Boeing 757 Pro Extended, version 2.3.11, with 'Professional Modern Avionics' by FlightFactor, and X-Plane 11.41, 64 bit –Manual V. 1.03

Add-Ons (optional): Better Pushback, X-Life Deluxe, Autogate

System: Windows 10 Home 64 bit, 32 GB RAM, Intel Core i7-3770K CPU @ 3,5 GHz,
Grafik: NVIDIA GeForce GTX 1070

From 'cold and dark' at Hamburg/Germany (EDDH), Gate 01A,
to ‚securing airplane' at Stuttgart/Germany (EDDS)

Passenger Number: 120
No extra cargo

Structur:

A. Flight Deck

Overhead Panel

Mode Control Panel (MCP)

Front Panel

Pedestal

B. Preflight

Put your B 757 to EDDH, Gate 01A.

B.1. Flightplan and fuel calculation:

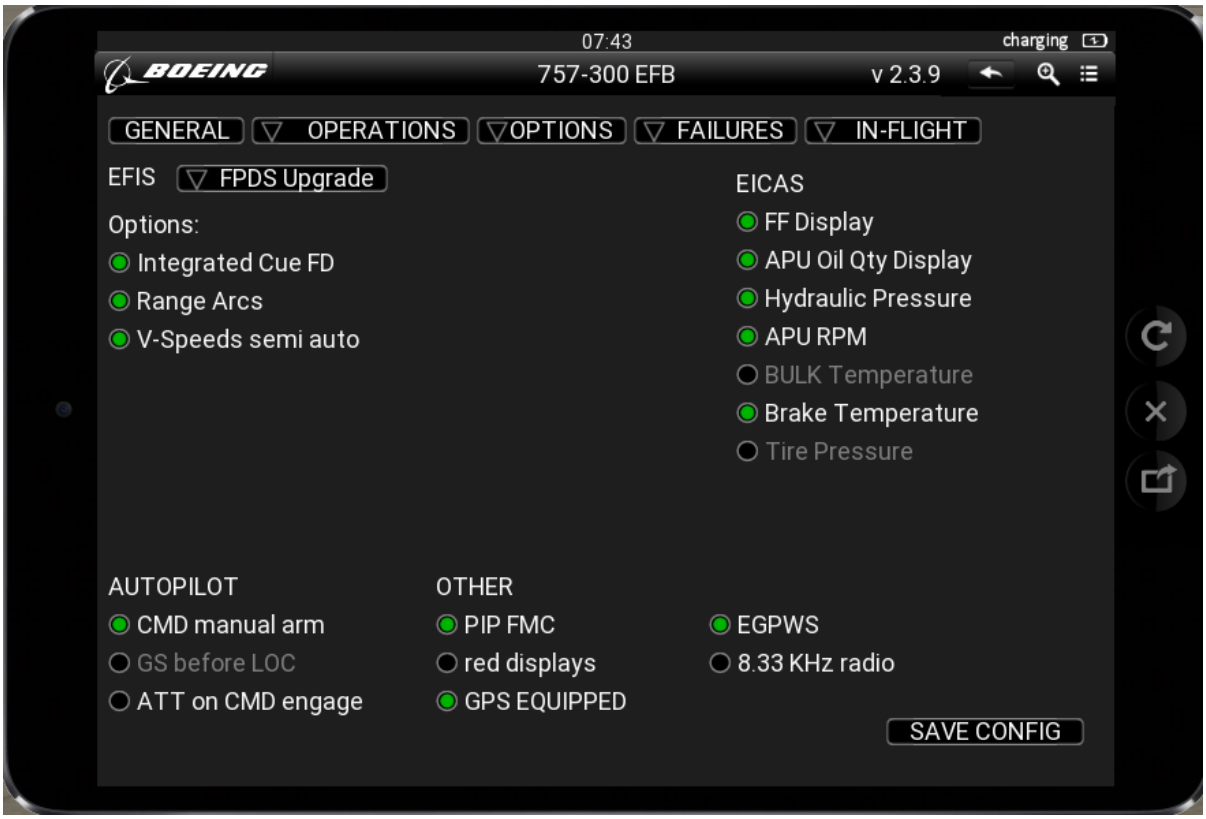
Get your flightplan from Simbrief, for example; Simbrief will calculate the quantitty of fuel needed. (https://www.simbrief.com).

Download the flightplan to the following folder: X-Plane 11/Aircraft/B757 Extended/co-routes. FMC will have access to your flightplan then.

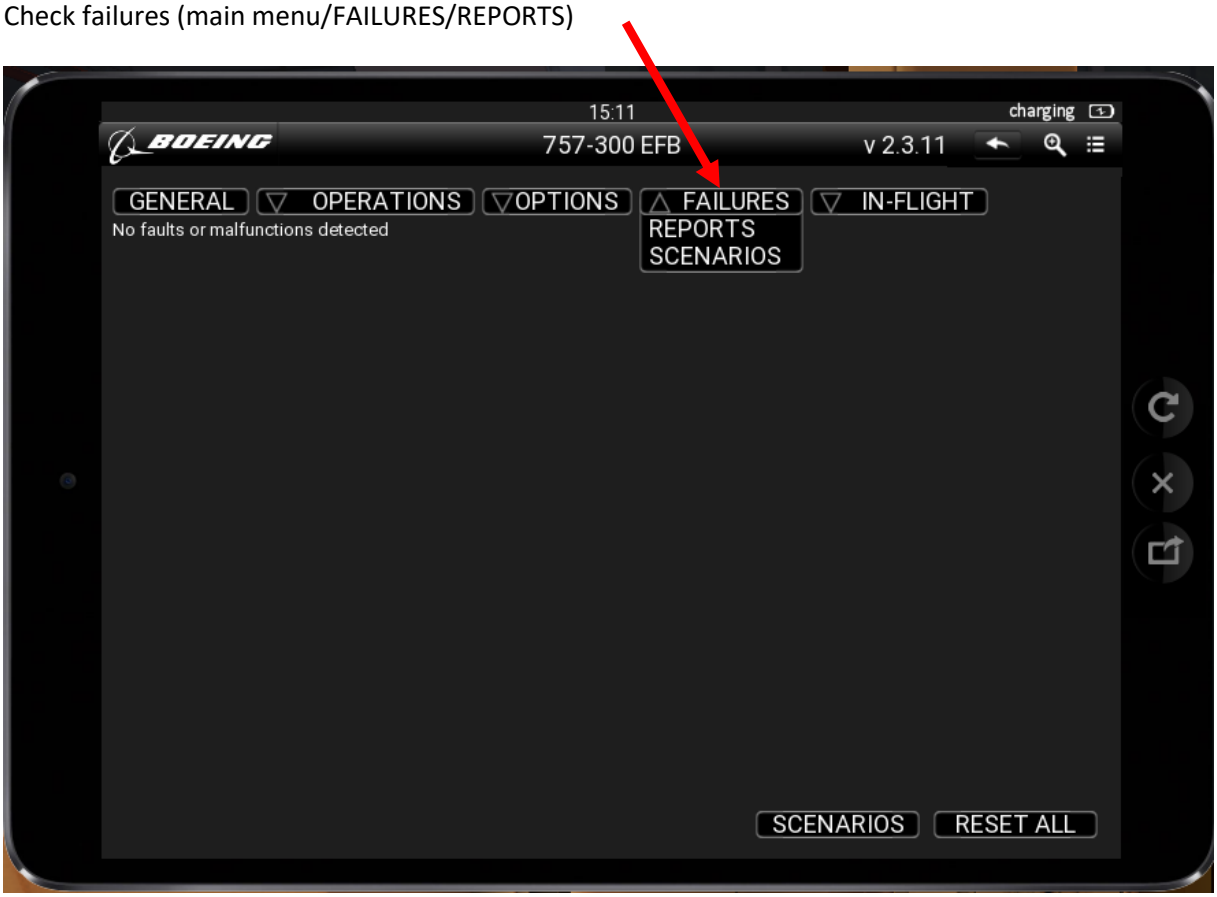
B.2. Airplane Settings

Settings in the Main Menu/GENERAL: real limits, real time, challenge level 0:

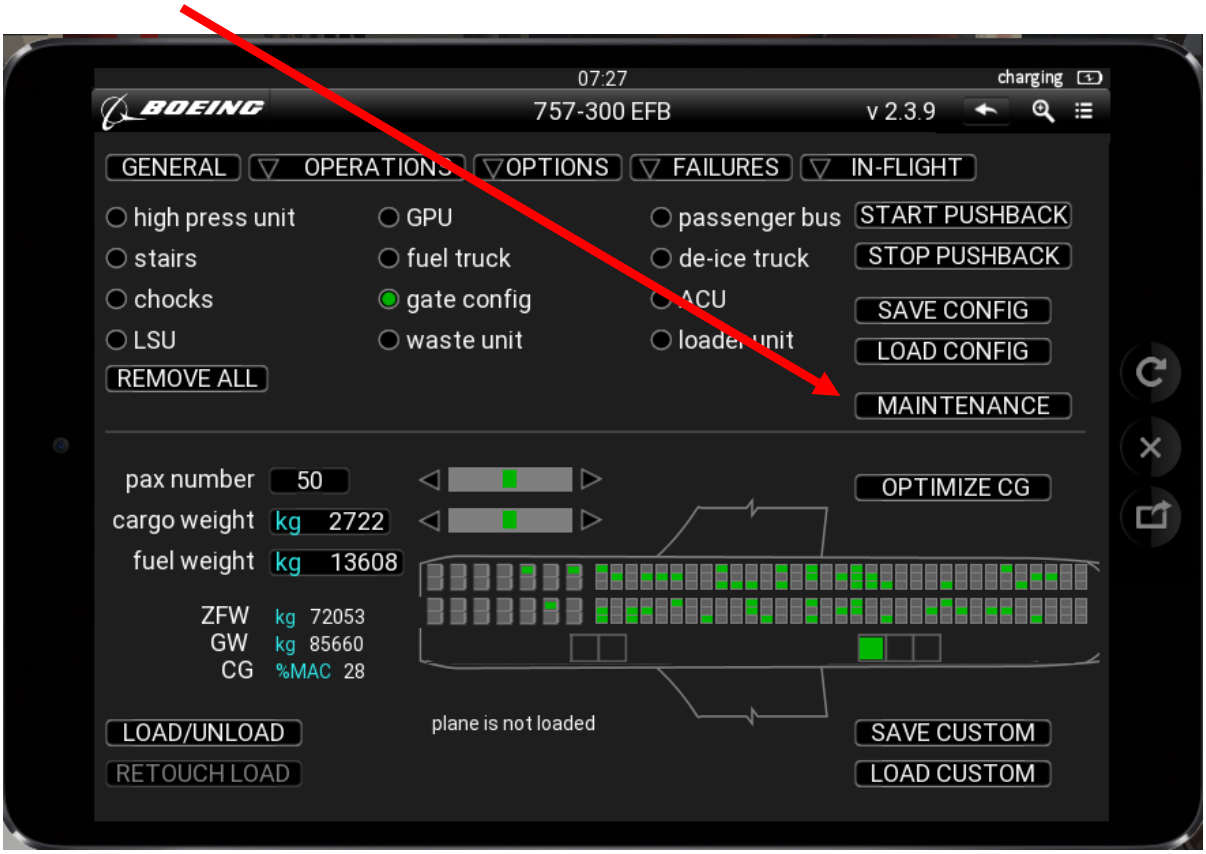
Set OPTIONS/AVIONICS-settings as followst:



Check failures (main menu/FAILURES/REPORTS)



Click ‘MAINTENANCE‘ in the Menu Operations/GROUND, if necessary.

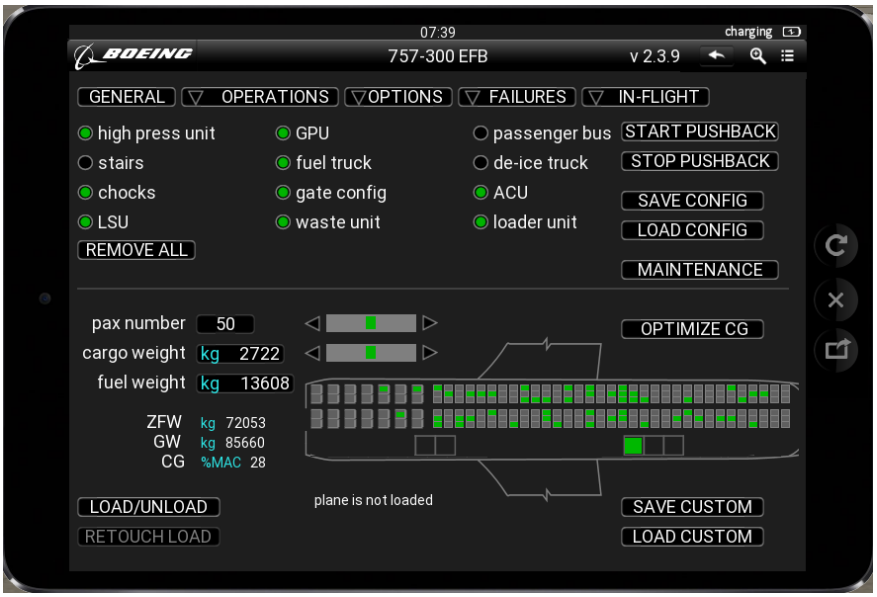


B.3. Ground supply

Main menu/OPERATIONS/GROUND:

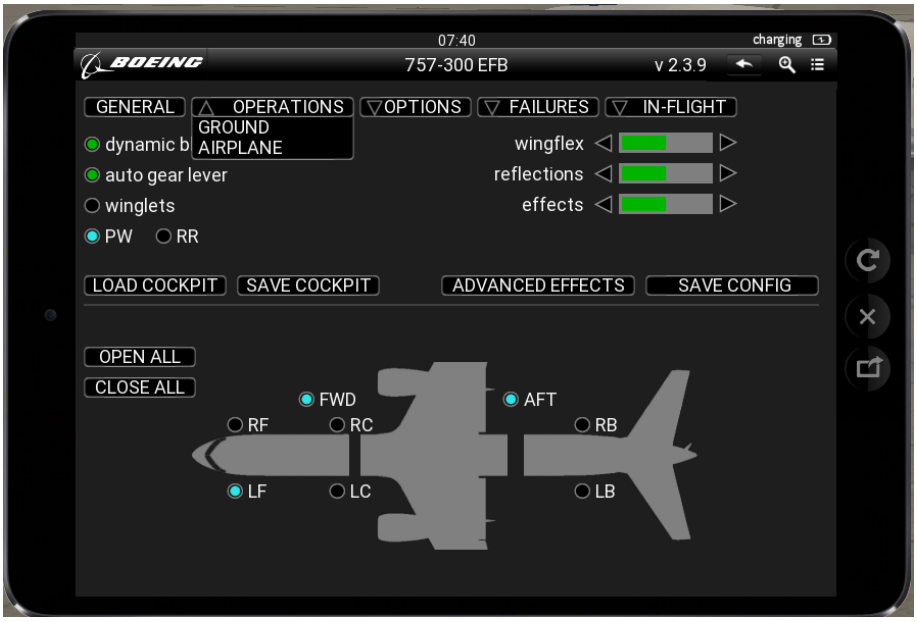
Call high pressure unit, GPU (für external power), fuel truck, chocks, passenger bus, luggage loader (LSU), waste unit, air conditioning unit (ACU), food loader unit, as needed.

Click ‘gate config’, as you are standing at a gate.



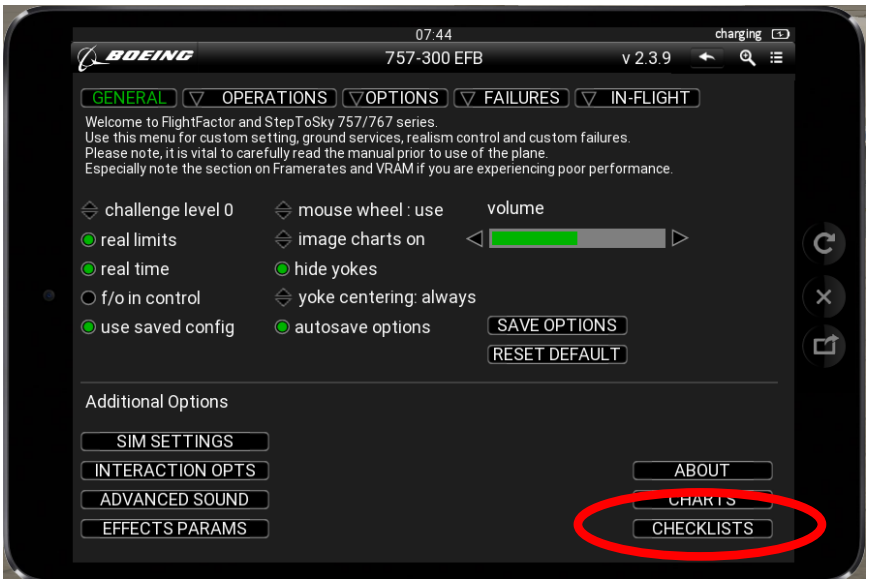
Main menu/OPERATIONS/AIRPLANE:

Open LF (left front) door for passengers, and FWD- (front) and AFT-(back) Cargoload hatches.

