to act as audible feedback to confirm a detent has been reached in the thrust levers without having to look at them. Always correlate the detent matches with the FMA indication.





3RD PARTY

- Streamer Mode: Hides the personal login ID for Simbrief, SayIntentions and Hoppie.
- SIMBRIEF USER ID: Insert your Simbrief ID to access ANF and Navigraph charts in the OIS.
- SayIntentions Api Key: Insert your SayIntentions key.
- HOPPIE LOGON: Insert your Hoppie logon to access CPDLC.
- NAVDATA: Toggle between default simulator database or Navigraph (requires a Navigraph subscription).
- CONNECT NAVIGRAPH: Scan the code to link your Navigraph account to the aircraft. A Navigraph subscription is required for the ANF to operate.



EFB

OPTIONS

AIRCRAFT

OIS SETTINGS

EQUIPMENT

EXTERNAL

THROTTLE CALIBRATION

SOUND/CABIN OPTIONS

VOLUME CONTROL

3RD PARTY

SIMULATION

STREAMER MODE

ON

OFF

SIMBRIEF USER ID

SAYINTENTIONS API KEY

HOPPIE LOGON

NAVDATA

SIM DEFAULT

NAVIGRAPH

This will clear FMS data and can only be performed without engines running on the ground

UPDATE DATA

UPDATE NAVDATA

This will clear FMS data and can only be performed without engines running on the ground

RESET NAVIGRAPH

RESET CREDENTIALS

FLT OPS MENU

GROUND

LOADSHEET

OFF

T.O PERF

LDG PERF

TERML CHART

ENROUTE

3RD PARTY – Displayed after linking your Navigraph account.

- UPDATE DATA: **Update the navigation data if a new cycle has been installed.**
- RESET NAVIGRAPH: Resets the Navigraph token, useful If you are experiencing issues displaying ANF or charts in the OIS.



EFB

OPTIONS

AIRCRAFT

OIS SETTINGS

EQUIPMENT

EXTERNAL

THROTTLE CALIBRATION

SOUND/CABIN OPTIONS

VOLUME CONTROL

3RD PARTY

SIMULATION

PAUSE AT T.O.D

YES

NO

PAUSE TOD DIST (nm)

100

AUTO GPU DISCO

NO

YES

AUTO STEP CLIMB

YES

NO

TIME COMPRESSION

AUTO

OFF

MAX COMPRESSION

UP TO 2X

UP TO 4X

AUTO IMPORT STEP CLIMB

ON

OFF

PERFORMANCE MODE

ON

OFF

Unload hidden model parts to aid in improved overall performance.

FLT OPS MENU

GROUND

LOADSHEET

OFF

T.O PERF

LDG PERF

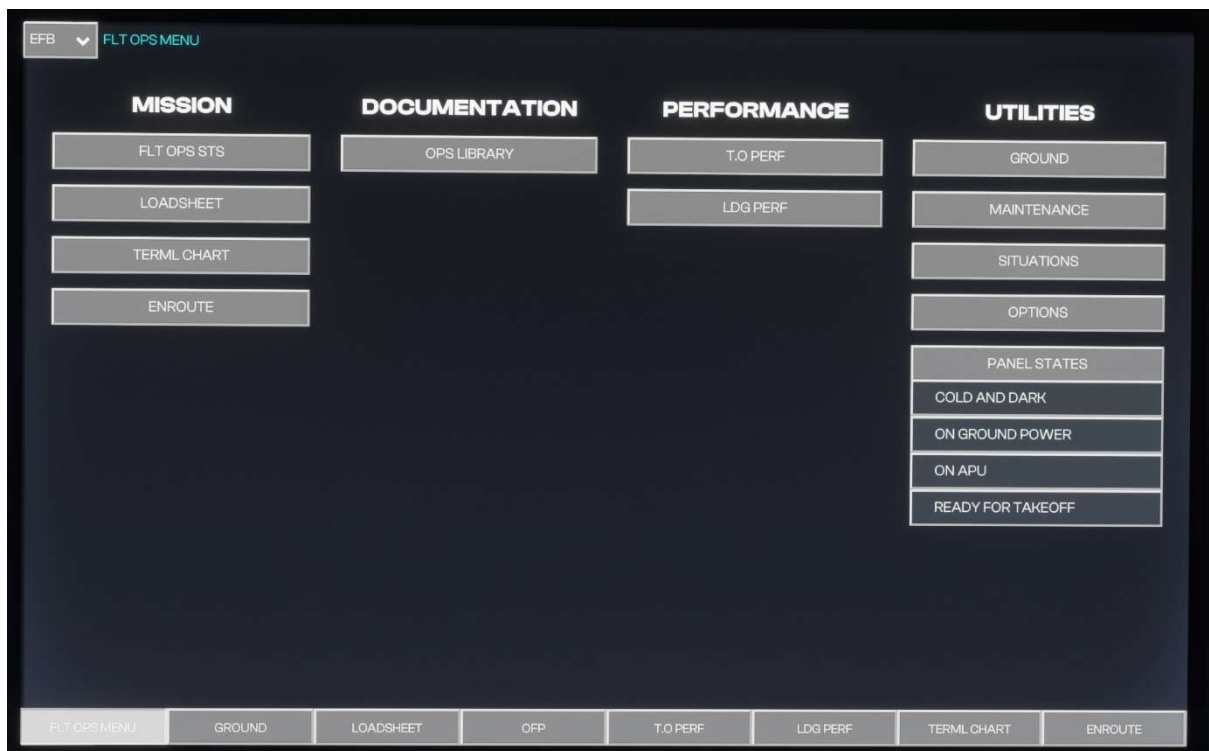
TERML CHART

ENROUTE

SIMULATION

- PAUSE AT T.O.D: The simulator will automatically pause when reaching a defined distance from the Top of Descent point as calculated by the FMS.
- PAUSE AT TOD DIST (nm): Enter the number of nautical miles before the TOD at which point the simulator will pause.
- Auto GPU Disconnect:
 - NO: You must disconnect the GPU manually from the GROUND page.
 - YES: The GPU will automatically disconnect when the Beacon light is switched on.
- AUTO STEP CLIMB: Step climbs entered in the FMS will be automatically flown without any pilot intervention.
- TIME COMPRESSION
 - AUTO: Simulator time compression will increase to a maximum of 2X or 4X. The actual rate will depend on the computer performance and will vary dynamically.
 - NOTE: In the polar region the maximum compression is limited to 2X.
 - OFF: Time compression is disabled.
- MAX COMPRESSION (NOTE: depending on performance the desired rate might vary)
 - UP TO 2X: Depending on your system performance the compression rate will reach a maximum of 2X.
 - UP TO 4X: Depending on your system performance the compression rate will reach a maximum of 4X.
- AUTO IMPORT STEP CLIMB: Automatically insert step climbs present in the Simbrief plan.
- PERFORMANCE MODE: Certain graphical elements from the model will be omitted to improve performance.





UTILITIES, PANEL STATES – Set pre-determined panel and ground power configurations.



Aircraft Systems

The A350 has many advanced systems, most of which are tightly integrated in function with each other. The following section introduces the core systems required to successfully operate the aircraft in Microsoft Flight Simulator.

Auto Flight System (AFS)

The AFS comprises the following parts:

The Flight Guidance (FG) part, performing the following functions:

- Autopilot (AP) command.
- Flight Director (FD) command.
- Auto thrust (A/THR) command.

The Flight Management System (FMS) part, controlling the following functions:

- Navigation and management of navigation radios.
- Management of flight planning.
- Prediction and optimization of performance.
- Display management.

The Flight Envelope (FE) part, controlling the following functions:

- Computation of data for the flight envelope and speed functions.
- Monitoring of parameters used by FG and FE parts.
- Windshear detection.
- Computation of GW and CG information.

Flight Management System (FMS)

The A350 has two Flight Management Systems (FMS), each system comprises the following units:

- One Flight Management Computer (FMC)
- One Multifunction Display (MFD)
- One Navigation Display (ND)
- One Primary Flight Display (PFD)
- One EFIS Control Panel (EFIS CP)
- One Keyboard and Cursor Control Unit (KCCU)

The Flight Management System provides predictions of flight time, distance, speed, economy profiles, and altitude. It reduces cockpit workload, improves efficiency, and eliminates many routine operations generally performed by the flight crew.

Managed vs Selected Guidance

The FMS computes the aircraft position continuously, using stored aircraft performance data and navigation data. It can steer the aircraft along a preplanned route and vertical and speed profiles. This type of guidance is known as “managed”.

If the flight crew wants to temporarily modify any flight parameter (Speed, Heading, Altitude, Vertical Speed), they may do so by using the various Flight Control Unit (FCU) selectors. The Flight Guidance part guides the aircraft to the target value of the selected parameter. This type of guidance is known as “selected”.



Flight Control Unit (FCU or Autopilot)

Guidance Modes

- Selected mode is when the knob is pulled out towards you, this means you have taken control away from the auto flight system.
- Managed mode is when the knob is pushed in, giving control back to the auto flight system.

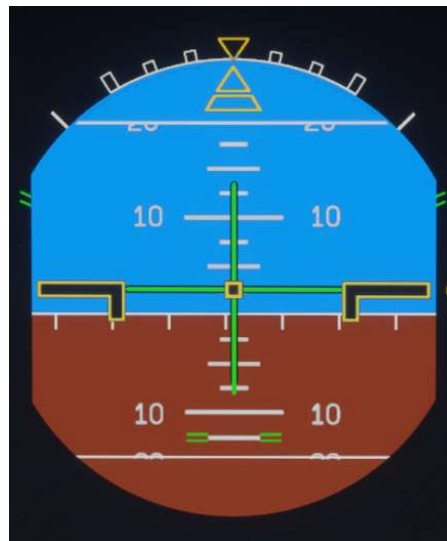
The AP is controlled by the FCU (Flight Control Unit) pictured below.



1. MACH/SPD push button:
Pushing this button changes the SPD target to the corresponding MACH target and vice versa.
2. SPD/MACH knob:
When pulled, this knob controls speed in IAS or MACH depending on altitude or if the SPD MACH button is pressed (upper left, 1).
When pushed, speed is managed by the FMS.
3. TRUE/MAG push button:
Changes the navigation reference between Magnetic and True
4. HDG (Heading) knob:
When pulled, this knob controls heading or track. You can swap between heading and track mode by pressing the HDG TRK button (6).
Pushing the knob arms managed NAV or within a set margin to the NAV track will automatically switch to NAV.
5. LOC (Localizer) push button:
Pushing this pushbutton arms, engages, or disengages the ILS LOC mode.
This mode is normally used for localizer only approaches using managed lateral guidance with selected vertical guidance.
6. HDG V/S – TRK FPA push button:
The pilot uses this push button to select HDG (associated with V/S) or TRK (associated with FPA).
Pushing it displays the Flight Path Vector (FPV) on the Primary Flight Display (PFD) or removes it.



On the PFD, it changes the FD crossbar display (with the aircraft attitude as its reference) to the aircraft Flight Path Director (with the flight path vector as its reference) and vice versa.



HDG/VS



TRK/FPA

The heading reference changes into track reference in the HDG/TRK window and vice versa.

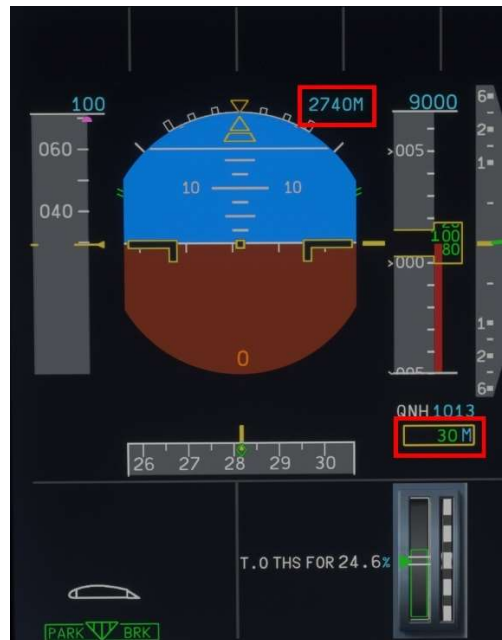
7. Flight Director push button: Engages both flight directors.
8. AP Engagement push buttons:
 AP1 will engage Autopilot 1, normally associated with the Captain side.
 AP2 will engage Autopilot 2, normally associated with the First Officer side.
 Engaging both AP's will provide system redundancy requirements for low visibility (CAT 2 or above) approaches and Autoland capabilities.
 Disengaging the AP is usually done with the instinctive AP disconnect buttons on the side stick.
9. A/THR (Auto thrust) push button:
 The flight crew uses this push button to arm, activate or disconnect the auto thrust.



Disengaging the A/THR is usually done with the instinctive A/THR disconnect buttons on the thrust levers.

10. METER push button:

Displays altitude in meters (metric) on the primary flight displays.



11. Altitude knob:

When pulled engages OPEN CLB/OPEN DES. Open Climb will engage if the target altitude is above you, otherwise Open Descend will engage. Open modes will disregard any altitude constraints entered in the flight plan.

When pushed engages CLB/DES. This mode cannot always be engaged as the situation depends on the flight mode and phase of flight. The aircraft also needs to be in a managed lateral mode (NAV) to engage CLB or DES mode.

The inner knob allows to select between 100 or 1,000 feet increments.

12. ALT (Altitude) push button:

This pushbutton is used to command an immediate level off.

13. VS or FPA selector knob:

Pulling changes from vertical mode to VS/FPA mode and the aircraft will comply with what is set in the window. Please be aware that the aircraft can be slow to follow large VS orders as the AP limits G forces imparted for passenger comfort.

Pushing the knob will set VS to 0 and command the aircraft to level off.

14. APR (Approach) push button:

Arms (and subsequently engages) the approach mode that is set on the FMS.



Multifunction Display & Keyboard and Cursor Control Unit



There is one MFD (split into two independently operated sections) and two KCCUs for flight crew loading and data display. The MFD allows the flight crew to interact with the FMS by selection of a flight plan for lateral and vertical navigation and speed profiles. The flight crew may also modify selected navigation or performance data and specific functions (revised flight plan, secondary flight plan, etc.).