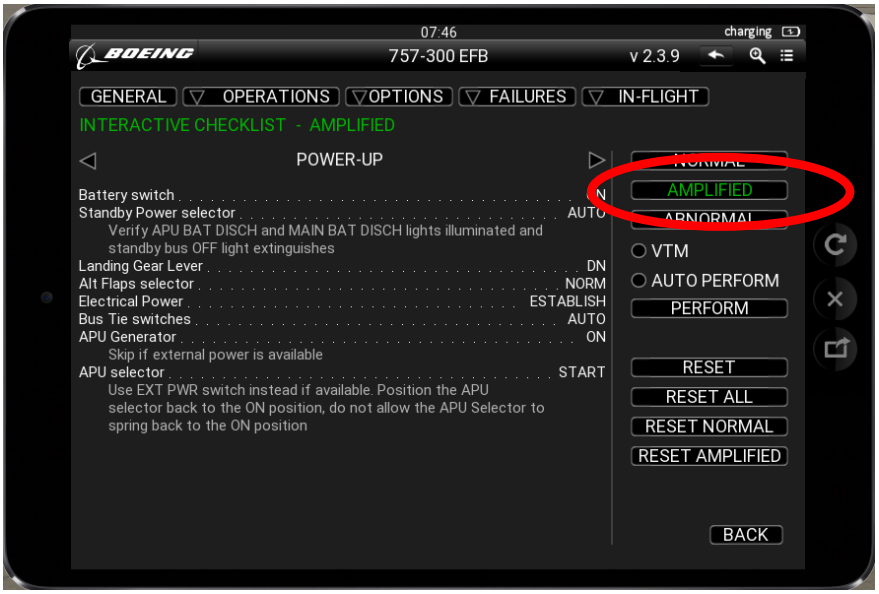


C. Cockpitpreparation

Cockpit Preparation according to the Checklist (Main menu/GENERAL):

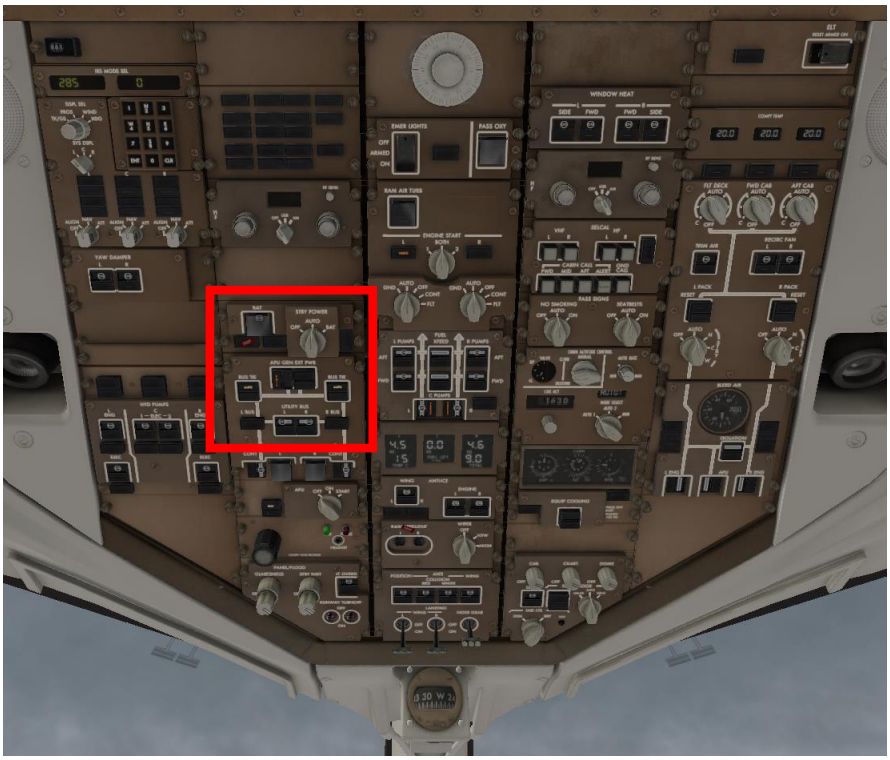


Use amplified checklist.



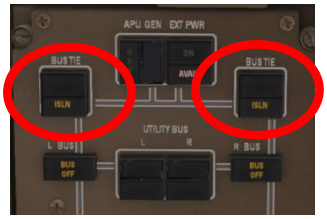
C.1. Power-up

Overhead Panel: Activate Batteries (ON) and switch Standby power to ‚AUTO‘

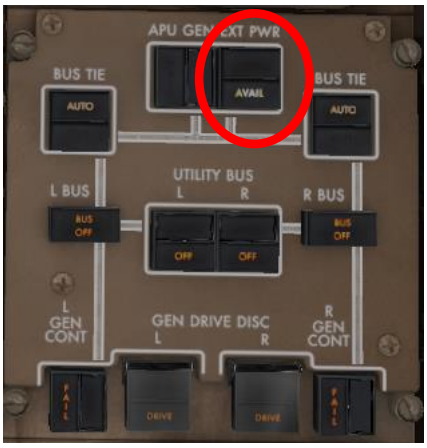


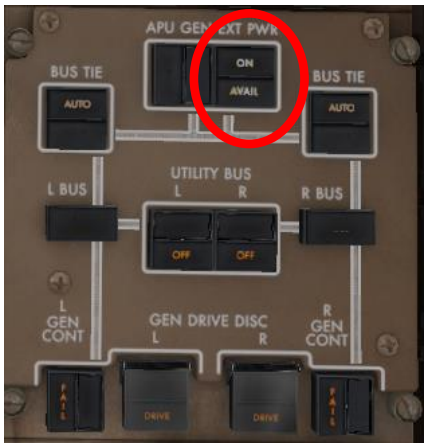
Activate ‚external power‘ and ‚BUS TIE‘s (switching to ‚AUTO‘), connecting downstream circuits.

Bus Tie System provides supply of both circuits in case of failure of one of both generators.



If the ground power unit (GPU) is connected, external power is available (EXT PWR-switch shows ‚AVAIL'). Switch EXT PWR to ON



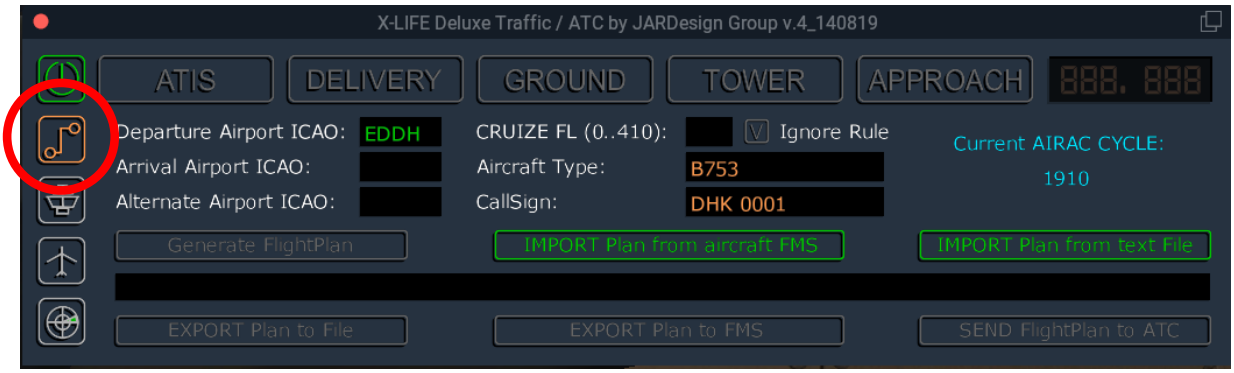


Plane will be supplied by external power now.

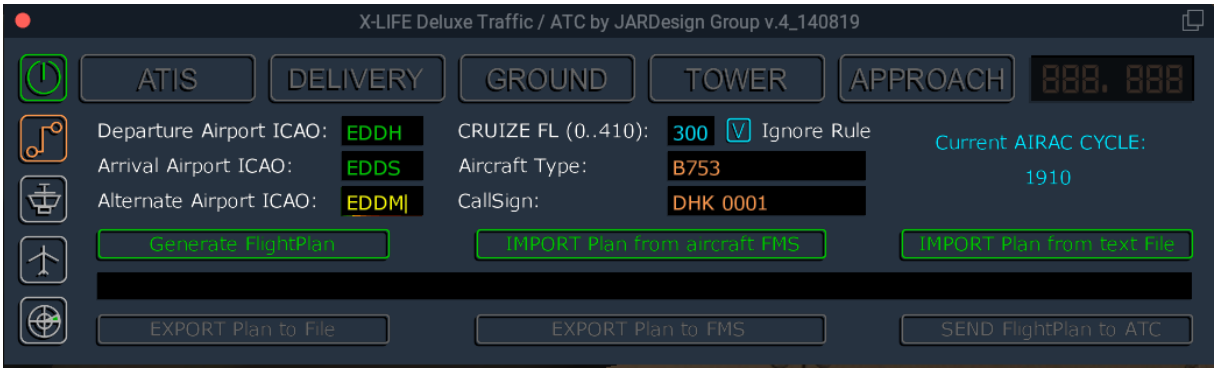
C.2. Flightplan

C.2.1. **Entering flightplan into X-Life** (if you fly without X-Life, click here)

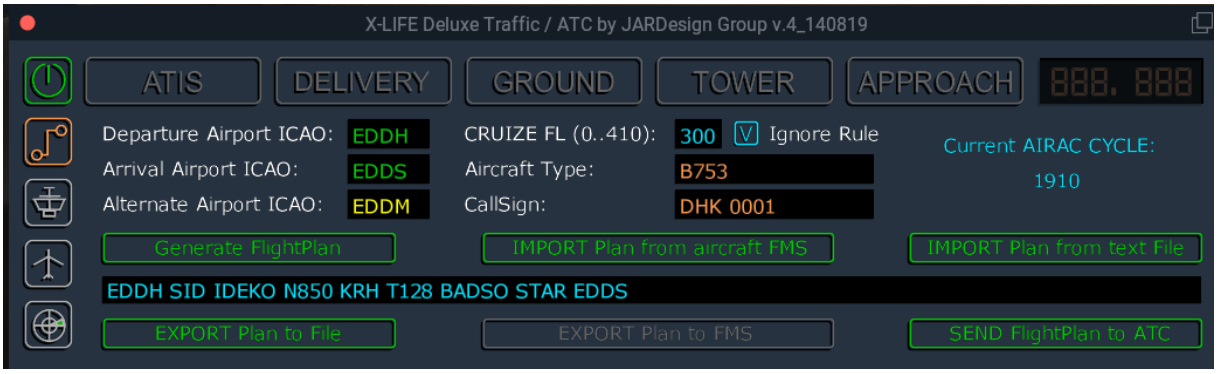
Open X-Life from the X-Plane Plugins-Menu, click X-Life-main switch, then click the flight plan symbol.



X-Life knows the departure airport. Enter arrival airport (EDDS), CRUIZE FL, airplane type and secondary airport.



Click ‘IMPORT Plan from text File’. X-Life fetches the flighplan from the X-Plane/Resources/Plugins/ X-Life/Flightplans folder.



Flightplan is loaded. SEND FlightPlan to ATC.

ATC will confirm flight plan input.

C.2.2. Automatic Terminal Information System (ATIS)

C.2.2.1. ATIS with X-Life

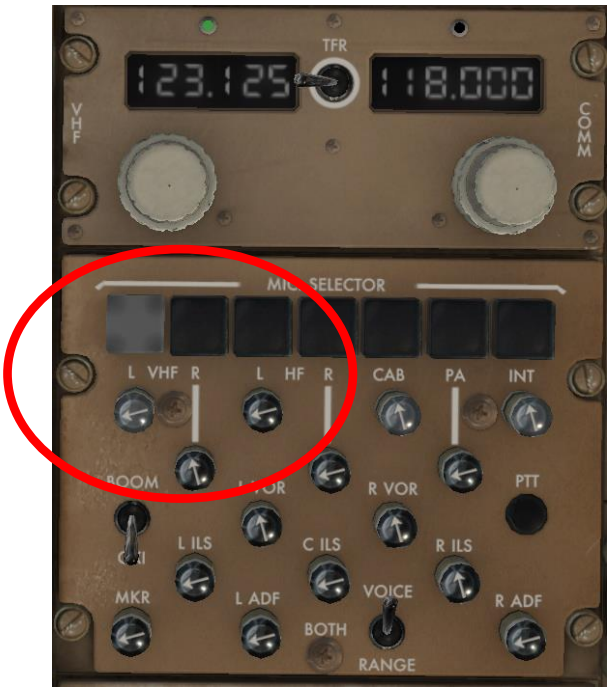
Click ATIS for weatherinformation

Get to know local QNH, active runways, Transition Height of departure airport, and transition level of your destination airport.

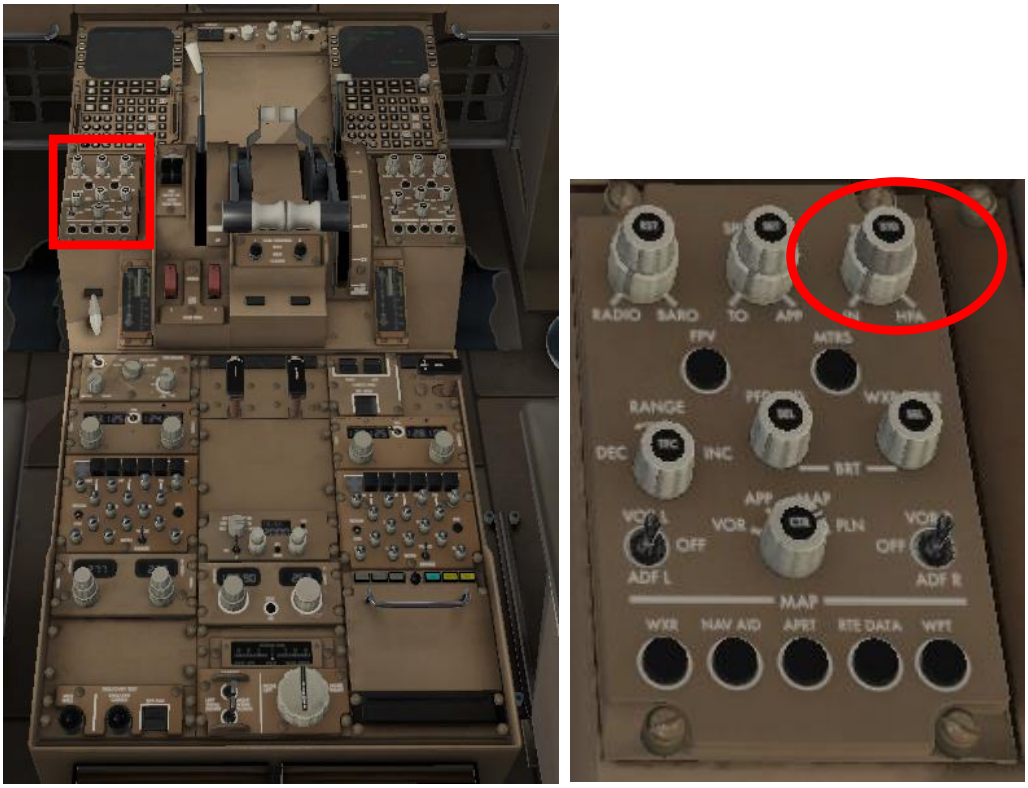
Get to know the local QNH, wind and active runways without X-Life, tuning ATIS-Frequency at the radiopanel.

C.2.2.2. ATIS without X-Life

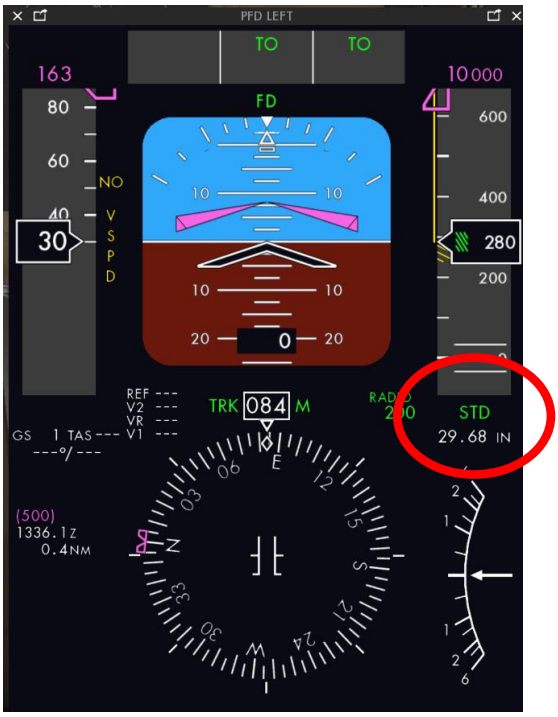
Tune 123.125 for VHF L oder R at the VHR panel for Hamburg ATIS, check ATIS for QNH, and active runways.



Enter the local QNH at the Display Control Panel (DCP).



QNH will be indicated in the Primary Flight Display (PFD).



Active runway in our example is RW33, and QNH is 3006.

C.3. Radio Check (if you fly without X-Life, click here)

Click DELIVERY, then ‚SAY' in the Departure Radio Check line, for the radio check:

Confirm with READBACK.

C.4. Flightplan, Transponder (Squawk), and Initial Altitude

Click ‚Request Clearance', for getting flightplan clearance.

Maybe, you get a new QNH. In this case: actualize the entry.

Click ‚Request Clearance' again. Now you get the clearance with runway, SID, and Squawk.

Confirm with ‚Readback and set Squawk'.

Squawk (today: 6271) will be entered into the Transponder (Pedestal) automatically.

If not, tune Squawk manually.

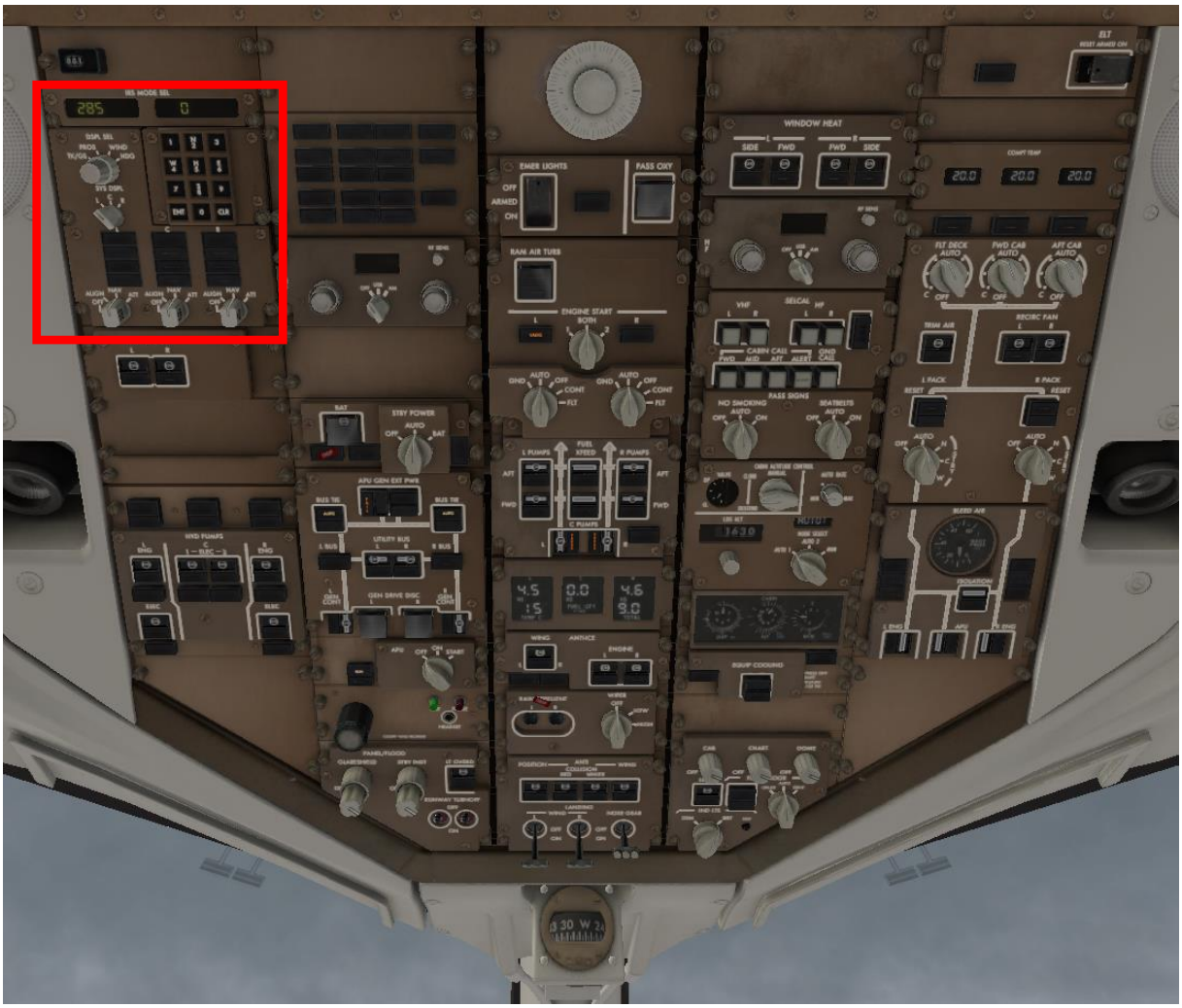
Enter ‚Initial Altitude‘ at the Mode Control Panel.

Finish Cockpit preparation, if necessary, then contact GROUND for push and starting engines.

Confirm ATC messages with Readback.

C.5. Air Data Inertial Reference System (ADIRS)

All 3 IRS-switches to ALIGN and, as soon as ‚ALIGN' is displayed, switch to the ‚NAV' position.



The 3 IRS-units (Left, Center, Right) provide the following information: Heading of the plane (‚true heading' in the HDG position), vertical speed, persent position (in the PPOS position), ground speed (in the TK/GS position), wind parameters in the WIND position). For reliable alignment, the plane hast not to be moved for at least 10 minutes.

‚ON DC' will be displayed first, informing that DC supply is provided.

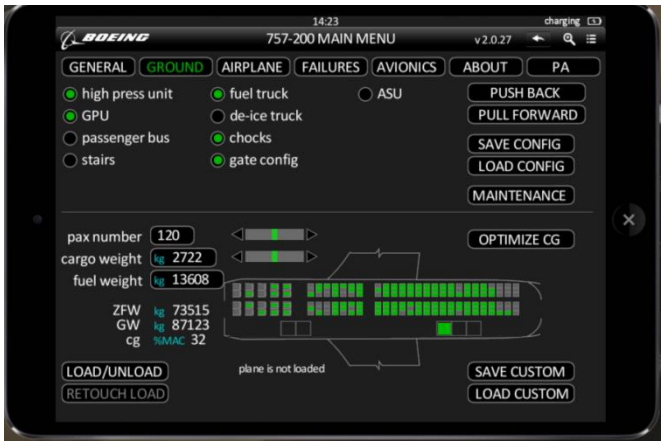
If the exact position of the plane is known, coordinates may be entered manually, as well, by the keypad (format: for North, 33°, 38 Min., 2 Sek.: N33382; confirm with ‚ENT', then latitude coordinates respectively).

After the location is complete, alignment display will be flashing

Entering the coordinates into the POS INI-page of the FMC, alignment signs will go out.

C.6. Fuel and cargo management

Enter pax number and cargo weight into the Menu OPERATIONS/GROUND.



.

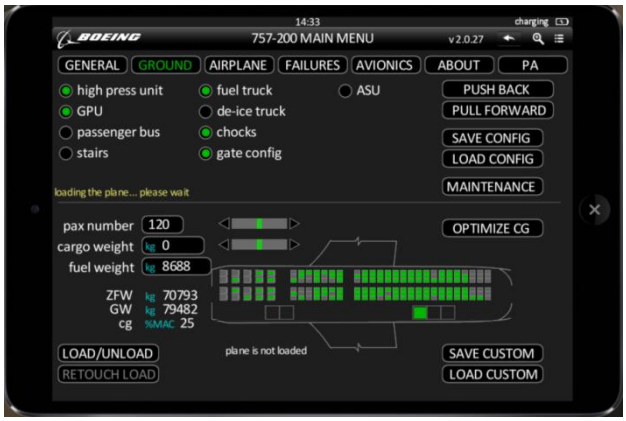
Zero Fuel Weight (ZFW), is 73515 kg in out example. This value is of relevance for the Fuel Plan Generator. (i. e. on https://www.simbrief.com/home/).

Our FL will be 30.000 ft.. Enter taxi time and reserve into the Fuel Plan Generator (SimBrief).

The fuel plan might look as follows:

```
-----------------------------------
         PLANNED FUEL
-----------------------------------
FUEL           ARPT   FUEL   TIME
-----------------------------------
TRIP            STR   2890   0058
CONT 15 MIN            794   0015
ALTN            FRA   1418   0026
FINRES                1368   0030
-----------------------------------
MINIMUM T/OFF FUEL    6470   0209
-----------------------------------
EXTRA                 1900   0038
-----------------------------------
T/OFF FUEL            8370   0248
TAXI            HAM    318   0020
-----------------------------------
BLOCK FUEL      HAM   8688
PIC EXTRA            .....
TOTAL FUEL           .....
REASON FOR PIC EXTRA ............
-----------------------------------
```

Enter fuel quantity (as calculated by SimBrief) into the Main menu/OPERATIONS/GROUND.



Load your plane now (‚LOAD/UNLOAD').

Doors and hatches msut beo open!

After loading, OPTIMIZE Center of Gravity [CG]).

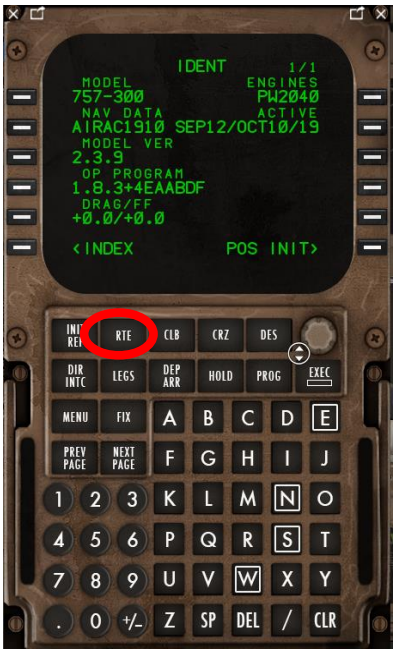
Mind: For safety reasons, fueling does work only with APU and engines off.

C.7. Programmimg flightplan into the Flight Management Computers (FMC):

Klicken Left Softkey 1 (LSK 1).

C.7.1. Route

Enter the route: Click ‚RTE' for entering CO ROUTE (this is the route, preferred by your company):



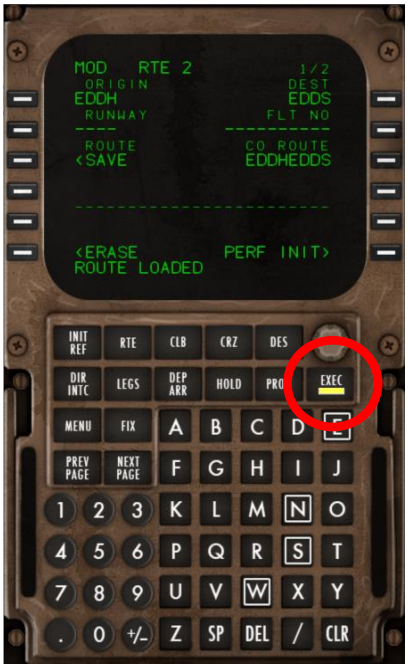
We fly< from EDDH to EDDS.

Enter EDDHEDDS into the scratchpad and click CO ROUTE (RSK3).

Flightplan will be loaded from the folder „X-Plane/.../Aircraft/B757/co routes“.

click ACTIVATE (RSK 6), then EXEC

‘



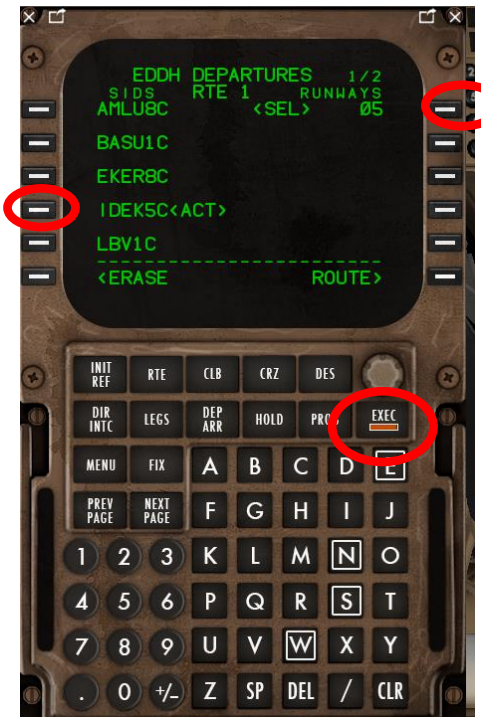
Enter flight number (optional).

C.7.2. Departure Runway and Standard Instrument Departure Route (SID)

Click DEP/ARR

You now may enter and activate departure runway and die Standard Instrument Departure Route (SID).

Wir choose RW 05 with IDEK 8G (according to ATIS)



then EXEC.

Check route segments on the LEGS page for discontinuities:

Route Legs will be indicated with NEXT PAGE/PREV PAGE, respectively.

In case of a discontinuity, as between KRH and BADSO in our example, this discontinuity has to be removed. For this, copy waypoint behind the discontinuity (this is BADSO in our example) into the Scratchpad, then click the knob next to the discontinuity (void field)

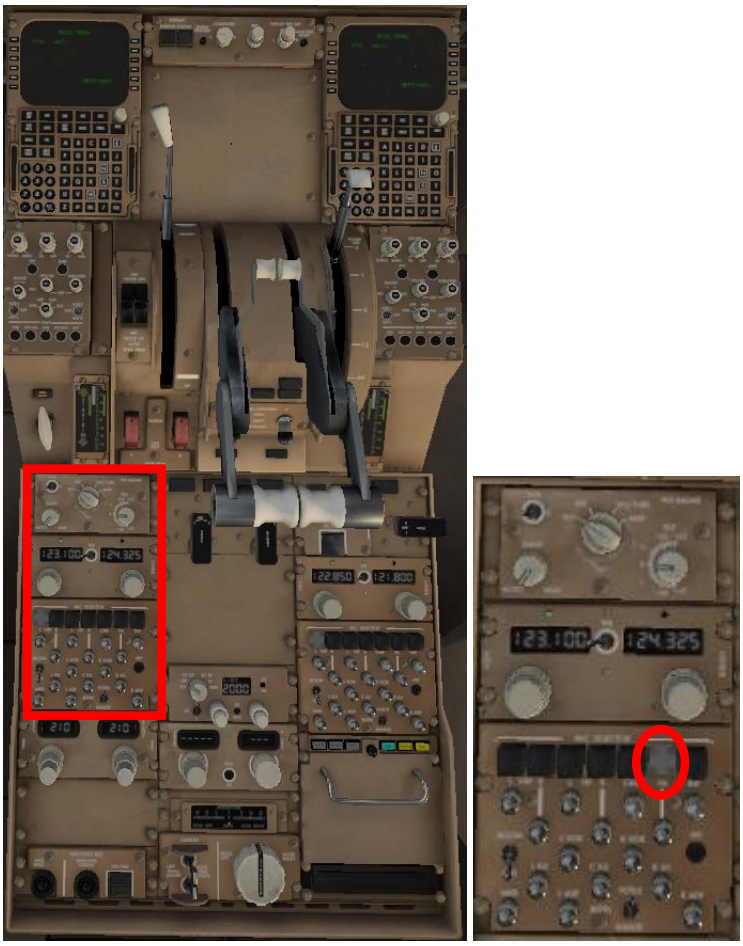
then EXEC.

Changes in the flightplan (deletion of the discontinuity) is now part of the active flightplan.

Loading of the plane should be finished meantime.