The KCCU is the interface used to interact with the MFD. It is composed of a full keyboard, shortcut keys, a trackball and a scroll wheel.

Note: to use your computer keyboard to enter data into the MFD you must first click on a field requiring an input, then press LEFT CTRL. Please be aware that the BACKSPACE key will still interact with your simulator. You will have to remove its assignment from within the simulator control options if you do not want this key to affect your input.



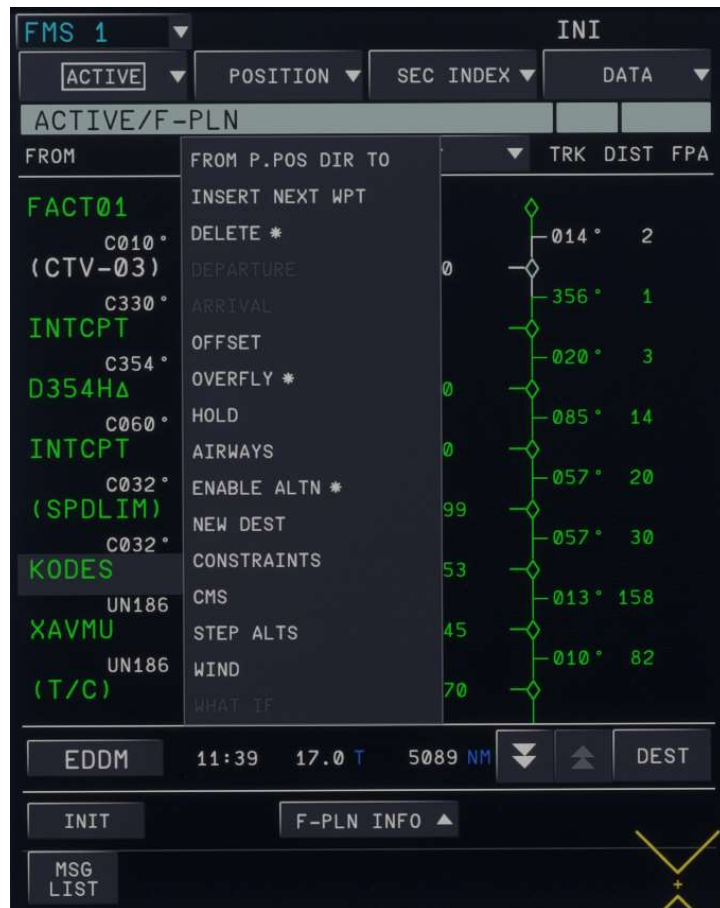


The various pages contained in the MFD can be accessed by the General Menu Bar at the top.



This is a composite image showing all the options available accessible from the General Menu Bar





The flight plan page is interactive. Clicking on a waypoint opens a new menu from where multiple options can be accessed.



FMS 1

INI

ACTIVE

POSITION

SEC INDEX

DATA

ACTIVE/F-PLN/VERT REV

RTA

SPD

CMS

ALT

STEP ALTS

SPD CSTR AT

KODES

KT

DELETE SPD CSTR *

CLB SPD LIMIT

250

KT

AT OR BELOW

FL 100

DELETE SPD LIMIT *

RETURN

MSG LIST

Clicking on the time, speed or altitude associated with a waypoint will open the Vertical Revision page.



KCCU Controls



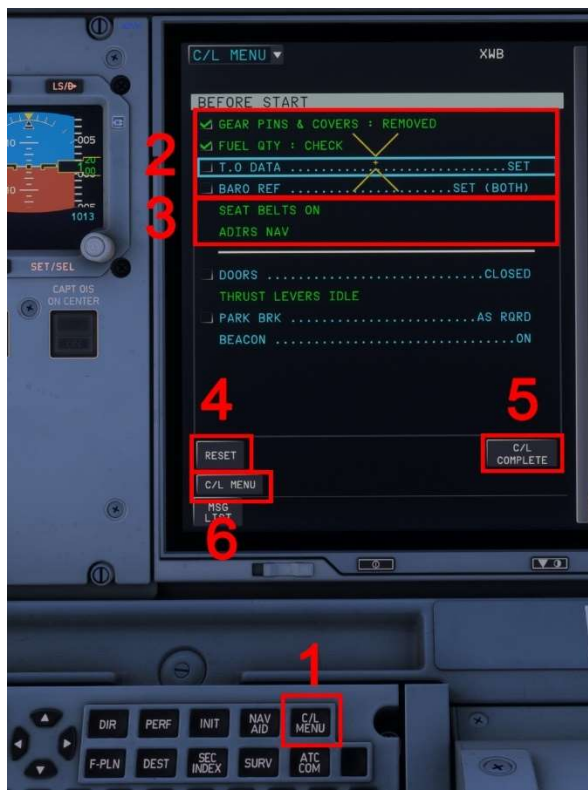
- | | |
|---|--|
| 1. Escape key: cancels active keyboard input to a field | 5. Cursor navigation keys: displaces the cursor to the relevant DU |
| 2. Scroll arrows: scroll through options and flight plan | 6. Scroll wheel: scrolls the flight plan and menus |
| 3. Shortcut keys: opens up the relevant FMS page | 7. Notepad: opens and closes the notepad at the bottom of the MFD |
| 4. Clear Info key: clears messages at the bottom of the MFD | 8. Enter key: validates keyboard entry inputs |

Practical use and operation of the MFD and KCCU is covered in the quick start guide.



Electronic Checklist

The A350 is equipped with an electronic checklist which can be displayed on either the Captain or FO MFD.



1. Access the Checklist by pressing C/L MENU on the KCCU.

The relevant checklist will show, when starting up this will be the Before Start Checklist. When this checklist is complete, the next press of the C/L MENU button will open the After Start Checklist.

2. Items that require pilot acceptance have a box to the left.

3. Items that are automatically sensed have no box and turn green when the condition is correct.

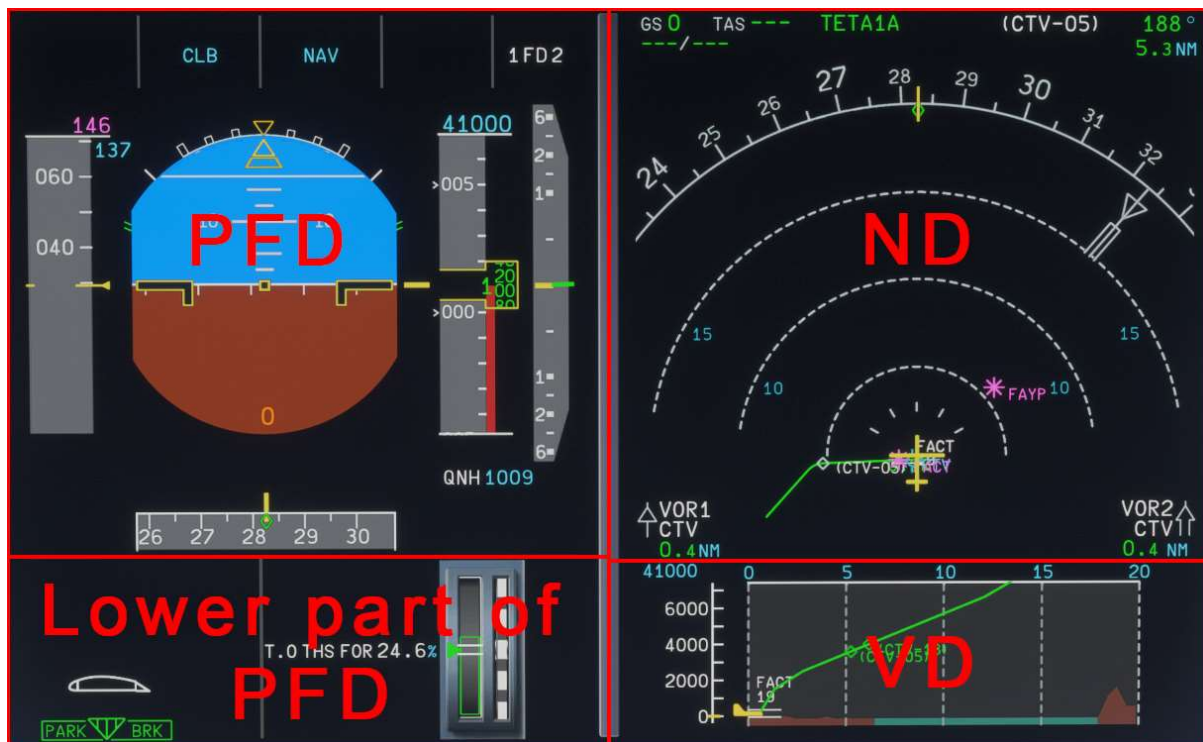
4. Reset the current checklist.

5. Mark the Checklist as complete.

6. Open the Checklist menu.



Electronic Flight Instrument System (EFIS)



The Inner Display Unit in front of the Captain and First Officer display parameters essential for flying and navigating the aircraft. These displays can be split into four sections:

- PFD (Primary Flight Display): essential parameters necessary for flying the aircraft.
- Lower part of the PFD: displays the slat/flap, gear and speed brake configuration, parking brake, pitch trim and information messages.
- ND (Navigation Display): horizontal position and navigation.
- VD (Vertical Display): vertical situation.

The Navigation Display in the A350 is interactive, various options are accessible by using your cursor directly on it. Press the ND Cursor navigation key in the KCCU to transfer the cursor there. All keyboard inputs from the KCCU will now be transferred to the ND as well.



EFIS Control Panel



The EFIS control panels are located on each glareshield; these are responsible for managing both the Primary Flight Displays and the Navigation Displays. On the ND, pilots can choose from various modes and ranges and display additional information. The weather radar is displayed by pressing the WX button.

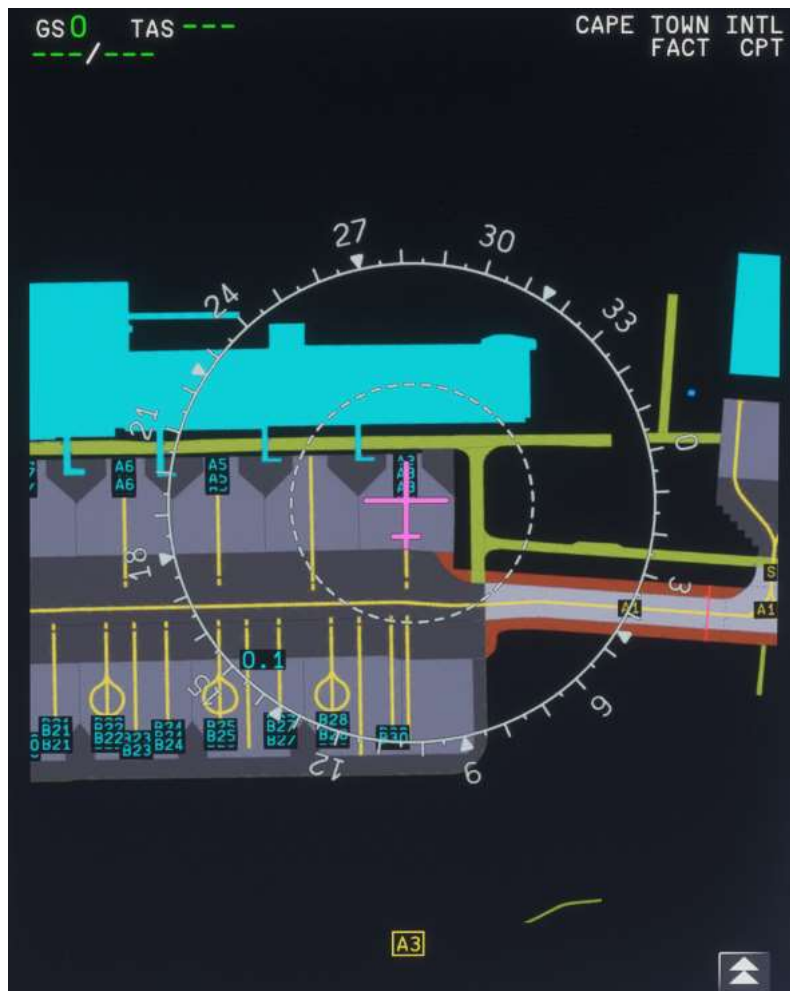


Barometer preset

The barometric reference window has a preset function. Whilst on Standard, rotating the knob will display the preset pressure value on the top right. This value will disappear after a few seconds but will be memorised. The preset value will be displayed when the knob is pulled.



Airport Navigation Function (ANF)

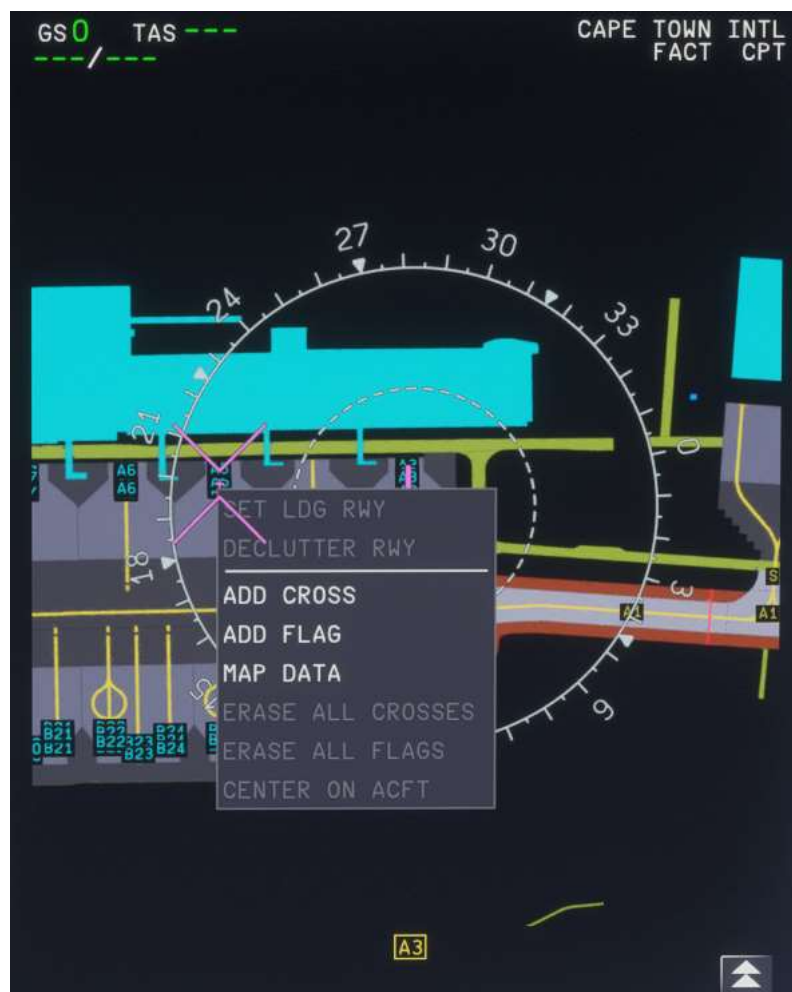


Whilst in NAV, ARC or PLAN mode reducing the range into the ZOOM range provides access to the ANF function. Once the ZOOM range is reached, further anti-clockwise rotations of the RANGE knob progressively reduce the range from a maximum of 5nm down to a minimum of 0.2nm.