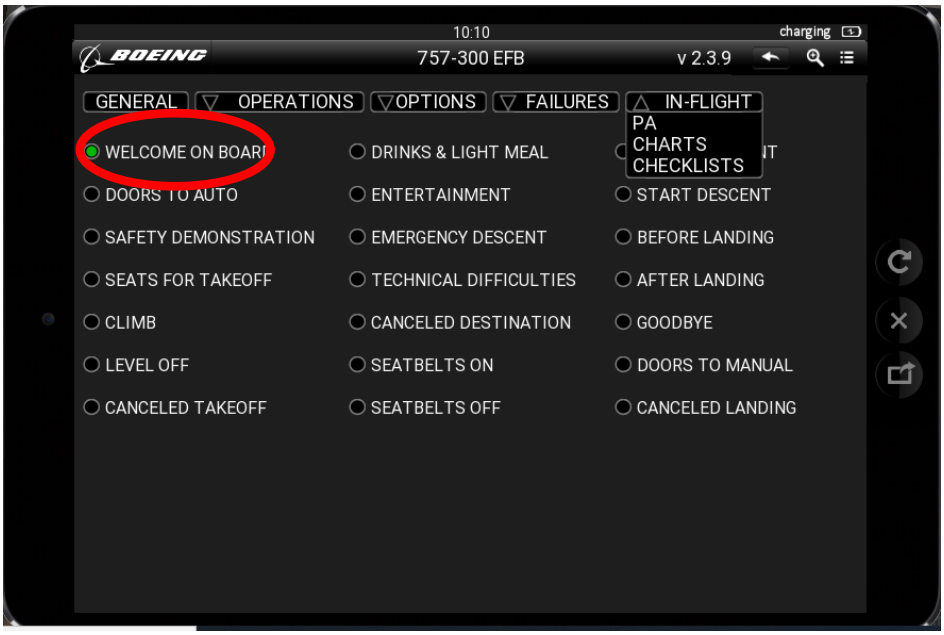
C.8. Cabin Announcments

Call the Announcement page from the Radio Panel:



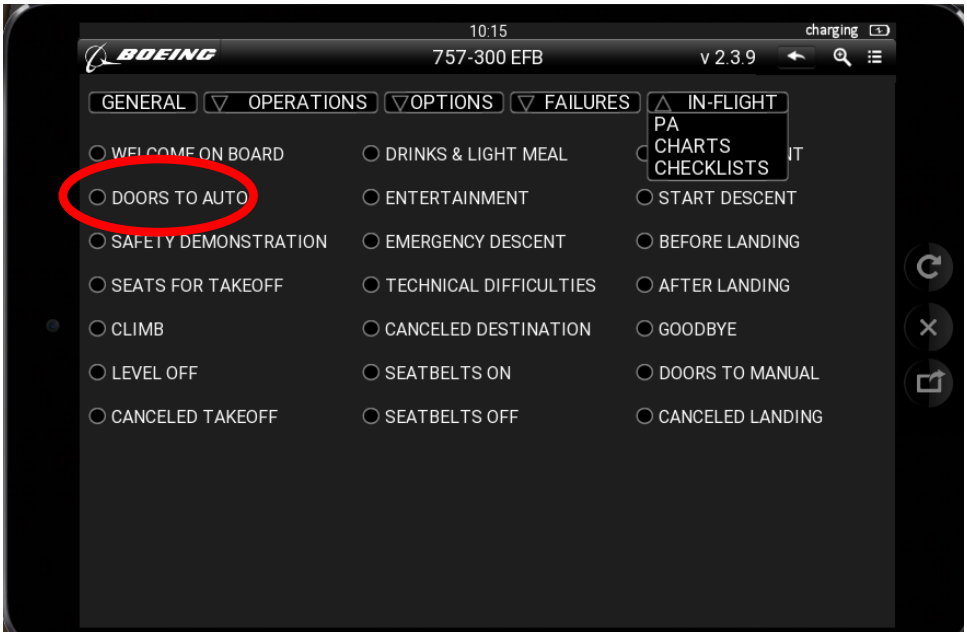
C.8.1. Welcome on Board

Welcome your passengers with WELCOME ON BOARD (Menu IN-FLIGHT/PA):



C.8.2. Doors to Auto

Then: (Cabin Crew to Cockpit): DOORS TO AUTO

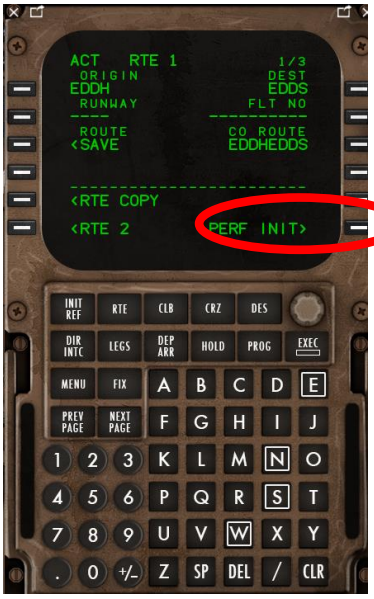


C.9. Performance (FMC)

Initialisation on the INIT REF page.

Loading of the plane must be finished for the next steps; otherwise weights would not be correct.

Click RTE, then PERF INIT (RSK 6);



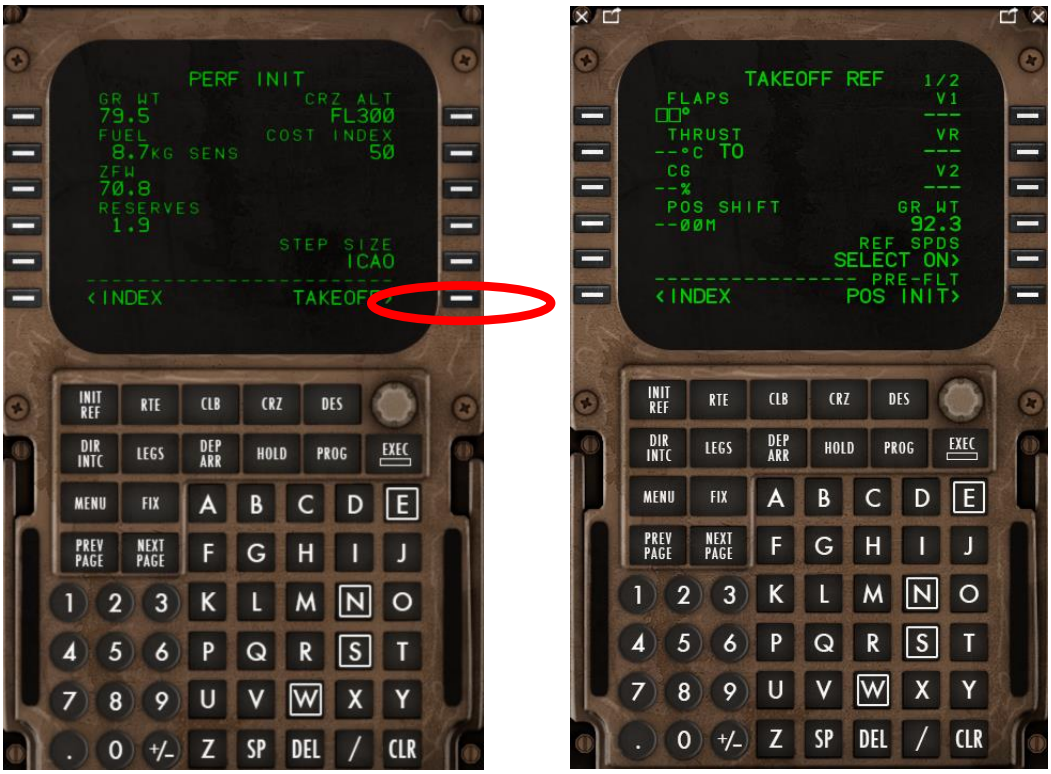
clicking GR WT

Clicking ‚GR WT' (gross weight) will enter the values automatically from the airplane configuration (main menu/GROUND).

Enter additionally: RESERVES (for example 1.9), CRZ ALT (FL300 ft) and the COST INDEX (CI) (for example 50). Cost Index optimizes costs at given costs for staff, fuel and maintenance by changing performance data. For further information: https://de.wikipedia.org/wiki/Cost_Index or https://www.skybrary.aero/index.php/Cost_Index.

C.10. Takeoff Data (FMC)

Switch to TAKEOFF



Enter FLAPS 5 for Takeoff, THRUST 59 [°C] for example, then click ‘CG’.

Remarks on Thrust Reduction: In order to safe fuel costs and engine maintenance, Treibstoffkosten V2 can be reached with reduced thrust, if the runway is long enough (not be used with wet runway surface). The higher the temperature entered in here, the lower will be the thrust, and the longer will be the takeoff run.

Available thrust decreases with decreasing air densitiy. Air density is lower with increasing pressure altitude (PA). That is why available thrust is lower with increasing PA. The difference between actual PA and geographical height can be calculated because barometric pressure decreases 1 hPa every 28 ft.

(Actual QNH [hPa] – Standard-QNH [hPa]) x 28.

At a given QNH on the airport (1030 hPa for example) the difference of altitude will

(1030 - 1013) x 28 = 17 x 28 = 476 ft..

This means, that air densitiy at Standard-QNH would be given at 476 ft. above airport.

Airport alitutide of EDDH is 53 ft. Airport-PA for EDDH would be 53 ft + 476 ft. = 529 ft., in our example.

For QNH below 1013, the difference must be subtracted from the airport altitude.

Air temperature has an additional effect on air density: Therefore, at a given Pressure Altitude (PA) the available thrust depends on outside temperature, in any case above a critical temperature (OAT_{ref}),: Decreasing above T_{ref} abnehmend, constant below T_{ref} (flat rating temperature). T_{ref} decreases with increasing PA.

Therefore: Pretending an outside temperature (OAT) higher than actual OAT, available EPR will decrease; saving engines.

Thrust Mode can be selected by the Thrust Mode Selector knobs (Front Deck), too:

TO/GA and CLB can be modified, in ordert o reduce um die Thrust
either by activating ‚1' oder ‚2'
or by entering a Thrust Reduction Temperature (FLEX TEMP) at the knob.

Ultimately, by TO-1/2 and/or by entering a higher than actual OAT Engine Pressure Ratio (EPR) will be modified.

EPR is always a positive value between a and 1.8 for the B 757. The EPR value choosen will be displayed in the EICAS-Display.

Corresponding entries for the climb- and the cruise mode can be done here, too.

See maximum thrust reduction for Takeoff EPR in Relation to Airport OAT and Airport Pressur Altitude the FCOM-sheets. The values can be entered in the TAKEOFF REF page 1/2.

Takeoff EPR

Based on engine bleed for packs on and anti-ice off

AIRPORT OAT		AIRPORT PRESSURE ALTITUDE (FT)						
°F	°C	-1000	0	2000	4000	6000	8000	10000
158	70	1.47	1.47	1.47	1.47	1.47	1.47	1.47
149	65	1.51	1.51	1.50	1.50	1.50	1.50	1.50
140	60	1.54	1.54	1.54	1.53	1.53	1.53	1.53
131	55	1.57	1.57	1.57	1.56	1.56	1.57	1.56
122	50	1.60	1.60	1.60	1.60	1.60	1.60	1.58
113	45	1.63	1.63	1.63	1.63	1.63	1.63	1.61
104	40	1.66	1.65	1.66	1.66	1.66	1.66	1.64
95	35	1.68	1.68	1.68	1.69	1.69	1.69	1.67
86	30	1.71	1.71	1.71	1.72	1.72	1.72	1.70
77	25	1.71	1.72	1.74	1.74	1.74	1.74	1.72
68	20	1.71	1.72	1.74	1.76	1.77	1.76	1.75
59	15	1.71	1.72	1.74	1.76	1.78	1.78	1.77
50 & BELOW	10 & BELOW	1.71	1.72	1.74	1.76	1.78	1.79	1.79

EPR Adjustments for Engine Bleeds

BLEED CONFIGURATION	AIRPORT PRESSURE ALTITUDE (FT)			
	-1000	8000	8001	10000
PACKS OFF	0.01	0.01	0.01	0.01
ENGINE ANTI-ICE ON	0.00	0.00	-0.01	-0.01
ENGINE & WING ANTI-ICE ON	-0.01	-0.01	-0.02	-0.02

Assumed Temperature Reduced Thrust

Based on 25% thrust reduction

MINIMUM ALLOWABLE EPR FOR REDUCED THRUST			
MAX TAKEOFF EPR FOR ACTUAL OAT	MIN TAKEOFF EPR ALLOWED		
	FULL	TO1	TO2
1.80	1.60		
1.75	1.56	1.54	
1.70	1.53	1.50	
1.65	1.49	1.47	1.45
1.60	1.45	1.43	1.42
1.55	1.41	1.40	1.38
1.50		1.36	1.35
1.45			1.31

For further information on Thrust Reduction and Flex Temp:

https://www.skybrary.aero/index.php/Reduced_Thrust_Takeoff;

https://www.skybrary.aero/bookshelf/books/2263.pdf;

Go to page 2 (NEXT PAGE) and enter:

Wind parameters, acceleration height (ACCEL HAT),runway slope (SLOPE) and Outside Air Temperature (REF OAT) (as told by ATIS).

Acceleration Height is the height above ground at which pitch will be decreased in ordert o increase speed at constant thrust. This makes flaps reduction possible.

Acceleration height depends on noise regulations, obstacles, etc.. In Germany, France, and Great Britain acceleration height is 1.500 ft normally.

In this height, the takeoff-phase ends. The Autopilot system changes to the climb phase. It is identical with the **Thrust Reduction Height (TRH),** which cannot be entered separately in our airplane model.

The **Runway-Slope** will be calculated as follows: For the RW 23 at EDDH:
45 ft at the beginning, 36 ft at the end, Rway length 10.663. Difference in height is Die Höhendifferenz is 9 ft.. The slope ist difference in height / RW length, i. e. -9/10.663, resulting in -0,009 (negligible). Format for entry would be: DX.X for sloping down, UX.X for sloping up.

Turn back to TAKEOFF REF page 1.

Click SELECT ON for V-speeds

V_1, V_R and V_2 are calculated in the FMC. V_{ref} is 1,3fold of stallspeed for flaps 30. This is the basic value for the calculationg the climb speed (V_{ref}30+80 kt), and will be relevant again for the approach. V_{ref} can be read from the APPROACH REF page of the FMC.

(Vref is to be expected lower during approach due to fuel consumption)

Click for V_1 – Decision Speed, V_R – Rotate Speed, and V_2 – Takeoff Safety Speed, then on V_{REF}.
V_2 will be displayed in the IAS/MACH window at the glareshield automatically.

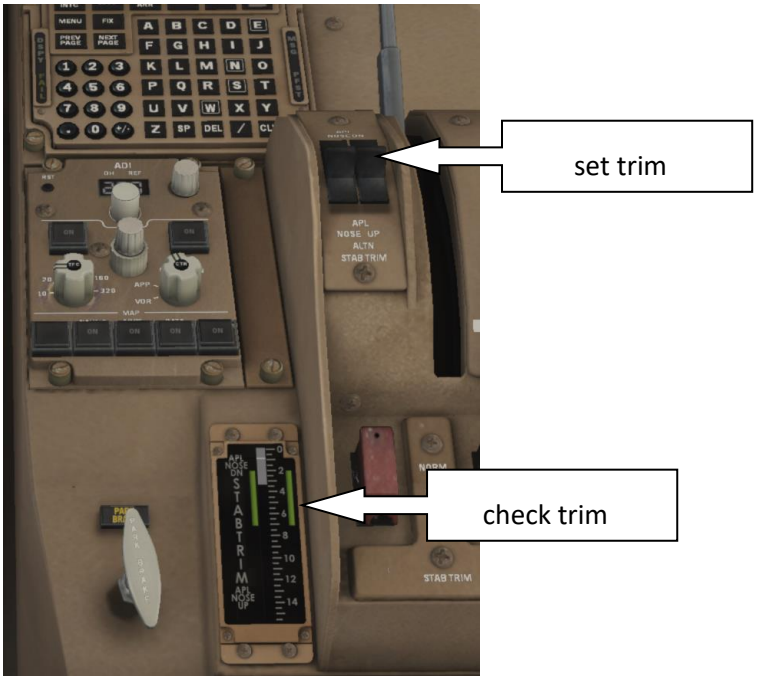
Set V_2 + 25 as IAS in the glareshield.

V1, VR, V2 and VREF can be tuned in the Display Control Panel (DCP; Pedestal). The values will be displayed in the PFD then:

Turn outer circle to TO for Takeoff, then tune the values with the inner circle in the upper sequence, and confirm with SET.

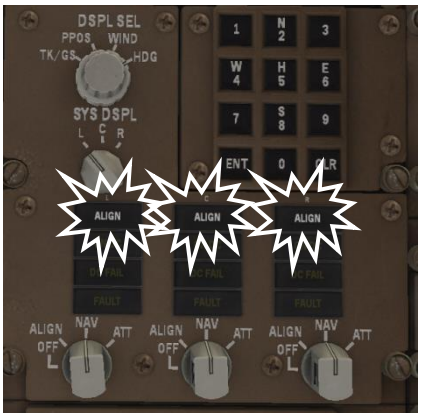
C.11. Trim

Our TRIM is 3.4. Set trim



C.12. IRS Alignment:

Meanwhile IRS Alignment should be possible; ALIGN will flash at the Overhead-Panel.

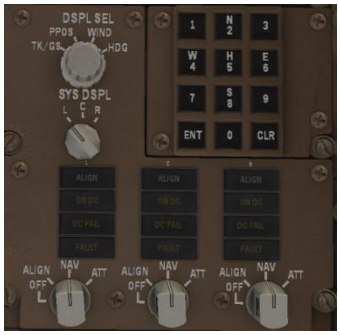


Click POS INIT

‚ENTER IRS POSITION' is to be read in the input line. Clear this text with CLR, then enter ‚EDDH' as GPS-Reference and click LSK2. You now can read EDDH as REF AIRPORT.

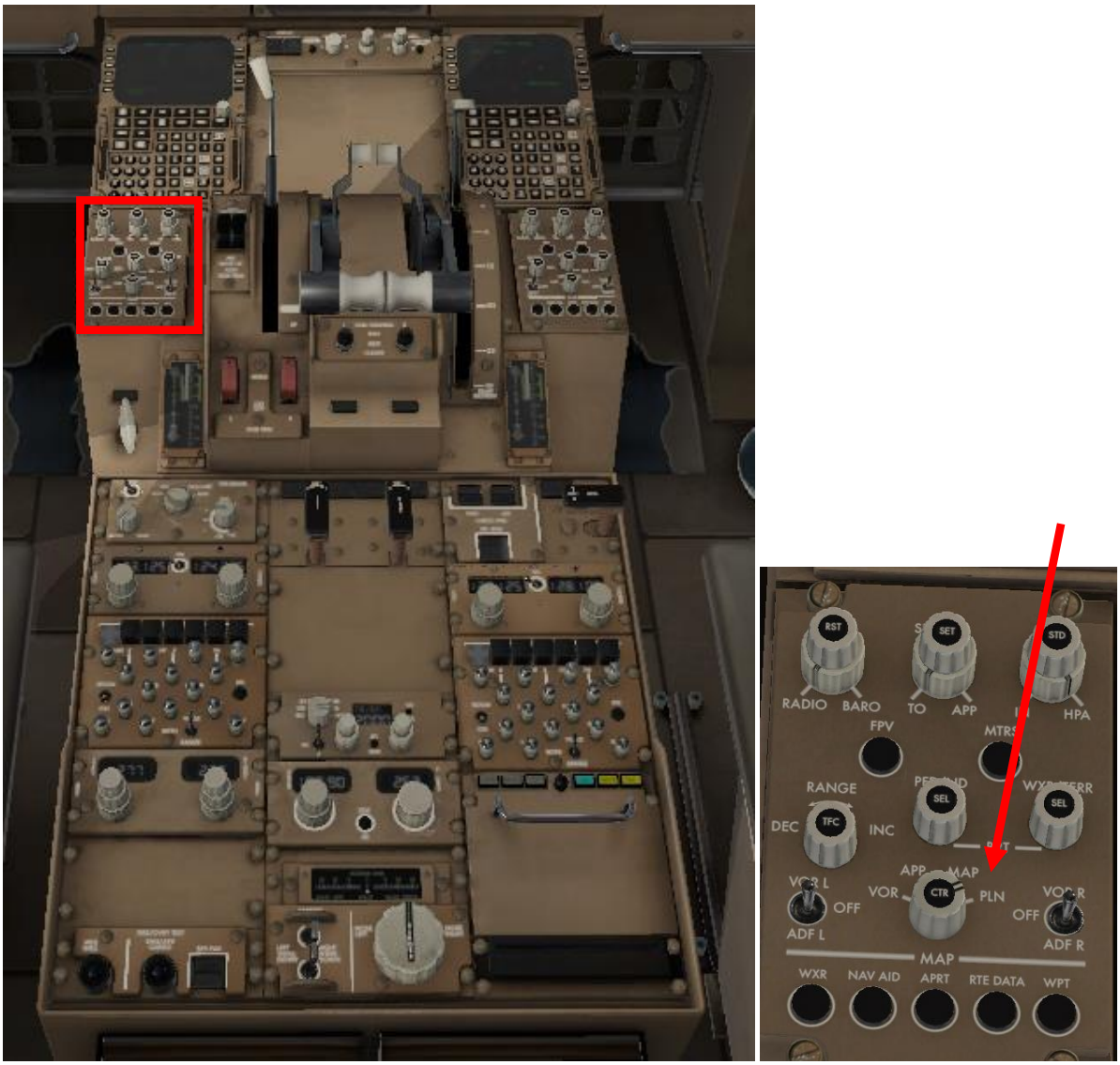
Copy GPS POS (click for ‚copy') and paste into the SET IRS POS-Zeile (click for ‚paste'):

'ALIGN'-signs at the Overhead-Panel will go out.

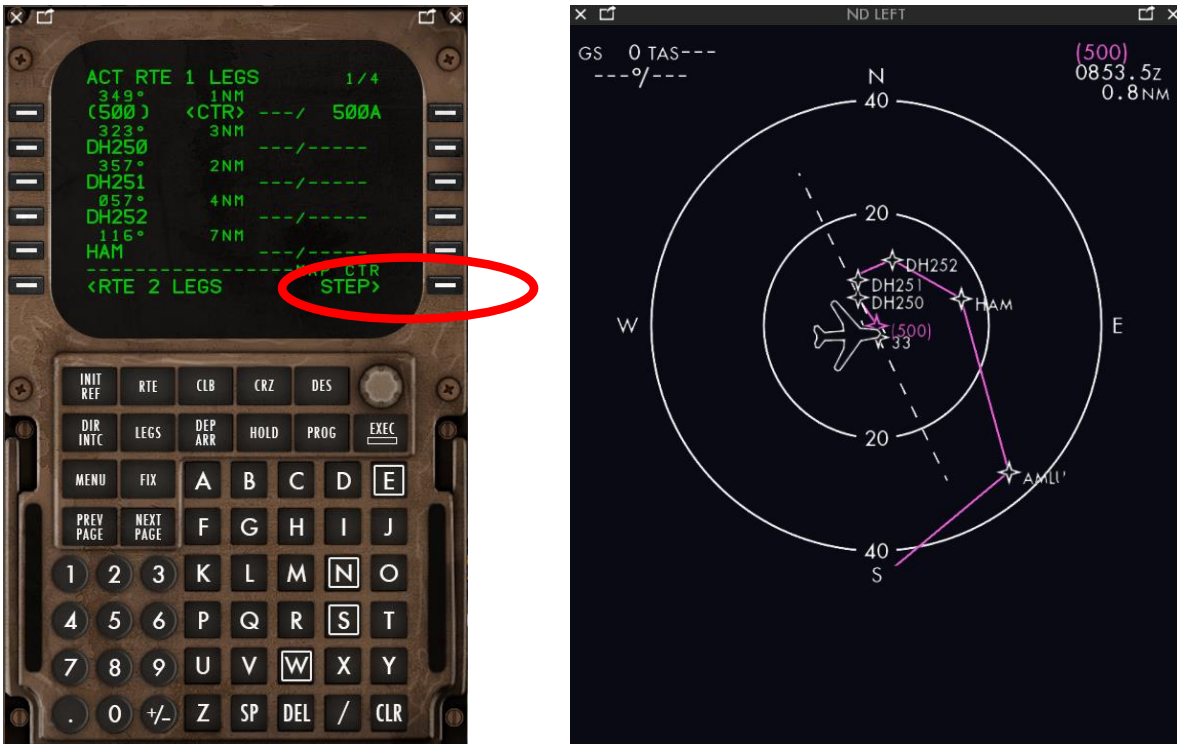


C.13. Check flightplan (FMC und PFD/ND)

Switch knob at the Display Control Panel (DCP) to ‚PLAN' and go to the LEGS-page of the FMC.



Check the legs on the Navigational Display (ND) step by step



The flightplan will be shown leg by leg in the ND. Change flight plan entries if necessary.

C.13.1 Constraints

The 3rd and 4th line of the legs show speed- and altitude constraints. These values can be changed manually (if physically possible asn plausible).

Enter values into the scratchpad in the following format:

New FL: XXXXX (feet) oder /XXXXX (feet)

New Speed: XXX/

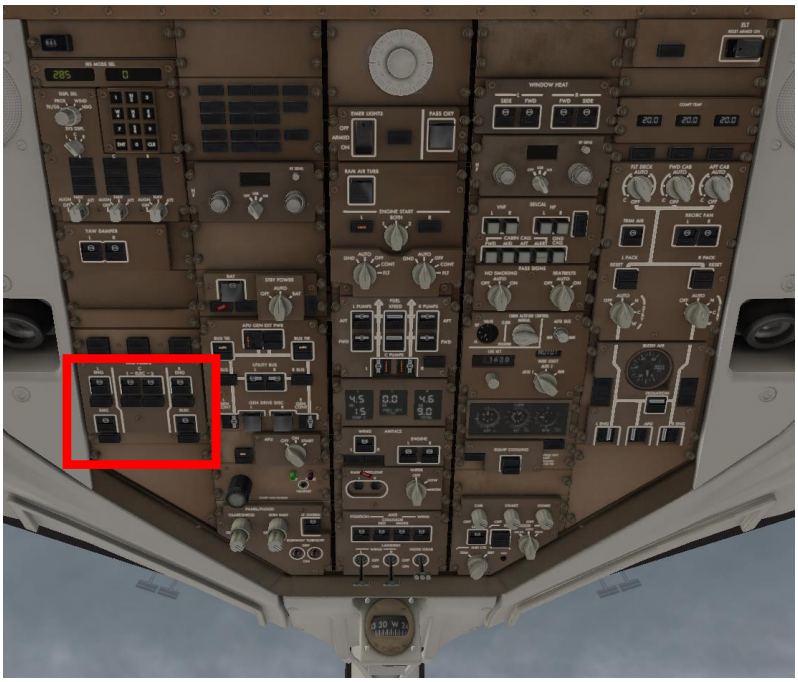
New Speed and new FL: XXX/XXXXX

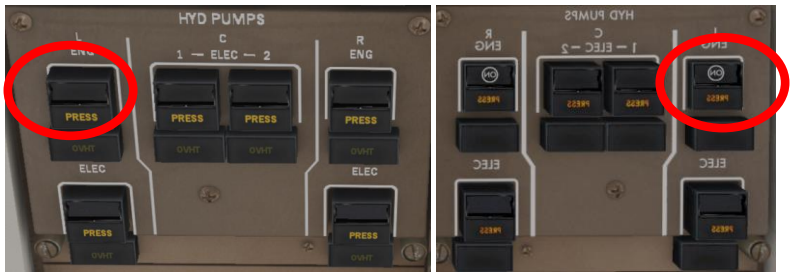
Physically and aeronautical values which cannot be reached will not be accepted: ‚INVALID ENTRY'

C.14. Hydraulic:

YAW dampers ‚ON'. Avoiding roll und yaw oscillations.

Left and right Engine Hydraulicpump ON





Left and right ELECTRIC PUMPS and C1 nd C2 ELECTRIC PUMPS OFF

C.15. Electric power supply (Batterie, External Power, APU):

Check: Battery Switch ON,

Check: Standby Power Switch AUTO,

Check: BUS TIE Switches AUTO,

Check: UTILITY BUS Switches ON,

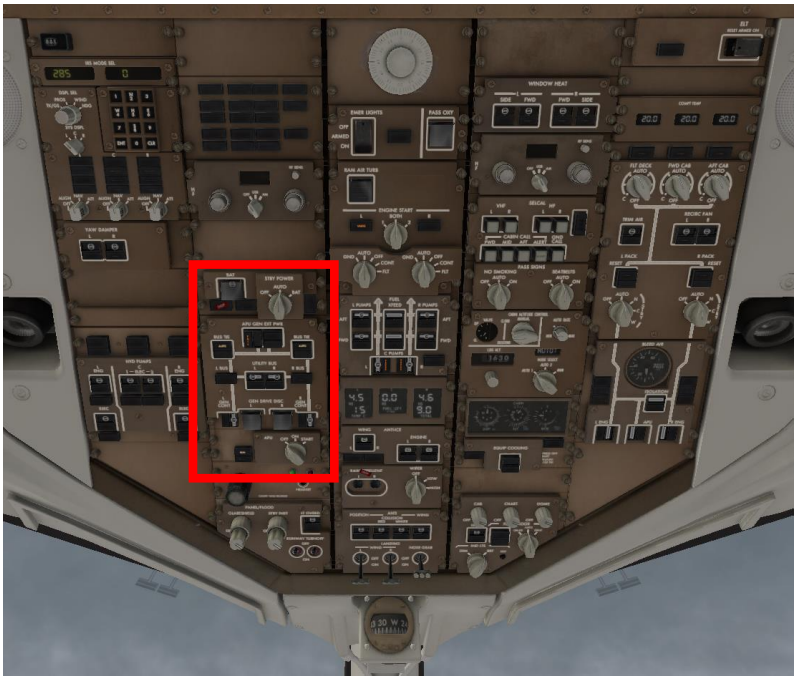
Check: GENERATOR CONTROL Switches ON,

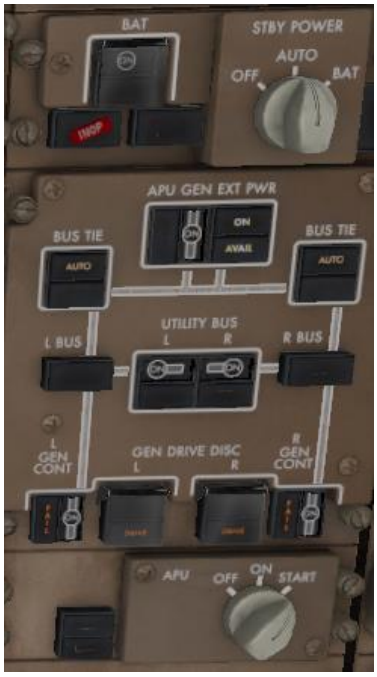
Auxiliary Power Unit Generator Switch ON,

APU Selector START.

By this, bleed air valve and fuel valve will be opended, and fuel pump starts.

In case of problems with the APU: This unit can be started only 3 times in 60 minutes.



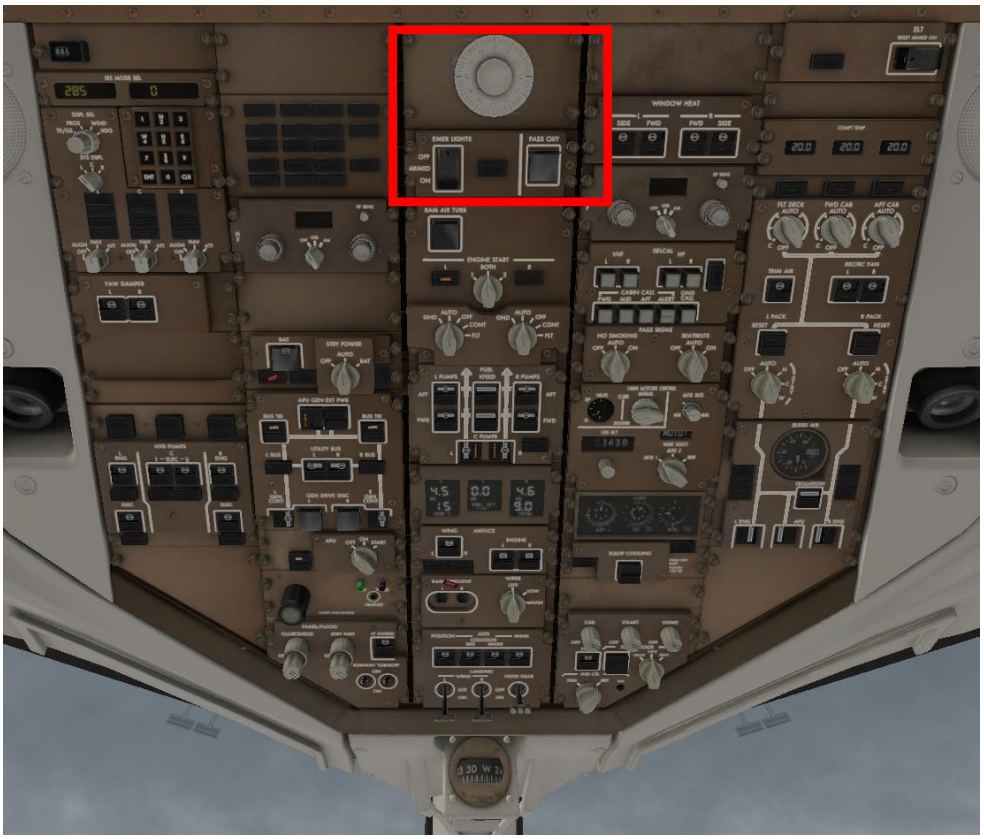


APU can be used during flight, too. APU will provide the plane with electric power up to maximum crusing altitude and bleed air (for air conditioning unit and for starting engines) up to 20.000 ft.