Note:

- Navigraph subscription is required to be able to display airports in the ANF.
- Airports have to be part of the Airport Mapping Database (AMDB) in order to be displayed. There are over 1,000 airports in the database, a quick way to determine if an airport is part of it is to look at it in the Navigraph VFR chart:





Clicking on the ANF opens a menu with various options, depending on the mode not all options are accessible. Using the ANF in PLAN mode allows you to scroll through the map by clicking and holding while you displace your mouse.



Brake To Vacate (BTV)

BTV is a system that optimizes braking of the aircraft to achieve a constant and smooth deceleration targeting a runway exit selected by the pilot.

Three conditions must be satisfied for BTV to work:

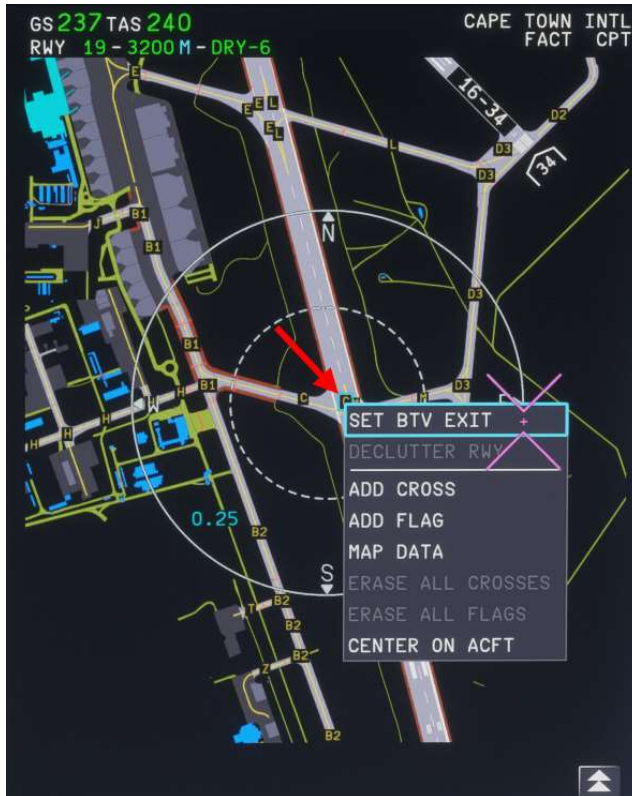
1. There must be no failures impacting the system, and
2. The arrival runway must be selected in the flight plan, and
3. A runway exit must be selected in the ANF

Arming BTV



1. Pull the RWY COND/BRAKING ACTION knob to display the Runway Condition/Braking Action menu on the SD.
2. Using the knob scroll to select the runway condition. Push the knob to remove the menu from the SD.





Set your EFIS mode to PLAN and reduce the RANGE to the ZOOM range. This will automatically display your arrival airport.

The top left section of the ND will display the selected landing runway, LDA and the runway condition selected.

On the KCCU press the ND Cursor navigation key to transfer the cursor control to the ND.

Click and hold to displace the map to display your desired exit. Select an exit past the relevant stop line for your runway condition.

Select the desired exit by clicking on the taxiway identifier that is **on the runway** to open the menu. Select SET BTV EXIT.



New information will be displayed based on your exit selection on the top left of the ND.

EXIT: selected BTV exit and distance to the exit.

ROT: Runway Occupancy Time in seconds.

TURNAROUND: Two values are displayed indicating the expected time necessary for the brakes to reach 150°C after landing. The first value assumes MAX Reverse and the second value IDLE Reverse.

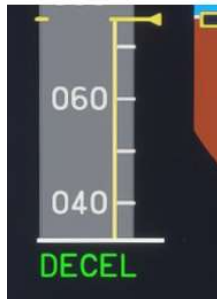
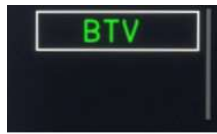


Press the A/BRK button on the braking panel.

BTV will now indicate armed in the PFD.



Deactivating BTV



After touchdown BTV will engage, indicated by the FMA on the top left.

If the required deceleration rate is achieved DECEL will be indicated at the bottom of the speed tape.

BTV will automatically deactivate when the speed reaches 10kts.

To deactivate BTV either press the toe brakes or press the A/THR disconnect buttons on the Thrust Levers (or in your controller if you have assigned a button to the function AUTOTHROTTLE DISCONNECT).



Indications that BTV is no longer active:

- BTV mode disappears from the FMA.
- AUTO BRK OFF indicated on the lower left of the PFD and ECAM memo.
- Aural "Auto brake off".

A further press of the A/THR disconnect button will remove the AUTO BRK OFF indications



Noise Function

Noise is a new, highly customizable function available for the initial climb phase.



The noise function is located in the Performance>Take Off page of the MFD.

By default, the NOISE function is not active. Thrust reduction and Acceleration altitudes are both the same based on the preferred setting as set on the OIS>OPTIONS>AIRCRAFT page.

In this situation the aircraft will keep Take-off power & SRS mode until 1650ft. At 1650ft Climb thrust and Climb mode will engage.

Click on NOISE to access the function.



To use the function a Noise End altitude must be inserted. For this example, we will insert an altitude of 4000ft. N1 and Speed fields become modifiable only once there is a Noise End input.

Note the CANCEL NOISE button, pressing it will eliminate all inputs and revert to the original non-Noise setup.



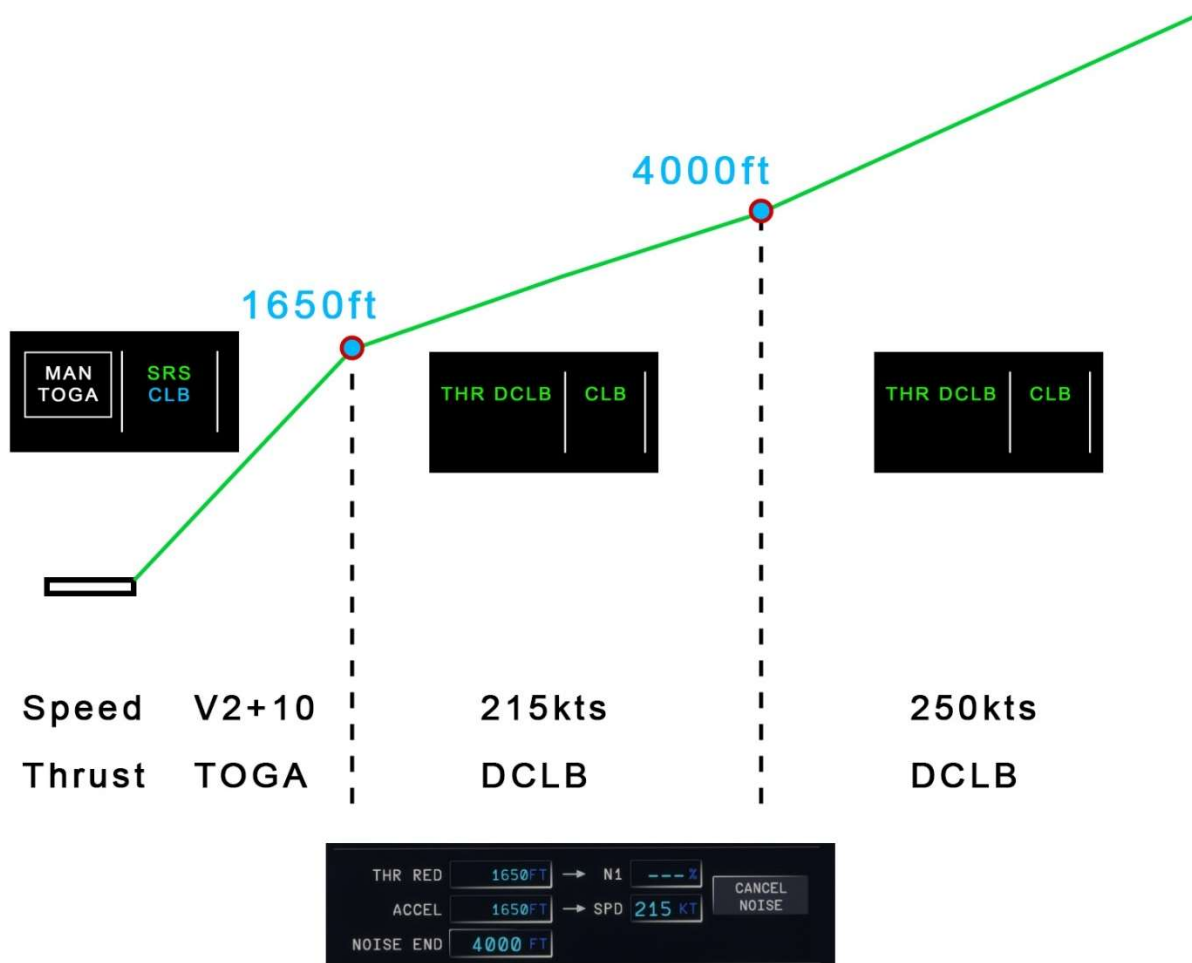
N1 and Speed are now modifiable. By default N1 will be blank and a speed value will be preset that can be modified.

Note: there is no need to insert a Noise N1, it can be left blank.

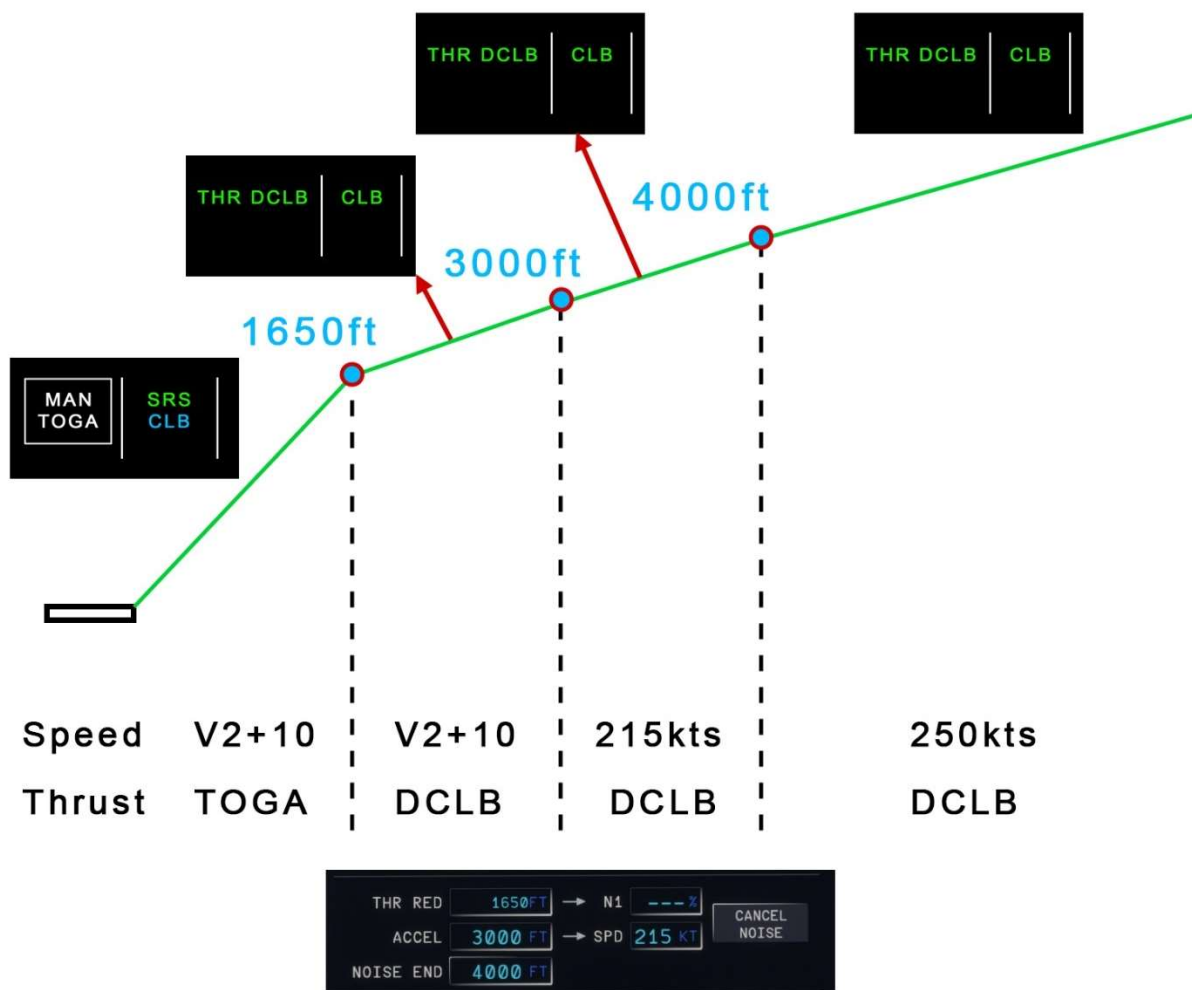
Different scenarios will be discussed to better understand Noise.



Scenario 1

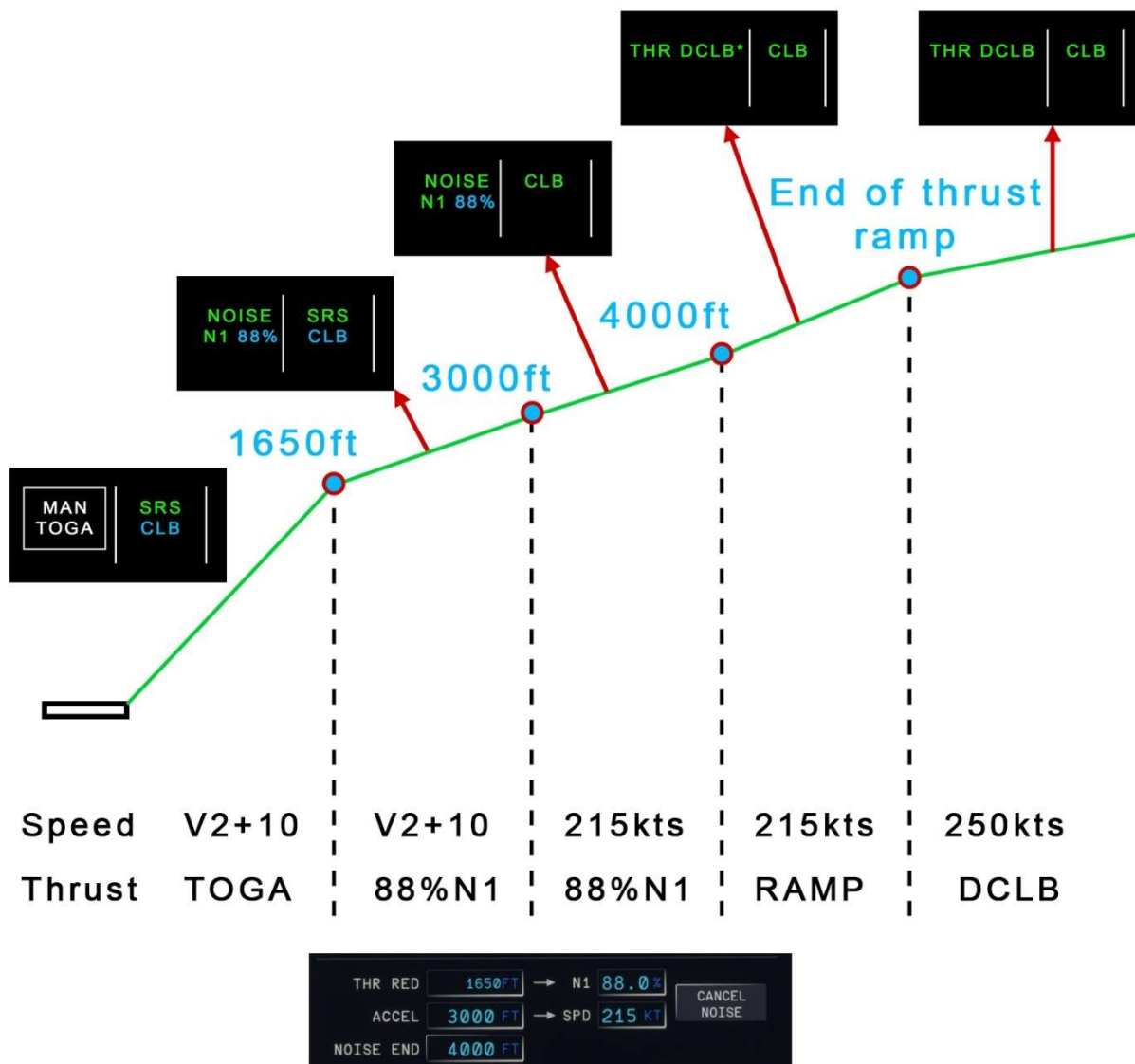


Scenario 2



Scenario 3





Ramp refers to the thrust transition stage between Noise N1 and Climb Thrust. It is indicated by THR DCLB* or THR CLB*.



Thrust levers

The thrust levers serve as the primary link between the flight crew and the Flight Management System (FMS), the Full Authority Digital Engine Control System (FADEC). Their functions include:

- Arming the auto thrust during take-off when FLX or TOGA is selected.
- Activating the go-around phase when TOGA is selected.
- Regulating the maximum thrust level when the auto thrust is engaged.
- Deactivating the auto thrust system when the flight crew moves the levers to the IDLE position.
- Deactivating the auto brake system after touchdown.
- Enabling manual control of thrust when the auto thrust is not in use.
- Configure the auto thrust to its armed mode when the levers are positioned between IDLE and the CL detent or between IDLE and MCT (one engine inoperative).



Radio and Transponder Functions



Radio frequency tuning, volume and microphone transmission selection is controlled with the Radio Management Panel (RMP). The RMP provides access to VHF, HF, transponder code and ident functions.

The MFD has a dedicated Surveillance page which can be accessed via the top left on-screen menu in the MFD or by pressing the SURV key in the KCCU.



Radio Management Panel (RMP)



- | | |
|---|---|
| 1. Access keys: Displays the selected page | 7. Microphone keys: Selects the transmission radio |
| 2. Activation keys: Swaps the STBY frequency into the active frequency | 8. Reception knobs: pull out to receive incoming transmissions and rotate to set the desired volume |
| 3. Line select keys: Validates the entered frequency as a STBY frequency | 9. Keypad |
| 4. Clears any RMP messages displayed | 10. Brightness knob |
| 5. RMP message area | 11. Interphone/Transmit switch |
| 6. Reset key: Silences an incoming call such as an HF, SELCAL or a cabin call | |





Tuning frequencies

1. Select the desired option.
2. Press to select the radio.
3. Type in your desired frequency.
4. Press to activate the standby frequency.

Typing VHF frequencies

Frequencies can be entered in full but there are a few features that save input time:

- It is not necessary to enter the first digit of a VHF frequency (leading 1)
- If the second digit is also a 1 there is no need to enter it either
- There is no need to enter the decimal (period), the system will correctly place it

Frequency input examples

<u>Input</u>	<u>Output</u>
1 1 9 2	119.200
1 9 2	119.200
9 2	119.200
2 3 4	123.400





Setting the transponder code

1. Select SQWK.
2. Type in the transponder code.

Note: the RMP only allows setting the code and transmitting the IDENT.

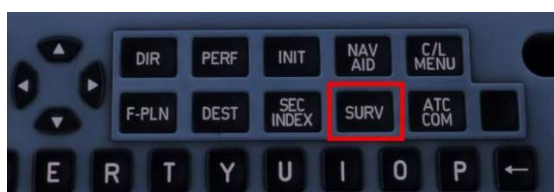
To change the mode of operation it is necessary to access the Surveillance page in the MFD.



Accessing the MFD Surveillance page

There are two ways of accessing the MFD SURV page.

1. Using your cursor in the MFD select SURV from the menu located on the top left.



2. Pressing the SURV key in the KCCU.





Activating the transponder & TCAS

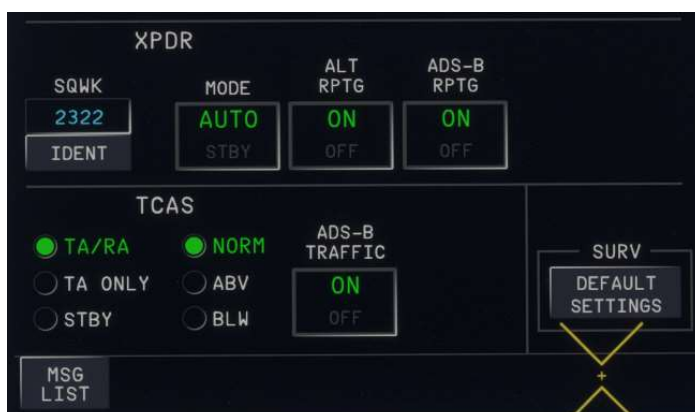
The marked area contains all the controls for the Transponder and TCAS. The Transponder code can be entered in this page or in the RMP.

Currently both Transponder and TCAS are deactivated, indicated by the XPDR MODE STBY and TCAS options greyed out and unavailable.

The preferred activation method is by pressing the DEFAULT SETTINGS button on the lower right which will reset ALL Surveillance options in this page to their default state (AUTO or ON).



A confirmation box will appear, select CONFIRM *.



Both the Transponder and TCAS are active now and options that were previously unavailable are now active and modifiable.





Deactivating the transponder & TCAS

In the XPDR area click on MODE. A confirmation box will appear, select CONFIRM *.

The Transponder and TCAS will now be deactivated.



Failures and Abnormal Procedures

The A350 has a very advanced Electronic Centralized Aircraft Monitoring function (ECAM) assisting the crew in managing system failures and abnormal procedures.



ECAM displays memos and abnormal procedures in the Warning Display (WD).

System information is displayed in the System Display (SD).

The crew interacts with the ECAM using the ECAM Control Panel (ECP) located in the pedestal.

Abnormal situations or failures can either be sensed or not-sensed.



Sensed failure

A sensed failure is one that is detected by the ECAM automatically. In the following example a PRIM 1 fight control computer has failed.



1. The WD displays the detected fault and its associated procedure

2. The SD automatically displays the relevant System Display page concerning the failure

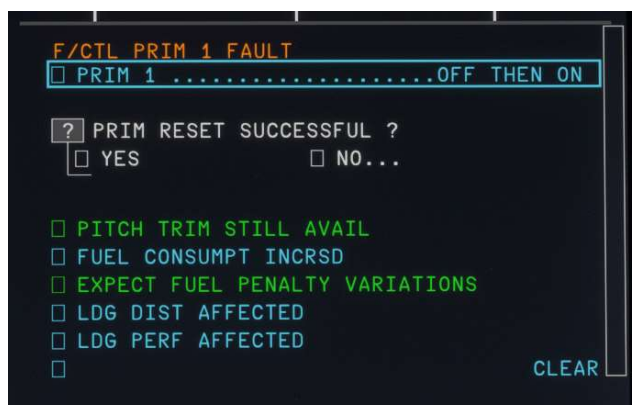
3. The failed item is visible in amber (PRIM 1)



Depending on the severity and type of failure a Master Caution or Master Warning could be triggered accompanied by Single Chime, Continuous Repetitive Chime or no chime at all. Pressing the Master Caution or Master Warning button cancels any aural warnings present associated with the failure.



On the overhead panel the relevant failed system can be identified with an abnormal indication.



The ECAM procedure will indicate the steps that need to be followed. The first line is indicating to turn PRIM 1 off and then on to attempt a reset.

We will assume the reset was not successful. Using the ECP tick mark button we will acknowledge the first line as complete.

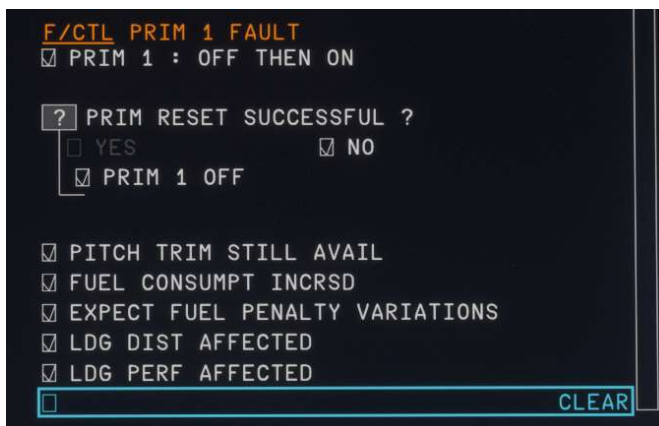




Using either scroll wheel in the ECP we will displace the blue selection box to the NO... option under PRIM RESET SUCCESSFUL? and activate it using the tick mark button on the ECP above the scroll wheel



Note that the procedure has changed from the previous display, the reset attempt was unsuccessful and now the procedure is to turn PRIM 1 off.



When the procedure is complete the final step is to CLEAR it.



STATUS will now appear indicating the implications of the failure.

- Limitations imposed on the operation.
- Additional information.
- Inoperative systems due to the failure.
- PRESS STS FOR NEXT STATUS PAGE is present at the end of the page If the STATUS page has too much information to be displayed in a single page.





When the STATUS review is complete, the STS button in the ECP will be pressed to remove the STATUS page:

- The SD will resume its normal operation.
- The top of the WD will permanently show any limitations caused by the failure.
- STS is shown at the bottom of the WD to indicate information present in the STATUS page.

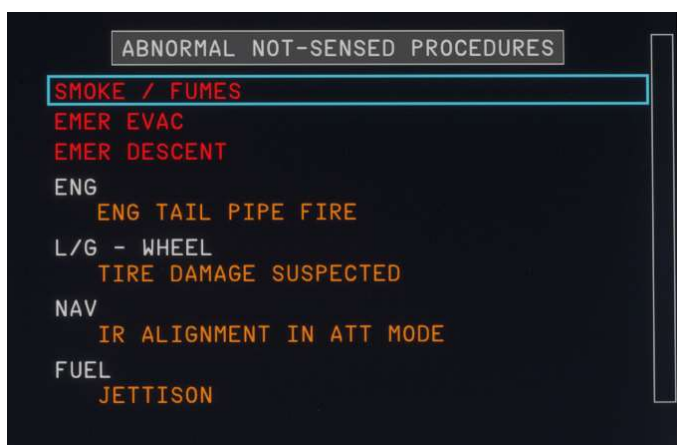


Not-Sensed failure

A not-sensed failure is one that can not be detected by ECAM automatically and has to be manually activated by the pilot.