After shutting down APU by mistake, it can be started by turning APU selctor to START immediately.

In case of emergency, the APU can be shut down at the pedestal.

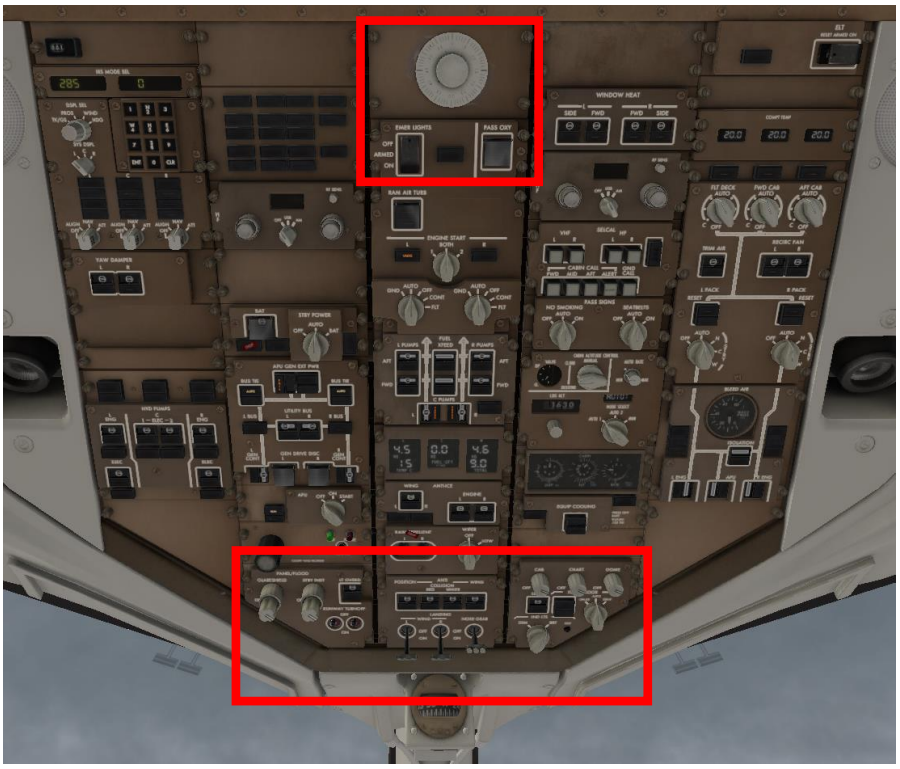
Arm Emergency Lights and check PASS OXY indicator (should be ‘off’)



Switch to the Engine-Indicating and Crew Alerting System Display (EICAS Display) for watching APU to start.

As soon as the APU is running, the APU switch turns to ‘ON’

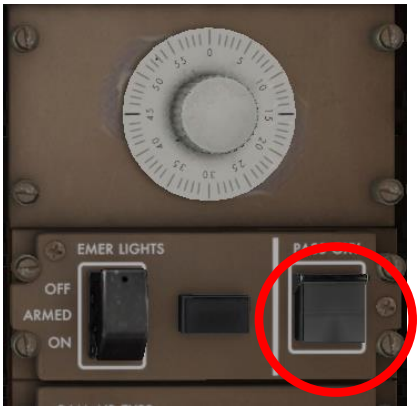
C.16. Lighting Pane (part 1/2):



Runway Turnoff Lights OFF

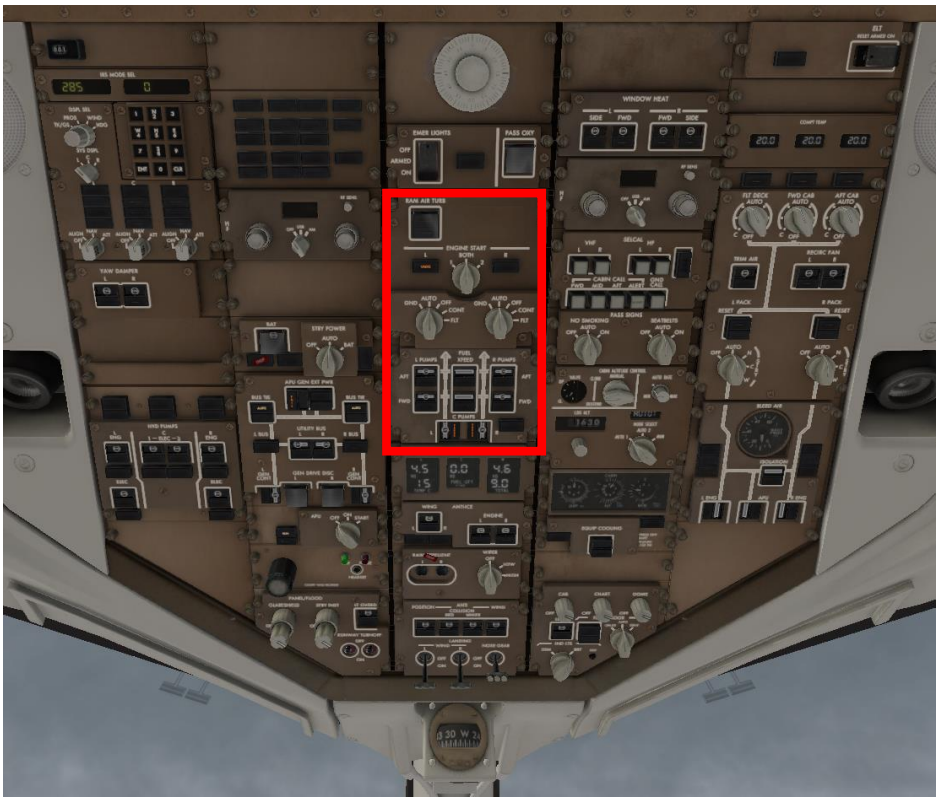
Emergency Lights Switch guarded and armed,

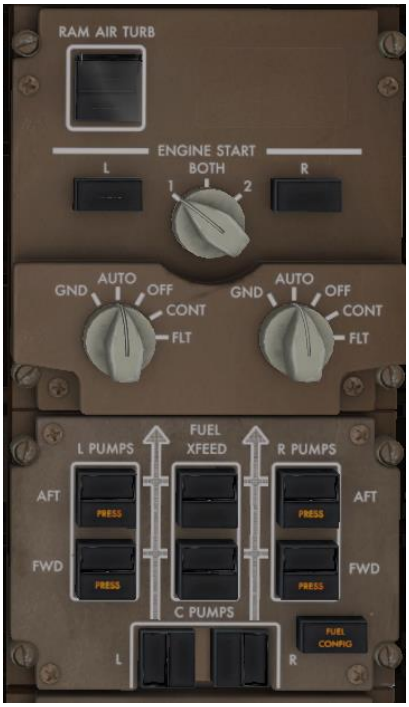
PASS(engers) OXY(gen) Light should be OFF.



C.17. Fuel pumps

Engine Start Selectors to AUTO, CROSSFEED FUEL PUMPS to OFF, Left, Right and Center Fuel Pumps to OFF.

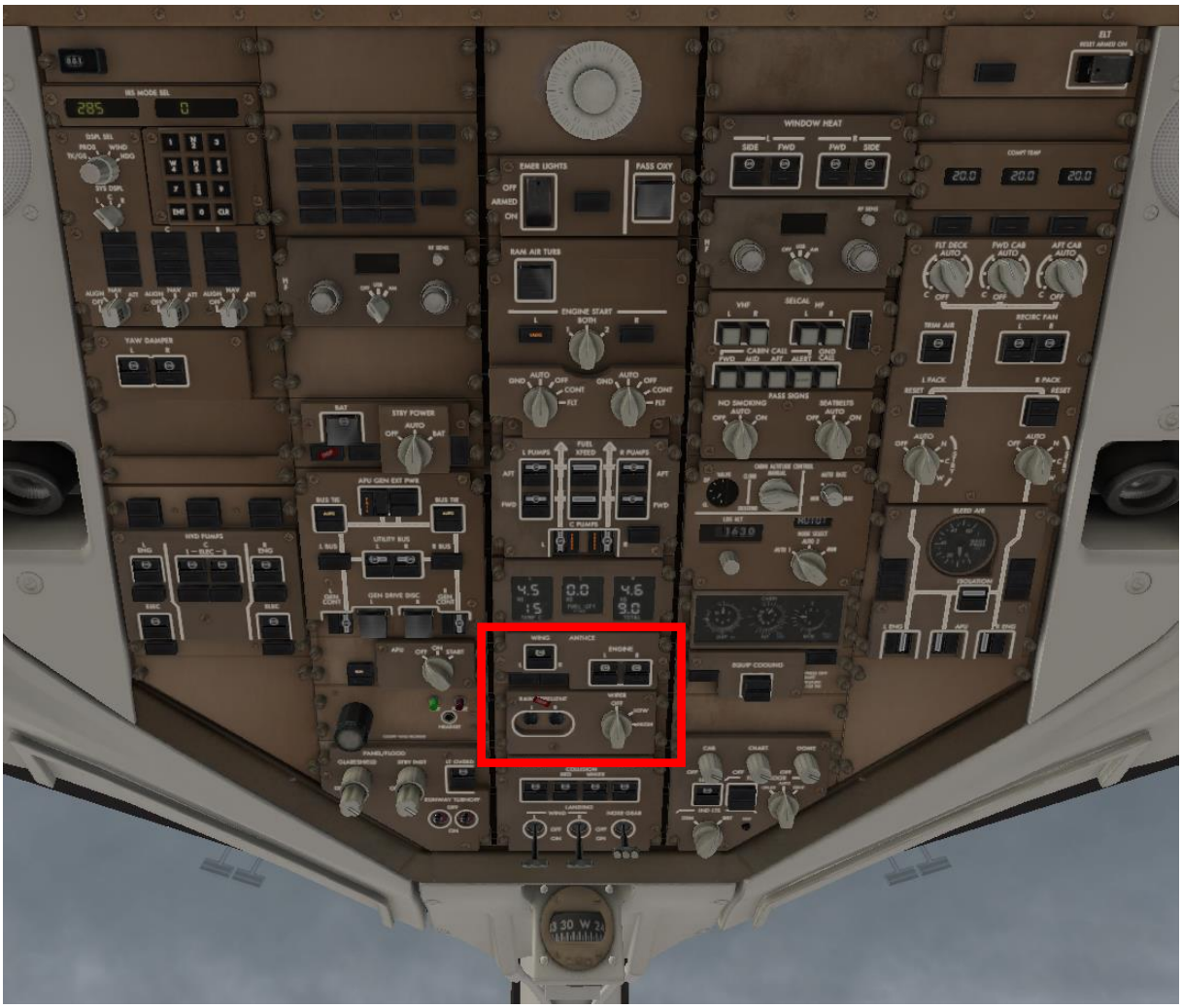




2 Pumps for each of the 3 tanks (R, C. L). Fuel from the center tank will be used first.

C. 18. WING ANTIICE Switch, ENGINE ANTIICE Switch and WIPER

Selectors to OFF; otherwise there will be not enough bleed air for engine start.

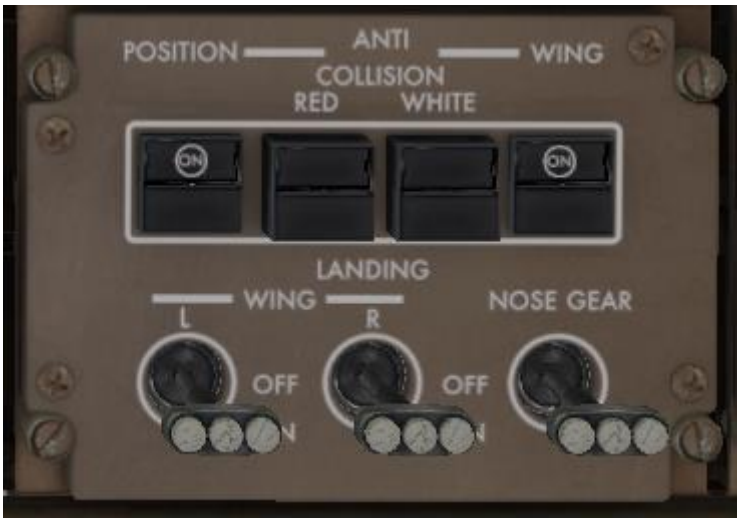


C.19. Lighting Panel (part 2/2)

POSITION Light Switch ON, ANTICOLLISION light Switch OFF

WING Light Switch as necessary,

LANDING Light Switches OFF,

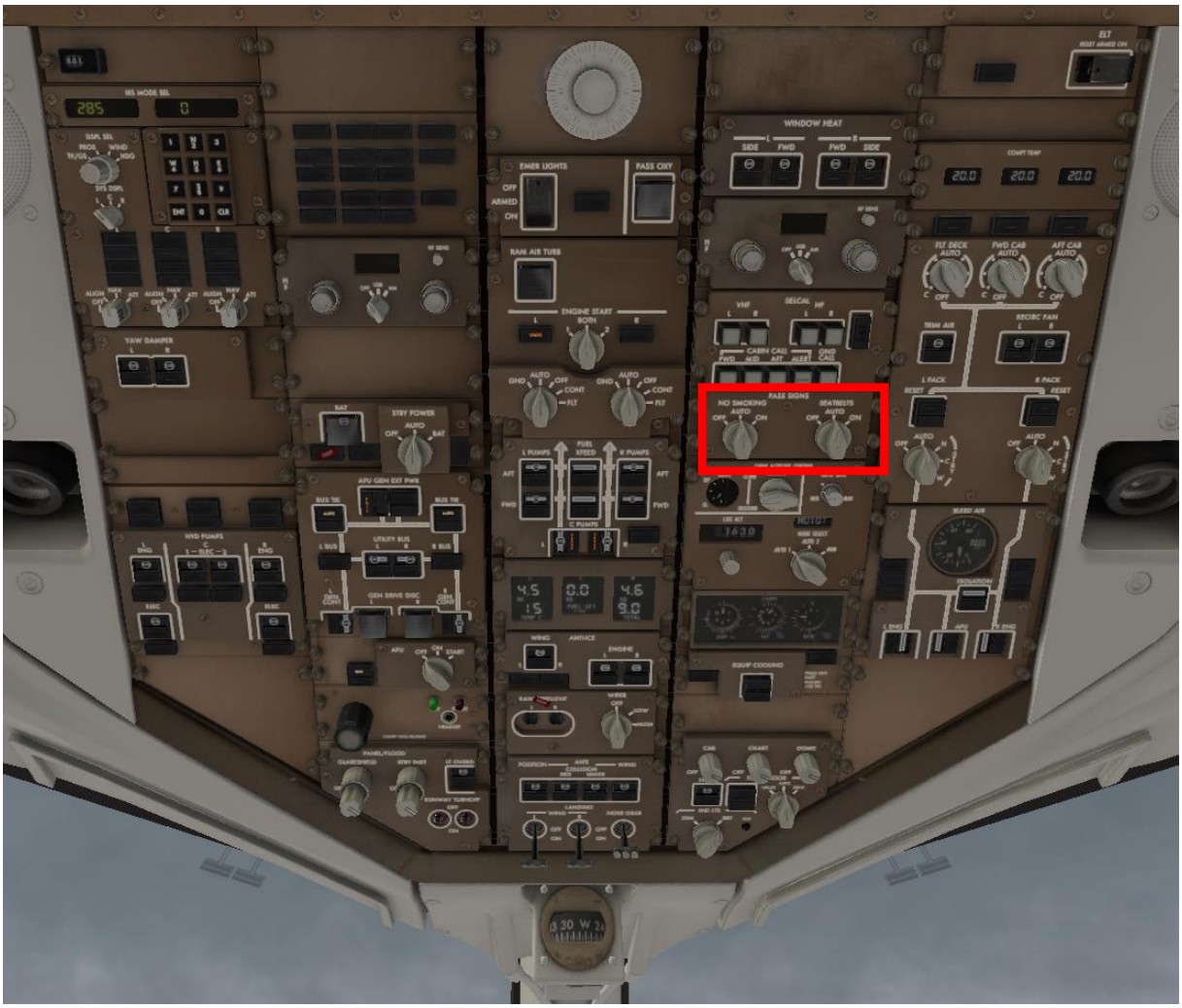


C.20. Window Heat

WINDOW HEAT Switches ON

C.21. Passenger signs

NO SMOKING and SEAT BELTS to AUTO



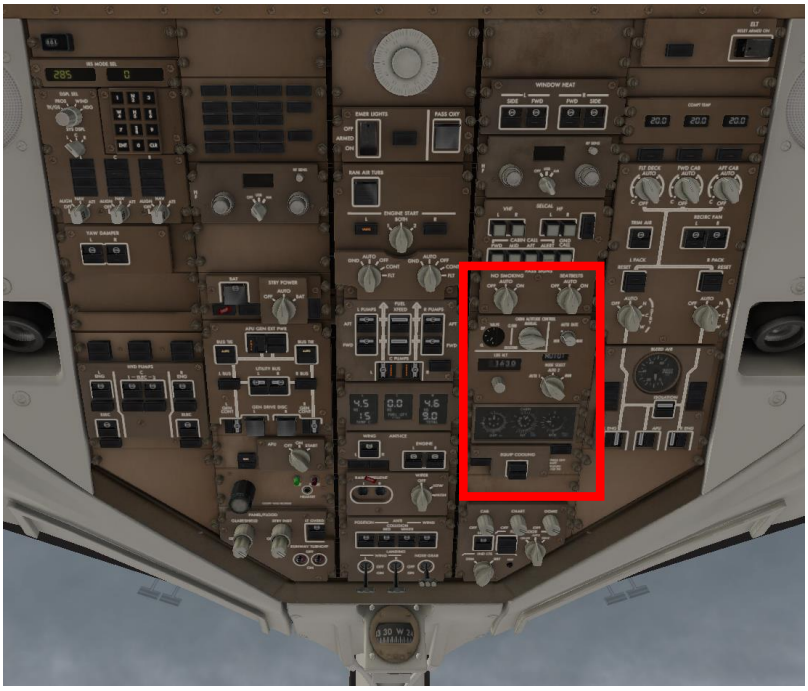
C.22. Cabin pressure

tune AUTO RATE control,

enter LANDING ALTITUDE (Stuttgart ca. 1200 feet),

Mode Selector to AUTO (1 or 2)