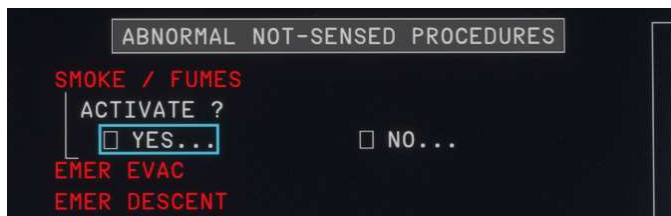
Abnormal not-sensed procedures are accessed by pressing ABN in the ECP.



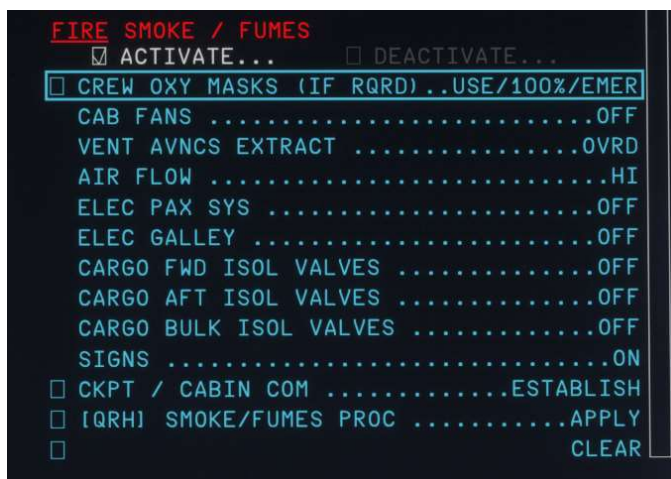
The list of procedures will be displayed in the WD.

Using the ECP scroll wheel and accept button select the procedure to be activated.

In this example we will select SMOKE / FUMES.



Select YES... to activate the procedure.



The procedure is now active and all the relevant steps to be completed are displayed.

Note that some items have a small box ☐ to the left and others do not.

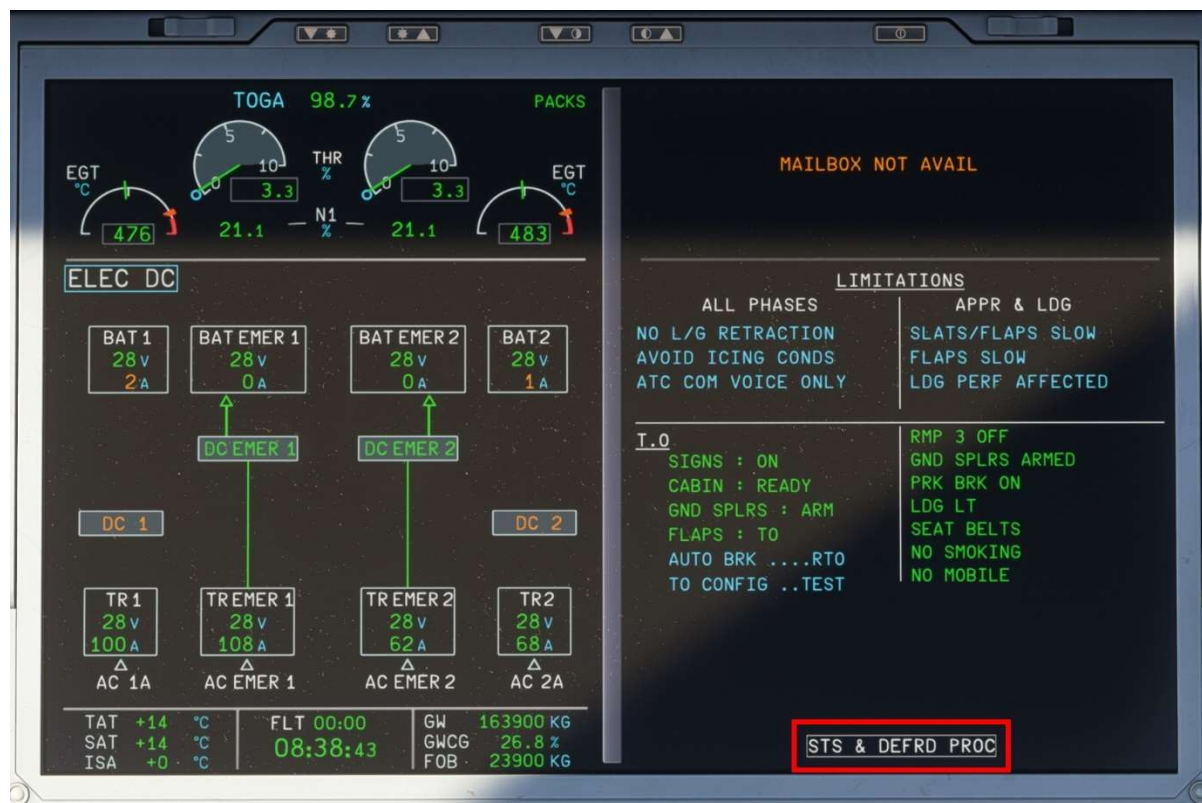
Items with a box require pilot acceptance as they can not be automatically detected by ECAM.

Items without a box will be detected by ECAM, the line will turn white when the control is set to the correct position.



Deferred Procedures

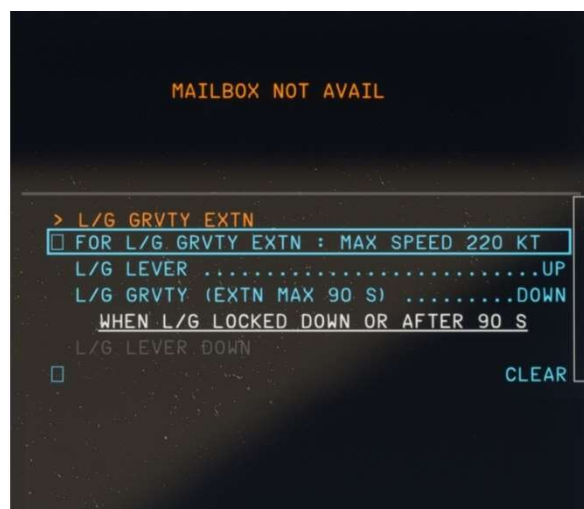
Some failures have implications that affect other systems and might require a procedure to be applied at a later stage.



In the example above note the STS & DEFERD PROC at the bottom of the WD. In the ECAM Control Panel press DEFERD. The list of deferred procedures will be shown, in this case Landing Gear Gravity Extension. This procedure is only applicable when it is time to extend the gear and therefore it is deferred for the time being. Navigate to the Deferred Page and activate it when ready to start the procedure.



Deferred procedure list



Procedure activated



Automatic Emergency Descent

The Automatic Emergency Descent function combines lateral and vertical modes to perform a fully automatic descent down to FL100 or current MORA plus a margin.

This function can be armed in two different ways: **manually** or **automatically**.

Automatic arming (cabin altitude predicted to exceed 14,000ft in the next 15 seconds)

This covers crew incapacitation and will subsequently engage automatically at the end of the countdown.

Manual arming

Performed by the crew by pressing the EMER DESCENT button near the speed brake lever. Extending the speed brake lever by greater than 1/3 position will engage the function.

Regardless of the arming conditions, once the mode is engaged the following will take place:

- Flight directors engage
- A/THR activates (if it was inactive) and maintains idle thrust
- The managed speed target becomes Vmax-5kts
- If in HDG, continues in HDG
- If in NAV, reverts to HDG and performs a right offset of approximately 3nm
- FCU altitude is set to 10,000ft or current MORA plus a margin
- Transponder is set to 7700
- TCAS set to BLW

If the function engages after automatic arming the following occurs as well:

- Autopilot engages (if previously disengaged)
- Speed brakes fully extend
- **AUTO EMER DES ENGAGED** message appears in the PFD



Operations and Techniques

This section outlines the procedures and techniques required to operate the A330 safely and efficiently throughout all phases of flight.

The sections are divided as follows:

Walk-through Guide: A complete A to B flight from cold and dark to shutdown to get you up and running.

Checklists: Printout of the checklists included in the default EFB.



Walk-through Guide

We are going to simulate a scheduled passenger service from Addis Ababa, Ethiopia (HAAB) to Cape Town, South Africa (FACT). We will use the built-in Simbrief functionality and assume the user is familiar with creating and exporting a Simbrief flight plan.

The procedures used here are not meant to replicate full real-world operations; this will, however, get the pilot airborne and flying in the minimum amount of time.

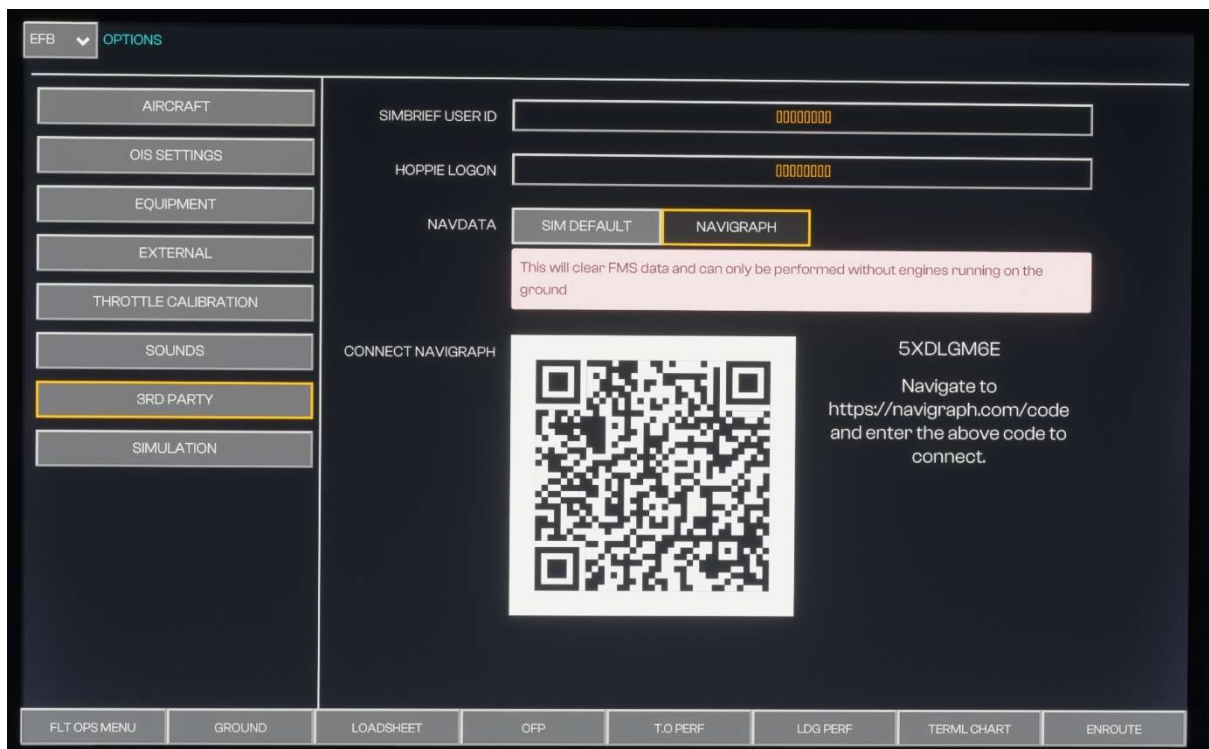
Load the aircraft at an available stand at HAAB cold and dark.

Preliminary Cockpit Preparation



On the overhead panel turn on all four batteries and select external power 1 and external power 2. Set the three ADIRS to NAV.





In the OIS navigate to OPTIONS>3RD PARTY. Input your Simbrief User ID and Hoppie login. If you have a Navigraph subscription use the QR code (or link) to connect your Navigraph account to the A350. Note: The EFB supports the keyboard combination paste (CTRL+V), which is particularly useful to insert the Hoppie login.



Using the navigation bar at the bottom select FLT OPS MENU>FLT OPS STS. Select SIMBRIEF IMPORT or manually insert the details of the route. When complete, select LOADSHEET from the navigation bar.



EFB

LOADSHEET

SIMBRIEF IMPORT

FIRST	PREMIUM ECONOMY	FWD ECONOMY	AFT ECONOMY	TOTALS
0 / 50 PAX	0 / 24 PAX	0 / 126 PAX	0 / 167 PAX	0 / 367 PAX
0 KG		0 KG	0 KG	0 KG

FWD BAGGAGE	AFT BAGGAGE	BULK BAGGAGE	ZFW
0 KG	0 KG	0 KG	193168 KG

FUEL LOAD

64992 KG

SET FUEL

LOAD CG

0 % ZFWCG

26.71 % GWCG

SET ZFW

SET FUEL

FLT OPS MENU

GROUND

LOADSHEET

OPF

T.O PERF

LDG PERF

TERML CHART

ENROUTE

LOADSHEET: Insert or import your ZFW and FUEL. Once the desired information has been set, **press SET ZFW and SET FUEL to set them.** Select **TERML CHART**.

EFB

TERML CHARTS

HAAB

SEARCH

HAAB

FACT

AIRPORT, AIRPORT INFO, TAKE-OFF MINIMS

HAAB - APT - 10-9

BENDO & SHALA 1A & 1B DEPS

HAAB - DEP - 10-3N

RNAV (GNSS) Z RWY 07R (LNAV/VNAV ONLY)

HAAB - APP - 12-4

APT

DEP

ARR

APP

APR

HAAB/ADD

Appt Elev 7625'

N08 58.5 E038 48.0

20 DEC 24 (10-9)

JEPPESSEN ADDIS ABABA, ETHIOPIA

BOLE INTL

ATIS	*BOLE Clearance	BOLE Ground	Tower
128.5	123.7	124.7	121.9

09-00

38-47

38-48

38-49

09-00

FOR DETAILS SEE PARKING STANDS, INS COORDS

Control Tower

Main Apron

GA Apron

197' 60m Stopway

197' 60m Stopway

12,139' 3700m

12,467' 3800m

07L

07R

25R

25L

197' 60m Stopway

197' 60m Stopway

12,139' 3700m

12,467' 3800m

07L

07R

25R

25L

Feet 0 1000 2000 3000 4000 5000

Meters 0 500 1000 1500

FLT OPS MENU

GROUND

LOADSHEET

OPF

T.O PERF

LDG PERF

TERML CHART

ENROUTE

TERML CHART: The departure and arrival airports have been automatically selected. Select the charts you will require and click on the pin to the right to bookmark them. All your bookmarked charts are visible when you click the highlighted pin.

At this point you can select the **GROUND** page to open or close doors as desired. We will continue with the setup.





MFD: The aircraft will power up on the DATA/STATUS page, confirm the Navigation Database date is correct, otherwise select SWAP* to select the second database. Press INIT in the KCCU.



ACTIVE/INIT: Insert manually or request and import your flight plan from Simbrief. We will now continue to the overhead panel.



Cockpit Preparation

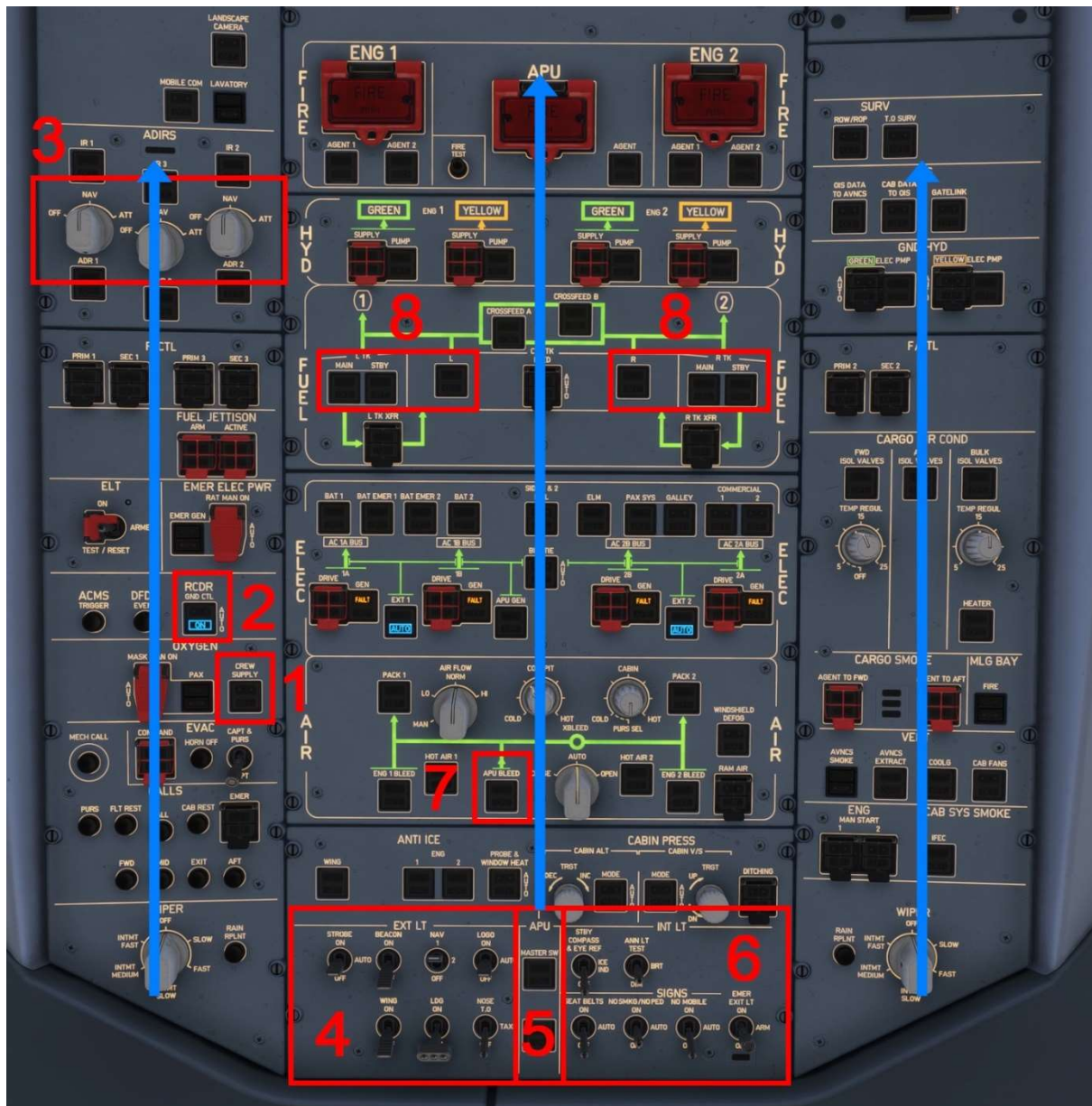
To properly configure the aircraft, you will use a series of cockpit 'flows' and scans. You can also use the in-sim checklist for guidance.

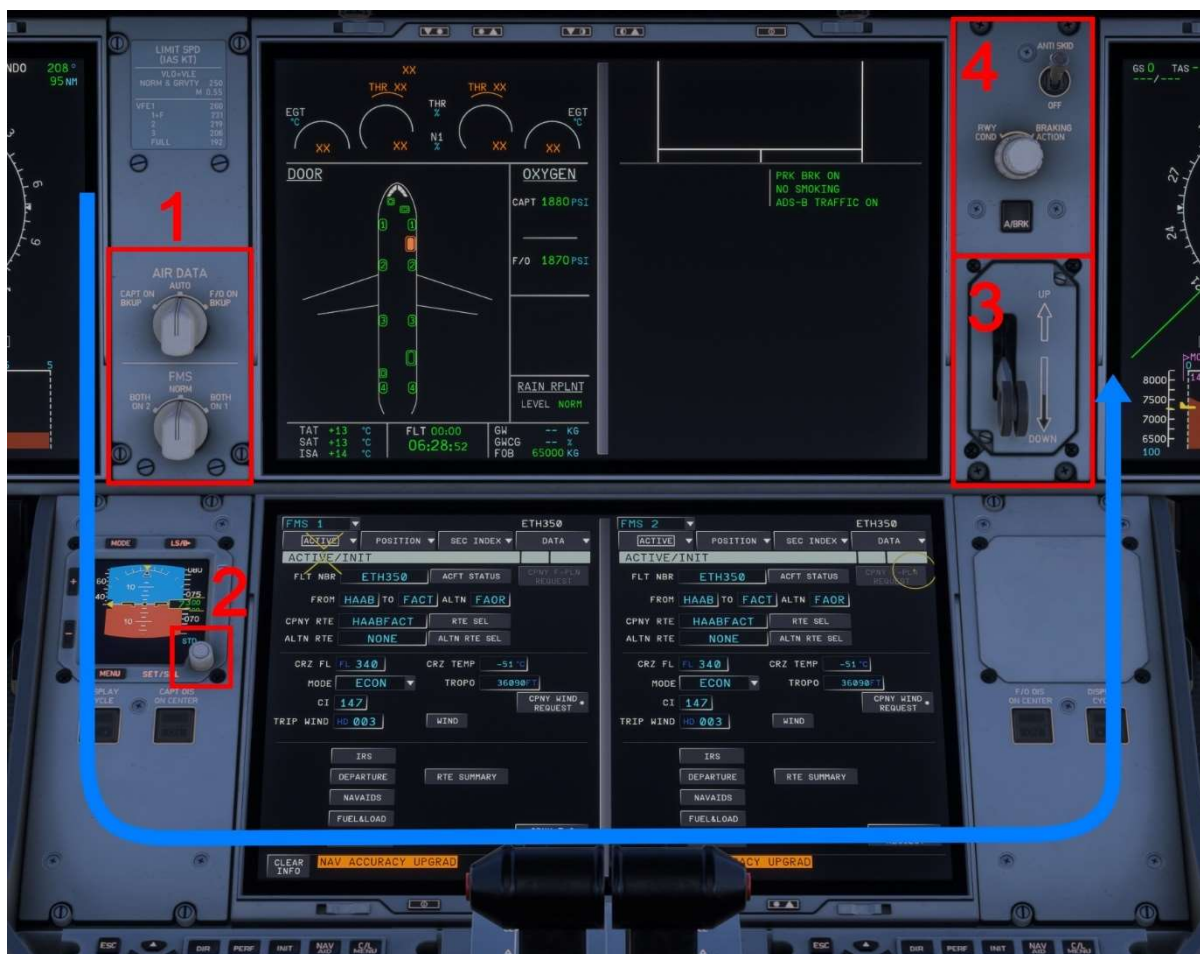
The scans normally start on the overhead panel using a bottom-to-top, left-to-right flow. Pay close attention to the following items to ensure that the aircraft is properly configured for departure.

Any white lights set to OFF should be turned ON during this flow.

- 1) Crew Oxygen Supply: ON (light out)
- 2) RCDR GND CTL: ON
- 3) ADIRS selectors 1, 2 and 3: NAV
- 4) Exterior lighting panel:
 - a. STROBE – AUTO
 - b. BEACON – OFF
 - c. Nav - 1
 - d. LOGO – AUTO
 - e. WING – OFF
 - f. LAND – OFF
 - g. NOSE – OFF
- 5) Start the APU by first pressing the MASTER SW ON and then pressing START
- 6) Passenger signs panel:
 - a. SEAT BELTS – ON/AUTO (once refuelling has been completed)
 - b. NO SMOKING/PED – AUTO
 - c. NO MOBILE – AUTO
 - d. EMER EXIT LT – ARM
- 7) APU BLEED – ON (When the APU is running)
- 8) Fuel Pumps: ON



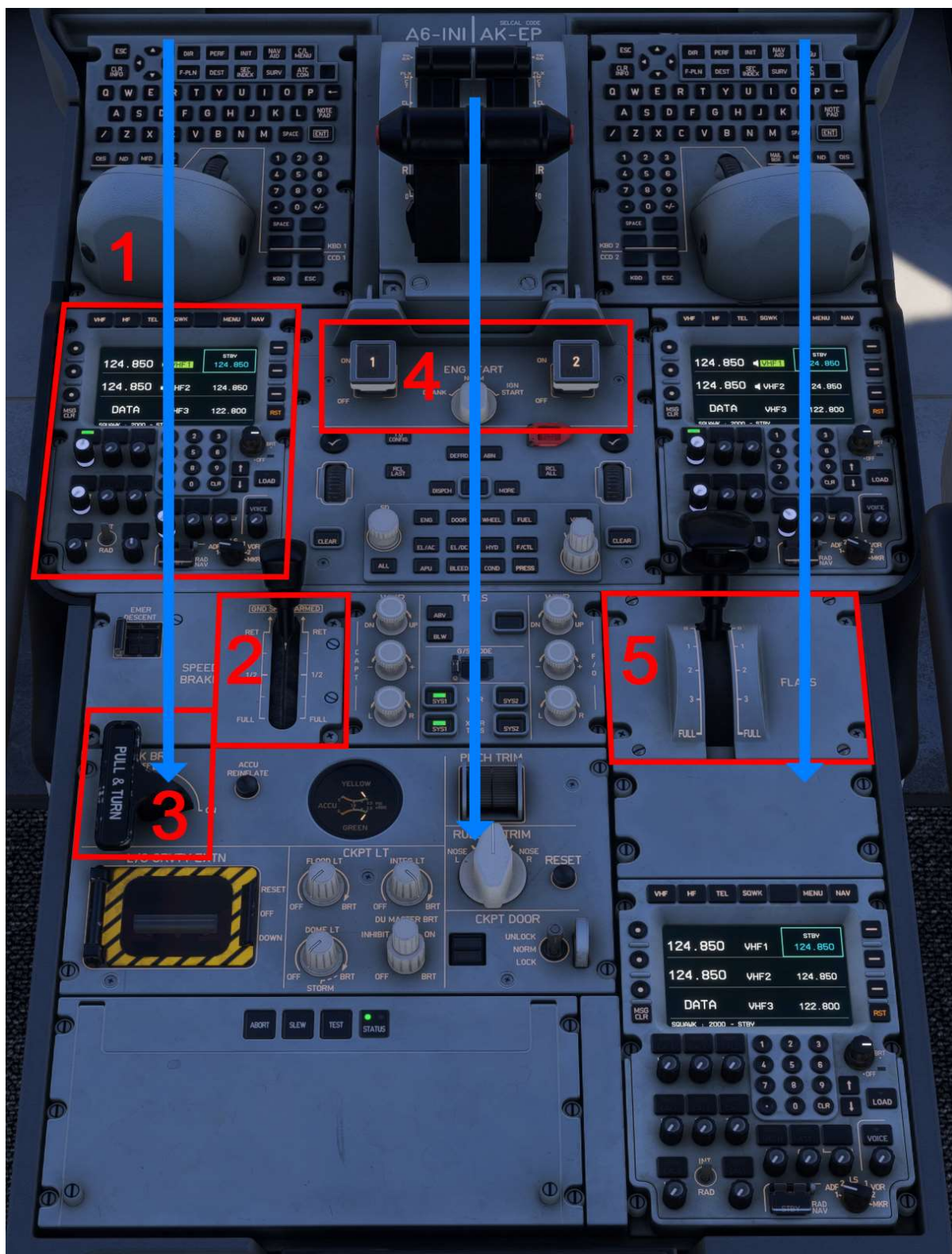




Centre Instrument Panel

- 1) AIR DATA and FMS: AUTO
- 2) ISIS is ON and aligned, set QNH
- 3) Landing gear lever: DOWN
- 4) A/SKID & N/W STRG: ON





Centre Pedestal

- 1) RMP: SET
- 2) Spoilers: RET
- 3) Parking brake: ON
- 4) Engine masters: OFF, ENG START: NORM
- 5) Flap lever must match the flap position indicated in the PFD



Now we will finish setting up the FMS using the MFD. Most of the information required will already be entered if using the Simbrief import function.