ALTN Equipment Cooling switch to OFF



Pressure euqalization during descent is provided now.

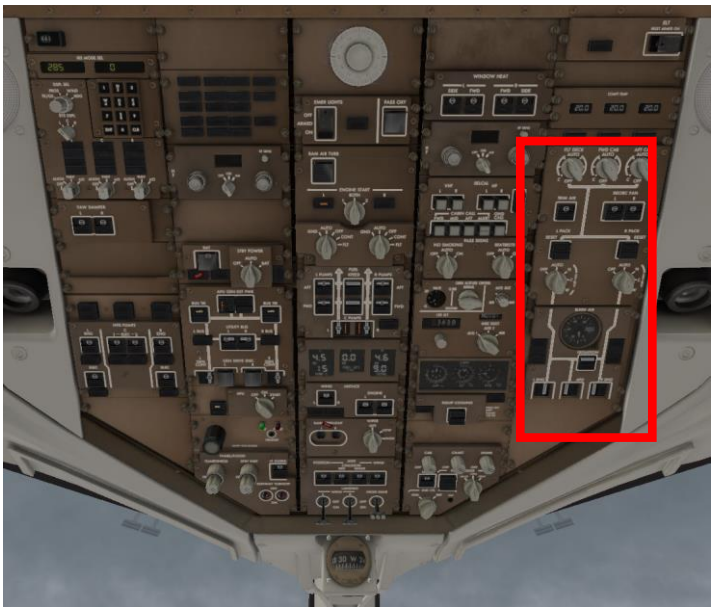
C.23. Air conditioning:

FWD-, AFT- and FLIGHT DECK CABIN Temperatur to AUTO

TRIM AIR switch ON

RECIRCULATION FAN switches ON

PACK CONTROL selectors AUTO



The other PACK-Control switch positions:

OFF: closes the valves

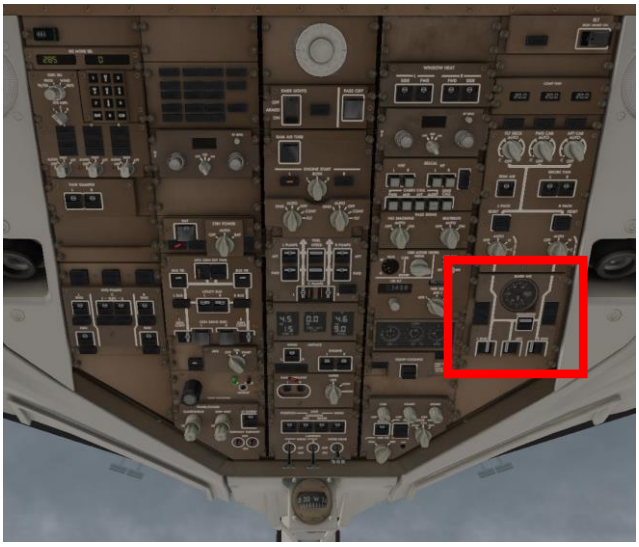
N: provides moderate temperature

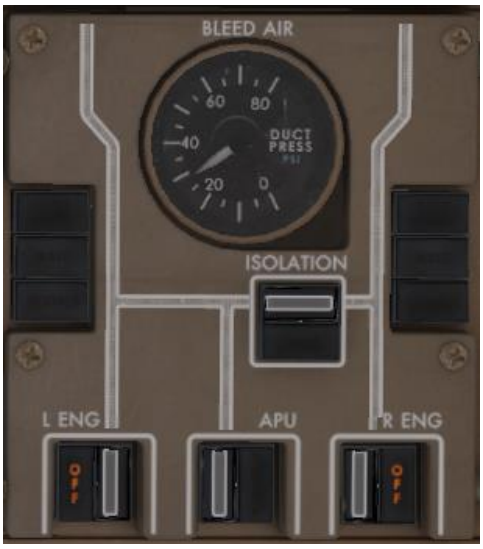
C: maximum cooling

W: maximum heating

C. 24. Bleed Air Panel:

Bleed air panel
ISOLATION switch . . . . . ON
Verify that the VALVE light is extinguished
ENGINE bleed air switches . . . . . ON
Verify that the OFF lights are illuminated
APU bleed air switch . . . . . ON
Verify that the VALVE light is extinguished





C. 25. Flight director:

In the ‘AUTO’ position, the VOR-Frequencies will automatically be tuned into the FMC according to the progress in flight. HSI Selektor at Center Pedestal must be in ‚MAP‘ or ‚PLAN‘ position.

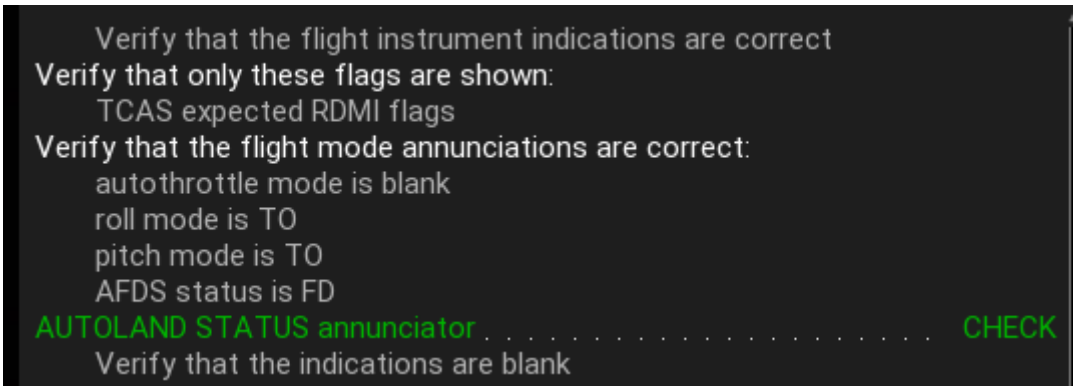
C. 26. Oxygen Test:

Click ‘RESET TEST’ just right side of the oxygen mask. You should hear a hissing noise.

C.27. Instrument checks

```
Instrument source select panel
NAVIGATION instrument source selector . . . . . SET
FLIGHT DIRECTOR source selector . . . . . SET
ELECTRONIC FLIGHT INSTRUMENT button . . . . . OFF
INERTIAL REFERENCE SYSTEM button . . . . . OFF
AIR DATA source button . . . . . OFF
```

Check pilot/copilot assignment; you can find the knobs for the Electronic Flight Instrument (EFI), IRS and AIR DATA at the left of the Central Panel.



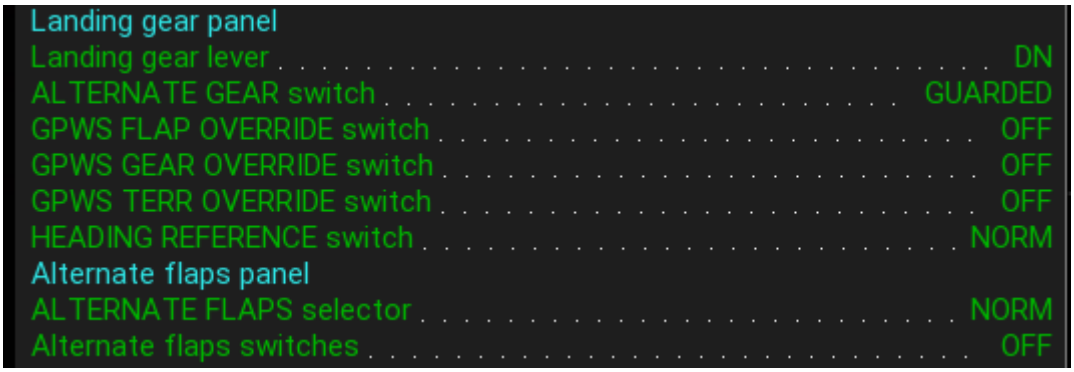
TCAS = Traffic Collision Avoidance System;

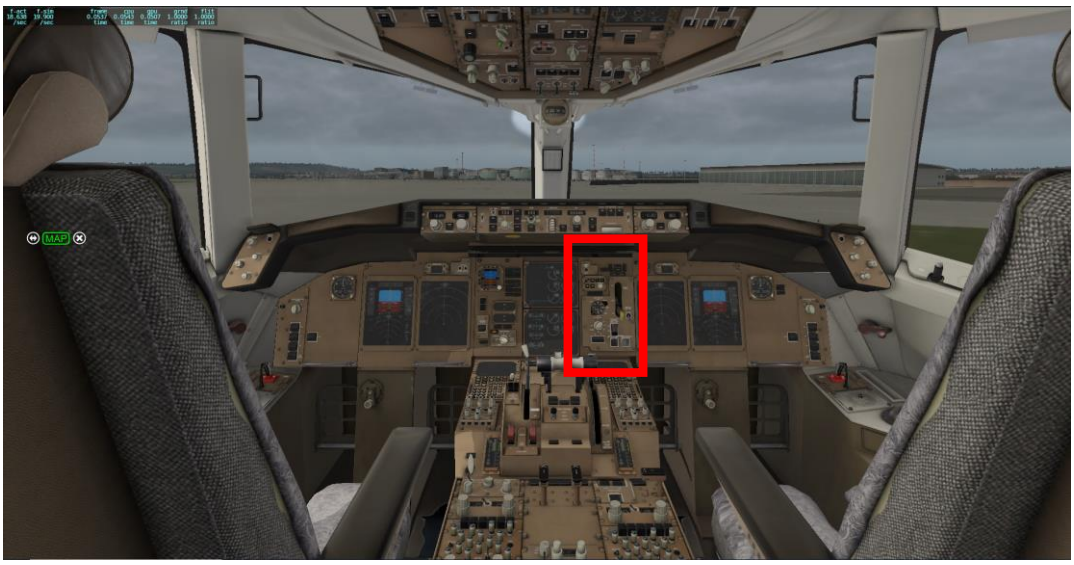
RDMI = Radio distance magnetic indicator

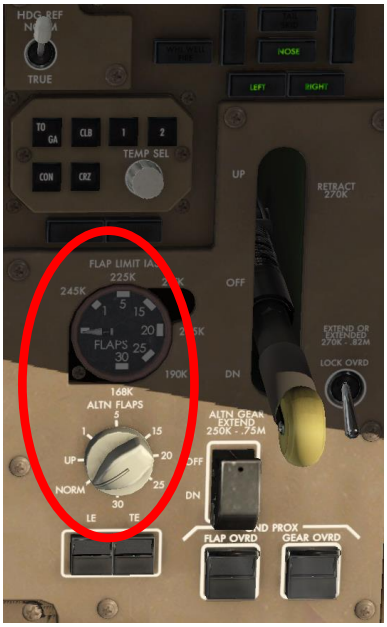
These signs (‘flags’) will be displayed in the PFD.

C. 28. Check landing gear and controls:

Landing Gear Panel and Alternate Flaps Panel:



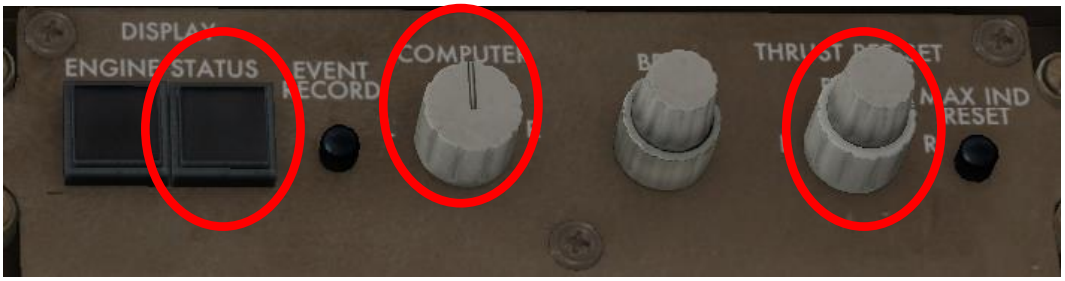




Display of flaps position and knob for alternativ flap lever.