FMS 1 ETH350

ACTIVE POSITION SEC INDEX DATA

ACTIVE/INIT

FLT NBR ETH350 ACFT STATUS CPNY F-PLN REQUEST

FROM HAAB TO FACT ALTN FAOR

CPNY RTE HAABFACT RTE SEL

ALTN RTE NONE ALTN RTE SEL

CRZ FL FL 340 CRZ TEMP -51 °C

MODE ECON TROPO 36090FT

CI 147 CPNY WIND REQUEST

TRIP WIND HD 003 WIND

IRS +

DEPARTURE RTE SUMMARY

NAVAIDS

FUEL&LOAD

T.O. PERF CPNY T.O REQUEST

MSG LIST

ACTIVE/INIT: Ensure complete, select IRS

FMS 1 ETH350

ACTIVE POSITION SEC INDEX DATA

POSITION/IRS

IRS ALIGNED ON GNSS POS: 08°58.9N/038°47.8E

ALIGN ON OTHER REF

DEVIATION FROM POS1

IRS	MODE	DEVIATION
IRS 1	NAV	0.0 NM
IRS 2	NAV	0.0 NM
IRS 3	NAV	0.1 NM

IRS 1 IRS 2 IRS 3

RETURN

MSG LIST

IRS: Confirm all 3 IRS are in NAV, select RETURN

FMS 1 ETH350

ACTIVE POSITION SEC INDEX DATA

ACTIVE/INIT

FLT NBR ETH350 ACFT STATUS CPNY F-PLN REQUEST

FROM HAAB TO FACT ALTN FAOR

CPNY RTE HAABFACT RTE SEL

ALTN RTE NONE ALTN RTE SEL

CRZ FL FL 340 CRZ TEMP -51 °C

MODE ECON TROPO 36090FT

CI 147 CPNY WIND REQUEST

TRIP WIND HD 003 WIND

IRS +

DEPARTURE RTE SUMMARY

NAVAIDS

FUEL&LOAD

T.O. PERF CPNY T.O REQUEST

MSG LIST

ACTIVE/INIT: Select DEPARTURE

FMS 1 ETH350

ACTIVE POSITION SEC INDEX DATA

ACTIVE/F-PLN/DEPARTURE

SELECTED DEPARTURE

FROM	RWY	LENGTH	CRS
HAAB	---	--- M	---

EOSID	FREQ/CHAN	SID	TRANS
NONE	---	---	---

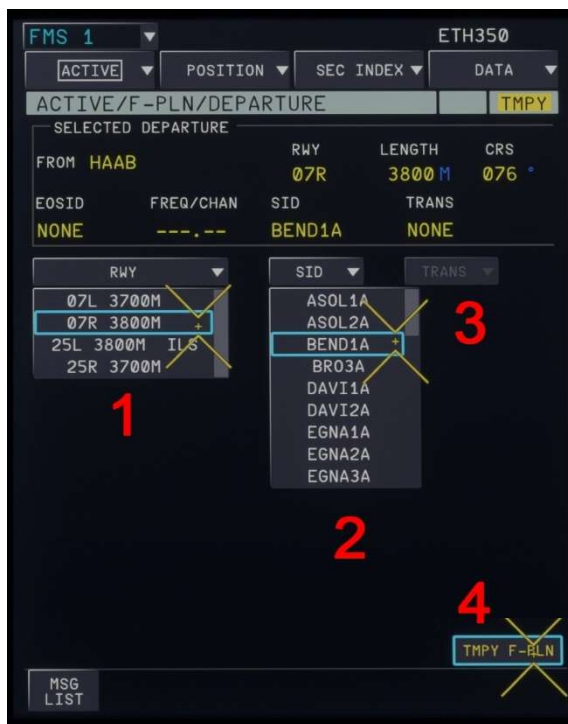
RWY SID TRANS

RETURN

MSG LIST

DEPARTURE page





1. Select the take off runway
2. Select the SID
3. Select the transition (if applicable)
4. Press TMPY F-PLN to insert or delete the changes



5. If your SID is not in view
6. Use the KCCU arrows to scroll the menu





ACTIVE/F-PLN: Insert temporary



The flight plan is now inserted

You can get a better view of the planned route on the ND by turning the EFIS mode to PLAN and increasing the range. You can also select the CSTR (constraints) option to confirm any speed and/or altitude constraints are entered correctly according to the appropriate chart.



At this point you can also request and insert wind data from Simbrief and enter a secondary flight plan, usually used for an immediate return to the departure airfield, or a possible departure runway change. Depending on the length of flight, the arrival can also be entered at this point, but for this demonstration we will complete this at a later stage during the cruise phase.

ACTIVE/INIT: Select FUEL & LOAD

Insert ZFW, ZFWCG, BLOCK fuel and PAX NBR

The required FUEL & LOAD information is displayed in the OIS>LOADSHEET page.

Note: there is a simplified way to insert ZFW, ZFWCG and BLOCK figures. Click on the field and press ENT in the KCCU, this will automatically insert the respective value.

When this page is complete, select RETURN. We will now calculate our take off performance in the OIS.



The screenshot shows the 'T.O PERF' screen in the EFB. It is divided into 'CONDITIONS' and 'DEPARTURE' sections. The 'CONDITIONS' section on the left includes fields for WIND, OAT, QNH, RWY COND, A-ICE, TOW, CONF, AIR COND, and THRUST. The 'DEPARTURE' section on the right includes fields for ELVN, TORA, ENTRY ANGLE, SLOPE, TODA, T.O SHIFT, ASDA, and RESULTS. The RESULTS section shows RWY, TODA, MTOW(perf), V1, VR, V2, THRUST, THS, T.O SHIFT, and EO ACCEL. At the bottom, there are buttons for 'SYNC', 'COMPUTE', and 'SEND TO FMGS'. Red boxes and numbers 1-4 highlight these buttons: 1. SYNC FMGS, 2. SYNC, 3. COMPUTE, 4. SEND TO FMGS.

OIS>T.O PERF: Insert all the required information to obtain the take off performance or use the SYNC buttons.

1. SYNC FMGS: Inserts the departure airport and runway as inserted in the FMS.
2. SYNC: Inserts the current conditions (live METAR) and take off weight. Note: runway condition must be manually selected as this is not imported from the METAR.
3. COMPUTE.
4. SEND TO FMGS: Click to send the take off speeds, configuration and thrust setting to the FMS.

The screenshot shows the 'FMS 1' screen with the 'ACTIVE/INIT' tab selected. The 'T.O PERF' button is highlighted with a red box and a yellow 'X'.

ACTIVE/INIT: Select T.O PERF

The screenshot shows the 'FMS 1' screen with the 'ACTIVE/PERF' tab selected. The 'T.O PERF' button is highlighted with a red box and a yellow 'X'.

Insert the OIS T.O. performance

The screenshot shows the 'FMS 1' screen with the 'ACTIVE/PERF' tab selected. The 'T.O PERF' button is highlighted with a red box and a yellow 'X'.

PERF T.O complete



This concludes the minimum FMS configuration requirements. Configure the autopilot (FCU) as the final step of the cockpit preparation process.



1. Set the correct QNH for the departure airport.
2. Set the EFIS as you prefer.
3. The Speed (SPD) and Lateral Navigation should both be automatically set in Managed Mode (displaying ---). If they are not, pushing the relevant control selector knob underneath the display will set them to Managed.
4. The Flight Directors (FD) should have turned on during power up, if not press the FD button.
5. Set the required stop altitude. This is normally indicated on the SID chart or given by ATC. For this flight, we will set this to our cruise altitude. The aircraft will respect altitude constraints in the FMGS flight plan if entered correctly.



Finally we cross check the PFD and ND to confirm the guidance is adequate.



1. V1 and V2 displayed.
2. Climb and Navigation modes are armed. Both flight directors are ON.
3. Initial stop altitude.
4. Crosscheck the indicated altitude against the airport elevation.
5. QNH correctly set.
6. SID name.
7. Initial waypoint information.



Before Engine Start

Prior to progressing to the next phase, ensure that loading is complete, and the aircraft is ready for pushback and engine start.

Select the OIS GROUND Page and select Close All. You should also remove the GPU and Chocks if not already completed.

You can confirm the status of the doors from the cockpit by viewing the SD display.



Once all exits and cargo compartments are closed, call ATC for pushback and start-up clearance.





1. APU: AVAIL.
2. APU Bleed: ON.
3. Beacon: ON.



1. KCCU: SURV.
2. Select DEFAULT SETTINGS.





CONFIRM



The transponder and TCAS is now active

Pushback and Engine Start

You can start the engines while the pushback is underway. Engines can be started in any sequence in the A350.



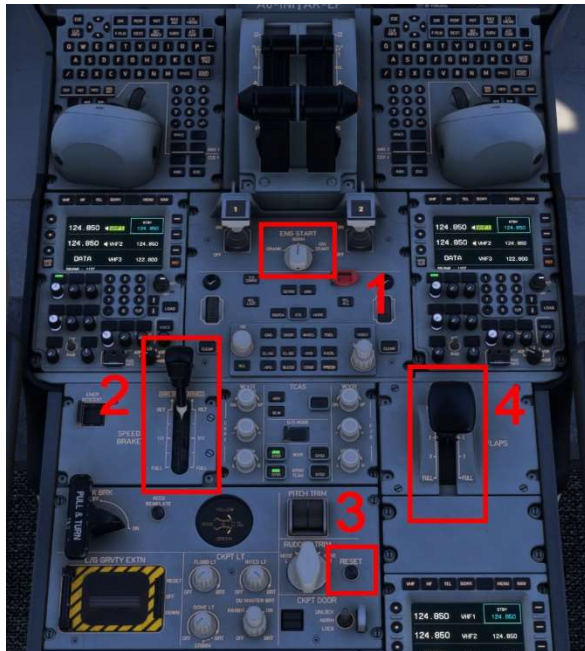
1. Engine start selector: IGN/START.
2. ENG MASTER: ON.

Once the startup is successfully completed by the FADEC, an AVAIL indication is shown temporarily on the Engine Display. Start the second engine by selecting the Engine Master to On.



After Engine Start

After the start sequence is complete for both engines and the pushback tug has disconnected from the aircraft, conduct the next procedure flow.



1. Engine start selector: NORM (1).
2. APU Bleed: OFF.
3. APU Master: OFF.
4. Ground spoilers: ARM (2).
5. Rudder trim: RESET (3).
6. FLAPS: SET (4).

Note: the trim is automatically set for Take-off.



Taxi

The following set of flows are typically completed during the taxi phase. For simplicity, we will conduct them now while stationary. Once you become more accustomed to these procedures, you will be able to undertake them while the aircraft is in motion.

Begin by checking the flight controls. Smoothly apply and hold full deflection of your joystick and identify corresponding inputs in the SD. Note that you do not need to select the F/CTL page; the F/CTL page will automatically display once you apply a joystick input. Full-up elevator input is shown below.

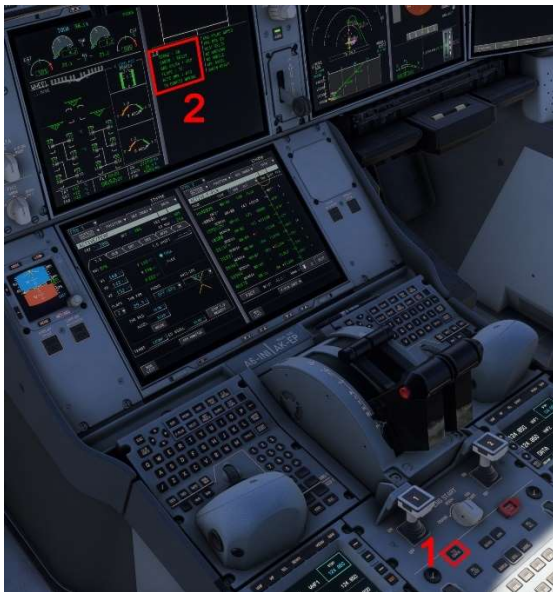


Press the A/BRK button when the control check is complete to arm automatic braking in case of a rejected Take-off.





Turn the Weather Radar ON by selecting WX on the EFIS Control Panel.

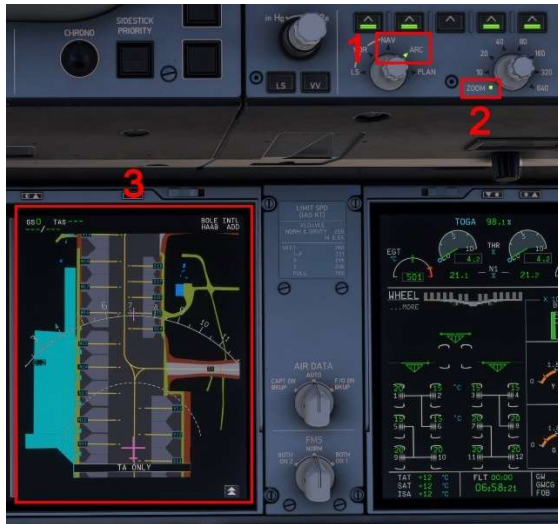


Press and hold the T.O CONFIG button (1) and confirm there are no blue outstanding items in the Take-off Memo present in the Warning Display (2).



Nose light: TAXI.





Display the Airport Navigation Function by selecting either NAV or ARC mode (1) in the EFIS Control Panel and reducing the Range (2) into the ZOOM range.

Note: the green triangle light remains static in zoom but further clockwise or anti-clockwise rotations of the range knob select different ZOOM ranges.

The ANF will be displayed in the ND (3).

Releasing the parking brake and leaving the engines at idle is usually sufficient to get the aircraft rolling; at heavier weights, a slight increase in thrust may be required.

Taxi to the active runway using the minimum thrust required while keeping your speed below 30 kts. The taxi speed can be monitored with the Ground Speed (GS) indication on the top left of the Navigation Display (ND). The preferred method is to allow speed to build to 30 kts then apply one smooth brake application to slow the aircraft down to about 10 kts. This avoids applying constant brake pressure which will cause brake degradation over time. Keep a maximum speed of 10 kts on 90-degree turns.

Apply the parking brake when holding short of the departure runway.



Before Take-off

Perform the following flow when you receive the Take-off clearance. For ease, complete this while the aircraft is stationary.



1. STROBE light: ON
2. LDG light: ON
3. NOSE light: T.O

Depending on aircraft performance configure the Air Conditioning PACKS.



Take-off

We suggest you read through these next steps a few times to familiarise yourself with the events that will take place. The Takeoff and initial climb phase progress in quick succession, and it is easy to 'get behind' the aircraft. Line up on the runway and apply the parking brake initially (you would not do this for normal operations). Exit the ANF in the ND by selecting a range out of ZOOM.

There are two main settings for takeoff: Take-off and Go-Around (TOGA) or FLEX. TOGA will provide maximum available thrust to the engines whereas FLEX reduces the thrust output of the engines to increase engine life.

Note: A FLEX temperature must be set in the MFD Take-off Performance page in order to perform a FLEX Take-off.

TOGA is always available, even when a FLEX temperature is inserted.



TOGA selected



FLEX selected, assumed temperature of 35C



The throttles have detents and audible clicks for each phase. For FLEX takeoff you will move forward two detents/clicks, for TOGA you would move the throttles fully forward (or 3 detents/clicks).



Release the parking brake and set your Take-off thrust. Hold the side stick approximately half travel forward, this ensures the nosewheel remains in contact with the ground and nose wheel steering can be maintained during acceleration. The aircraft will accelerate quickly! Maintain the runway centreline using the rudder pedals to steer. The fly-by-wire system will gradually blend nosewheel steering to the rudder only.





The FMA will indicate the active and armed modes during Take-off. Climb and Navigation modes are still armed, ready for the acceleration phase.

Speed tape indications

V1: Cyan 1

Vr: Cyan circle

V2: Magenta speed bug

While accelerating, gradually release the forward stick pressure to neutral by 100 kts. Next you will reach V1, your decision speed. Barring any major technical issues, you will continue the takeoff. At Vr rotate by pulling back on the stick gently. We are aiming for an initial climb attitude of 12.5 degrees at a rate of 3 degrees per second.

When airborne, follow the Flight Directors and engage Autopilot 1 (AP1).



Once airborne with the aircraft positively climbing, raise the landing gear by selecting the Landing Gear Lever to the UP position.



The aircraft will accelerate the aircraft to its clean configuration and climb speed, normally 250 kts below 10,000 ft. The acceleration segment will normally happen between 1,000 and 1,500 ft above ground level. This can be set to automatically populate in the OIS>OPTIONS page. The Autopilot will automatically pitch to achieve this acceleration. You will also note another change in the FMA ordering the thrust levers to be set to Climb power (LVR CLB) and flashing white. Vertical CLB and lateral NAV modes are now fully engaged (indicated in Green).



LVR CLB: Set Thrust levers to CLB detent.
CLB: Climb mode engaged.
NAV: Navigation mode engaged.



Accelerating above the F speed select Flaps 1.

Note: if the Take-off was performed with Flaps 3 you **still select Flaps 1** when accelerating past the F speed, not Flaps 2.





Accelerating above the S speed select Flaps 0.

Complete the after take-off flow:

1. Disarm the speed brakes by pushing the lever in. Be careful not to deploy speed brakes, the aircraft will provide a warning if you do this.
2. NOSE lights: OFF

Now the aircraft is climbing to its cruise flight level.



Climb

Turn the landing lights off above 10,000 ft and the passenger seat belt sign can also be set to Auto.



Set Standard (STD) on the altimeters by pushing the baro selector knob when above the transition altitude.



Cruise

Few pilot actions need to be performed during the cruise phase other than monitoring the aircraft systems and tactically managing the guidance system.

Performing a Direct-To

When inserting a Direct-To a waypoint you are presented with 4 options: DIRECT, DIRECT WITH ABEAM, CRS IN and CRS OUT. Course in and Course out are not normally used during the cruise phase and will not be discussed in this section.



Direct-To options for waypoint PONAL.

Note waypoint ILKAM present before PONAL.



Direct-To with Abeam inserted.

Any waypoints between the Direct-To will be inserted as Abeam points, note ABILKAM is in the flight plan, indicating the position Abeam ILKAM.





Direct-To PONAL inserted again, without using the Abeam option. Any waypoints between the present position and PONAL are discarded.



Direct-To options are also accessible from the ND by clicking on the waypoint in the ND and selecting Direct-To from the drop-down menu.



Approach Preparation

As for departure, you will need to prepare the FMS for the arrival into Cape Town.

For this arrival you will follow a Standard Arrival Route (STAR) followed by a conventional Instrument Landing System (ILS) approach. You will execute a fully automatic landing using the autopilot. This is usually reserved for low visibility operations, you can manually fly the landing if you desire.

Press the F-PLN button on the KCCU and using the cursor, click on the arrival airport (FACT) at the bottom left corner of the page. This will open the Arrival page.



FMS 1 ETH350

ACTIVE POSITION SEC INDEX DATA

ACTIVE/F-PLN/ARRIVAL TMPY

SELECTED ARRIVAL

TO	LS	RWY	LENGTH	CRS
FACT	----	19	3201 M	191

APPR	FREQ/CHAN	VIA	STAR	TRANS
19	---.--	NONE	---	---

RWY APPR VTX STAR TRANS

01 3200M	ILSZ19	NONE
16 1700M	RNV19	ASD11B
19 3200M	RNVZ19 (RNP)	ERDA1B
34 1700M	VDM19	EVUK1B
	19	GE1E1B

MSG LIST TMPY F-PLN

Select the Runway, Approach, STAR, Transition and Via. Then click TMPY F-PLN.



INSERT TMPY

2534 NM

F-PLN INFO

Click on INSERT TMPY



Press the PERF key in the KCCU to open the Performance page of the FMS, then click on the APPR tab.

Insert the wind, temperature, QNH and approach minima.

Check and modify (if necessary) the Transition Level, Landing Configuration and Vapp (Approach speed).

The ILS will be auto tuned within 300nm of your destination. Press RAD NAV in the KCCU to access the Nav aids page of the FMS and confirm the correct frequency is tuned.



Select your runway exit on the ANF and arm BTV. For the detailed steps refer to Page 55, Arming BTV.

You should be approaching the top of descent at this point, indicated by a white arrow along the flight plan lateral path.

Descent

Initiate the descent when the aircraft is within a few miles of the descent arrow.

Normally, ATC provides descents as a series of 'step downs', but for the purpose of this guide, you will set your final approach fix altitude. For the ILS19, this is 3,000 ft.

Set the FCU altitude to 3,000 ft.



To commence the descent, push the altitude knob to enter managed descent mode.





Preset the arrival QNH by rotating the knob (but do not push or pull). The preselected value will disappear after a few seconds but will be stored in the memory.

Pull the knob below the transition level to set the QNH to the preset value.



When descending through 10,000 feet, turn the landing lights to ON and the seat belt signs to ON. Select the Landing System (LS) push buttons to ON to show the approach guidance in the PFD.



Approach and Landing

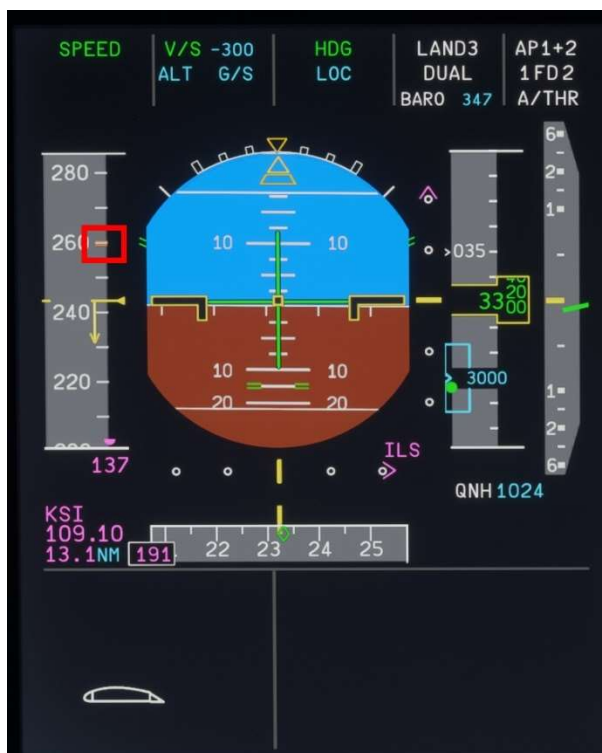
At a conservative distance from the airport start configuring the aircraft. The first step is to activate the approach phase. Press PERF in the KCCU and click on ACTIVATE APPR*.



The approach phase will activate automatically when flying past the Deceleration pseudo waypoint. Indicated by a D in the ND. When the approach phase is active the tab will show APPR in green.

Arm the approach (when on an intercept heading), by pressing the APPR button on the FCU and selecting the remaining autopilot ON, in this case pressing AP2.





The FMA will now display **G/S** and **LOC** in **BLUE** to indicate Localizer and Glide Slope modes are armed.

The ILS identifier, frequency, and distance (DME) is indicated on the lower left of the PFD.

Note the amber (=) symbol in the Speed tape at 260kts. This indicates VFE next, the maximum speed for your next configuration. Always select your next flap setting when below Vfe next.



Speed control during the approach

The approach speed is indicated in magenta at the bottom of the speed tape (137). The aircraft will not decelerate to this speed until the configuration is adequate.

In this case, with no flaps, the aircraft will not decelerate below green dot, which is the minimum clean speed. If your speed is managed you will notice a magenta dot, this indicates the **short-term managed speed**. The aircraft will target the minimum speed for the current flap configuration. This dot will move as the flaps are extended until Vapp can be flown.

Select Flaps 1.



After Flaps 2, select the gear down, which will contribute to the aircraft's deceleration while descending along the glide path. Arm the spoilers by pulling on the speed brake lever. Select Flaps 3 and Flaps full.

The landing memo will be displayed below 2,000ft. Confirm there are no outstanding (blue line) items.



The aircraft will now complete an automatic landing and rollout, bringing the aircraft to a complete stop. You will be prompted at approximately 20 ft to retard the throttles; move the thrust levers to the idle position or press F1 on your keyboard. Select reverse thrust after touch down by pressing F2, or if calibrated via the OIS, the reverse thrust range on your throttles. Cancel reverse thrust at approximately 60-70 kts by pressing F1 again or returning your throttles to idle.

Disconnect the autopilot by pressing the red button on the side stick or in your joystick. You will also need to press the brakes (or press the Auto-Thrust disconnect button) to manually take control of braking again.

Congratulations! You have completed the flight. You may now taxi the aircraft to an available parking stand and follow the in-sim checklist to shut down and secure the aircraft.



Checklists

BEFORE START	
COCKPIT PREP	COMPLETED (BOTH)
GEAR PINS & COVERS	REMOVED
FUEL QTY	_____ KG
T.O DATA	SET
BARO REF	_____ SET (BOTH)
SEAT BELTS	ON
ADIRS	NAV
DOORS	CLOSED/ARMED (BOTH)
THRUST LEVERS	IDLE
PARK BRK	AS RQRD
SURV	DEFAULT (BOTH)
BEACON	ON

REDUCED ENGINE TAXI OUT	
GUIDANCE AND CONSIDERATIONS	REVIEWED
ENGINE 1(2)	START
ENG START SELECTOR	NORM
XBLEED	OPEN
APU BLEED	OFF
APU	OFF
ANTI ICE RUNNING ENG	AS RQRD
ECAM STATUS	CHECK
TUG & GND CREW	DISCONNECT



ENG START SELECTOR ENG 2(1)	IGN/START START
ENG START SELECTOR	NORM
CHRONO	START
XBLEED	AUTO
ANTI ICE RUNNING ENGS	AS RQRD
GND SPOILERS	ARM
RUDDER TRIM CHECK	ZERO
FLAPS	SET
PITCH TRIM	CHECK
ECAM STATUS	CHECK
A-ICE	AS RQRD
ECAM STS	CHECK
RUDDER TRIM	NEUTRAL

BEFORE TAKEOFF	
F/CTL CHECK	COMPLETED (BOTH)
FLIGHT INSTRUMENTS	CHECKED (BOTH)
BRIEFING	CONFIRMED
FLAPS SETTING	CONF ____ SET (BOTH)
V1 / VR / V2 / THR RATING	(BOTH)
SQUAWK	____ SET
SEAT BELTS	ON
CABIN	READY
GND SPLRs	ARM
FLAPS	T.O



AUTO BRK	RTO
T.O CONFIG	NORMAL
T.O RWY	_____CONFIRMED (BOTH)
CABIN CREW	ADVISED
PACKS	OFF

AFTER TAKEOFF / CLIMB	
LDG GEAR	UP
FLAPS	0
PACKS	ON
BARO REF	_____SET (BOTH)

APPROACH	
BRIEFING	CONFIRMED
SEAT BELTS	ON
MINIMUM	_____SET (BOTH)
BARO REF	_____SET (BOTH)

LANDING	
CABIN CREW	ADVISED
A/THR	SPEED/OFF
AUTO BRK	AS RQRD
RWY COND	_____SET
SEAT BELTS	ON
CABIN	READY
LDG GEAR	DOWN



GND SPLRs	ARM
FLAPS	LDG

AFTER LANDING	
GND SPLRs	DISARM
FLAPS	0
APU	START

REDUCED ENGINE TAXI IN	
GUIDANCE AND CONSIDERATIONS	REVIEWED
ECAM STATUS	CHECK
APU	AVAIL
ENG 1(2)	SHUTDOWN

PARKING	
EXT LT	AS RQRD
PARK BRK / CHOCKS	AS RQRD
XPDR	STBY
APU BLEED	ON
ALL ENGs	OFF
FUEL PUMPs	OFF
SEAT BELTS	OFF

SECURING THE AIRCRAFT	
ADIRS	OFF
OXYGEN CREW SUPPLY	OFF



APU BLEED	OFF
EMER EXIT LT	OFF
SIGNS	OFF
ALL LAPTOPS	OFF
APU	AS RQRD
LOGBOOKS	COMPLETED
ALL 4 BATs	AS RQRD