C.29. Engine indication crew alerting system Panel (EICAS Panel)

EICAS display
Upper EICAS display . . . . . CHECK
Verify that the primary engine indications show existing conditions
Verify that no exceedance is shown
Secondary ENGINE indications . . . . . CHECK
Verify that the secondary engine indications show existing conditions
Verify that no exceedance is shown
STATUS display . . . . . SELECT
COMPUTER selector . . . . . AUTO
THRUST REFERENCE selector . . . . . BOTH
Verify that the TO mode is shown

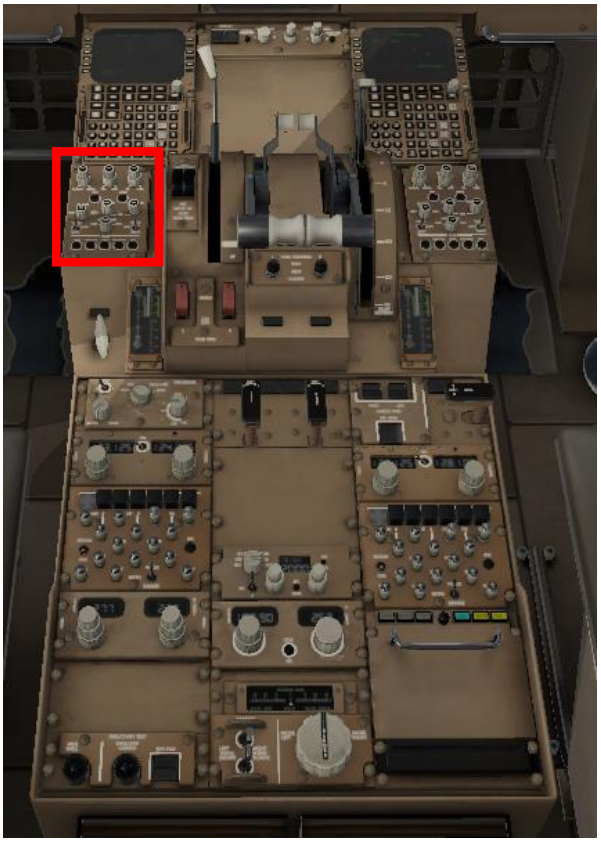


C.30. Electronic Flight Instrument Panel Control Panel (EFIS Control Panel)

EFIS control panel
Decision height selector . . . . . CHECK
TERRAIN switch . . . . . CHECK
HSI RANGE selector . . . . . CHECK
HSI TRAFFIC switch . . . . . CHECK
HSI mode selector . . . . . CHECK
HSI CENTER switch . . . . . CHECK
WXR RADAR switch . . . . . OFF
Verify that weather radar indications are not shown on the HSI
Left VHF communications panel . . . . . CHECK
ADF panel . . . . . CHECK

Decision height selector at the Display Control Panel (DCP): Select Radio Altimeter or altitude measurement by barometric pressure (RADIO ./. BARO);

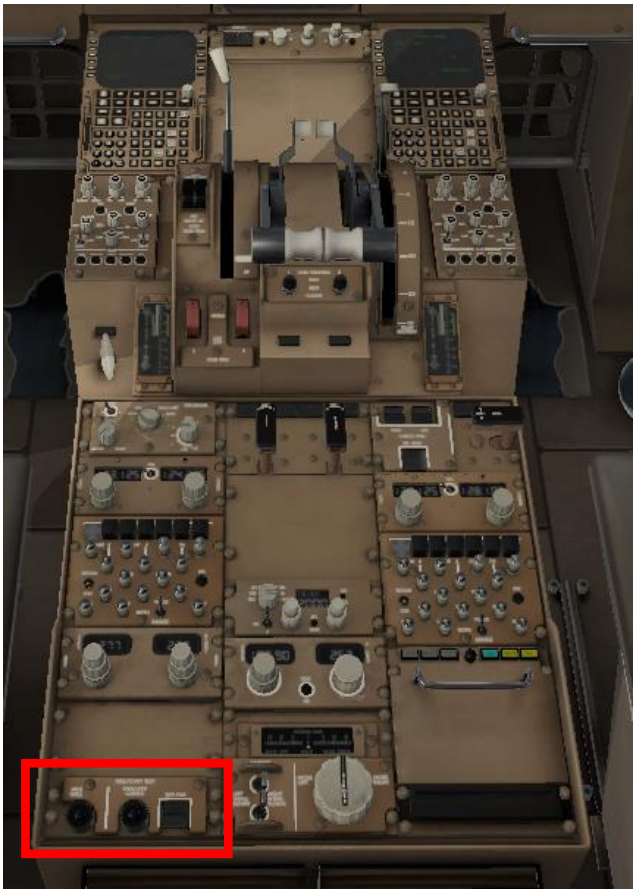
HSI = Horizontal Situation Indicator; WXR = Weather



C.31. Fire Warning Panel

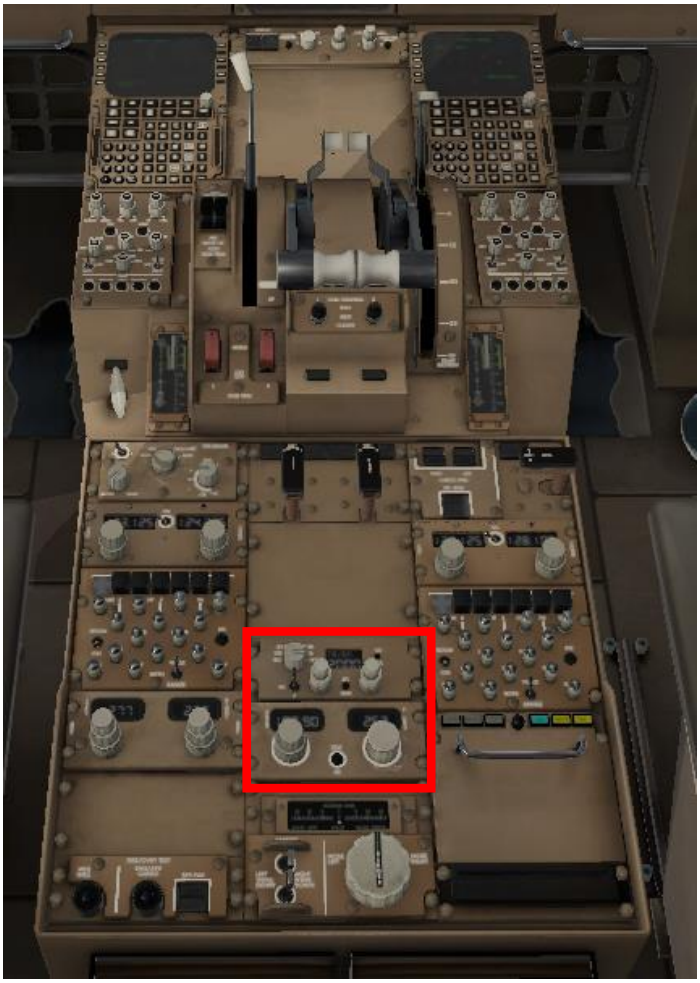
Engine fire panel . . . . . CHECK
Verify that the ENG BTL 1 DISCH and ENG BTL 2 DISCH lights are extinguished
Engine fire switches . . . . . IN
Verify that the LEFT and RIGHT lights are extinguished

Cargo Fire panel
CARGO FIRE ARM switches . . . . . OFF
Verify that the FWD and AFT lights are extinguished
Verify that the DISCH lights are extinguished
APU fire panel
APU fire switch . . . . . IN
Verify that the APU light is extinguished



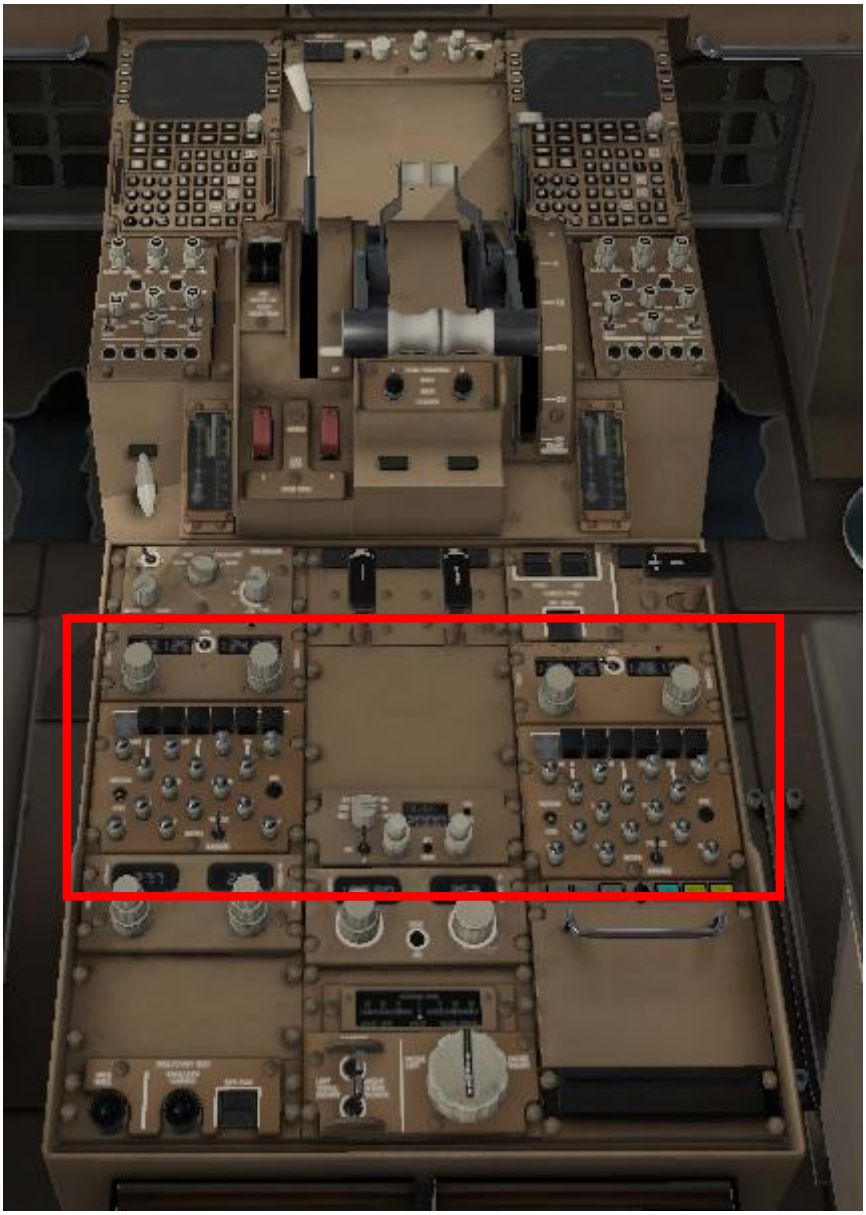
C.32. Transponder

```
Transponder panel . . . . . CHECK
ILS panel . . . . . CHECK
```

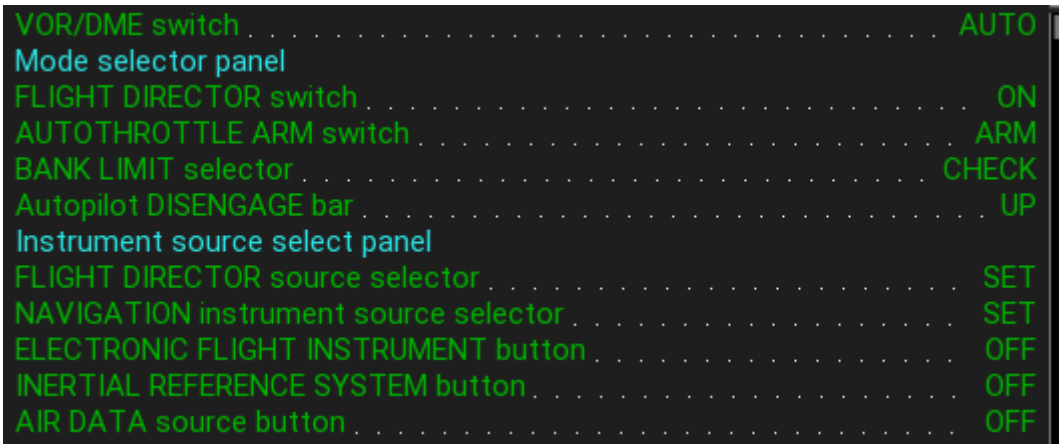


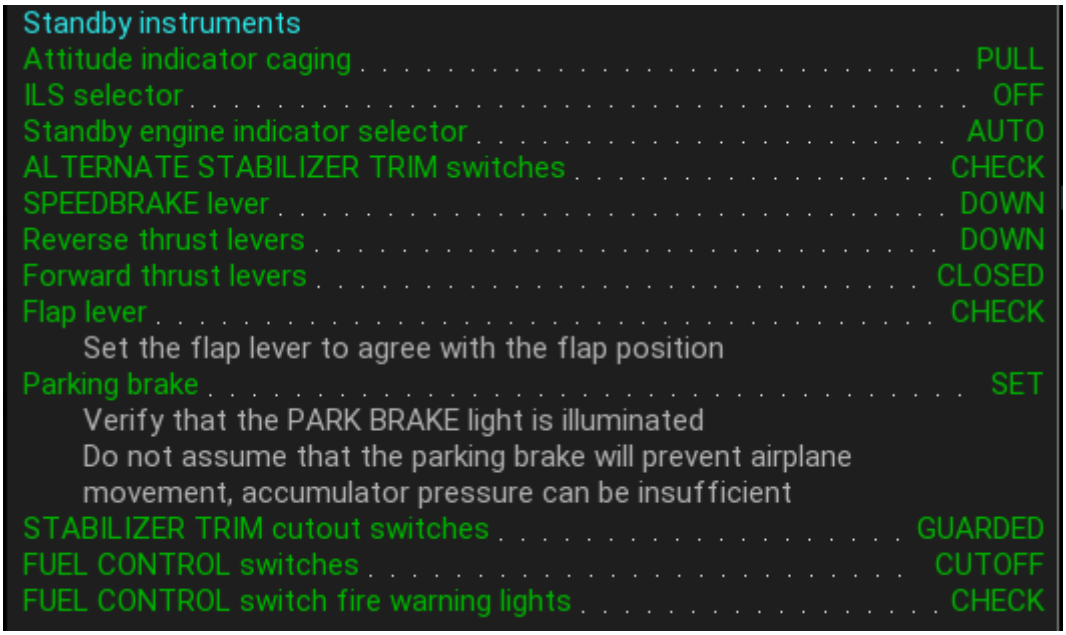
C.33. Radio Panel

Right VHF communications panel . . . . . CHECK



C. 34. Additional checks at Glareshield and Central Pedestal:

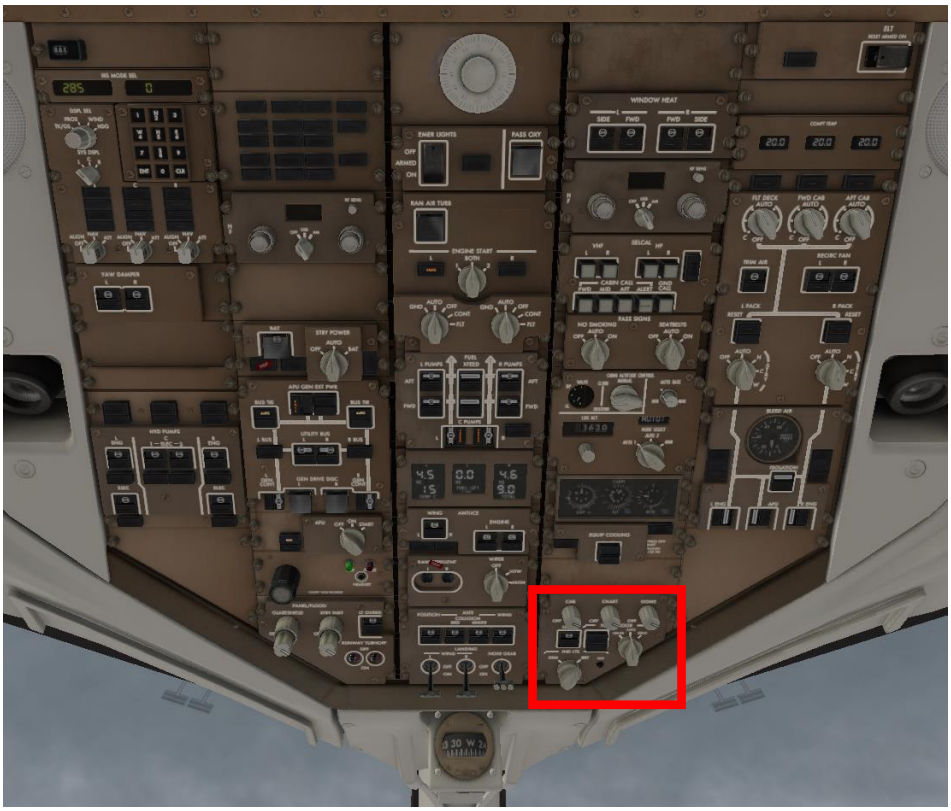




D. Checks before pushback/taxiing/takeoff:

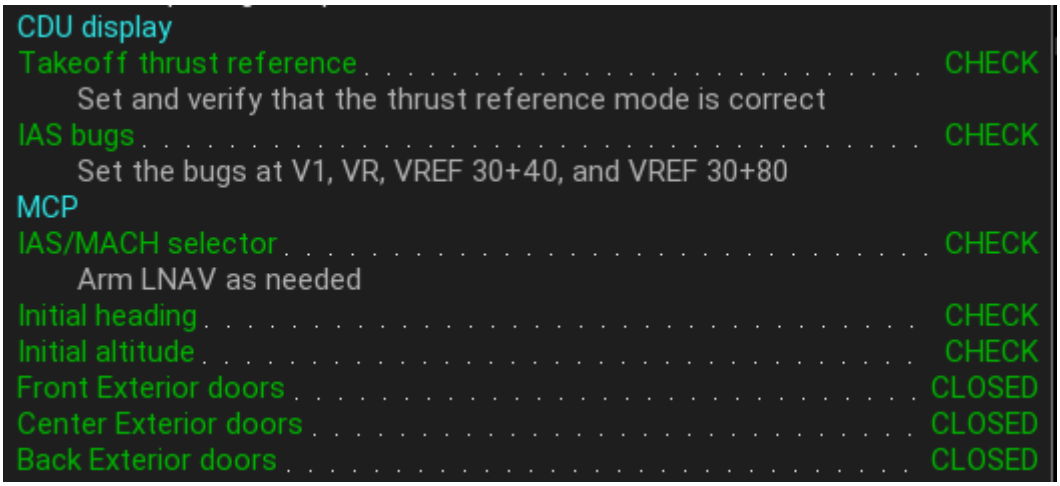
D.1. Flight deck door (FLT DK DOOR)

to AUTO



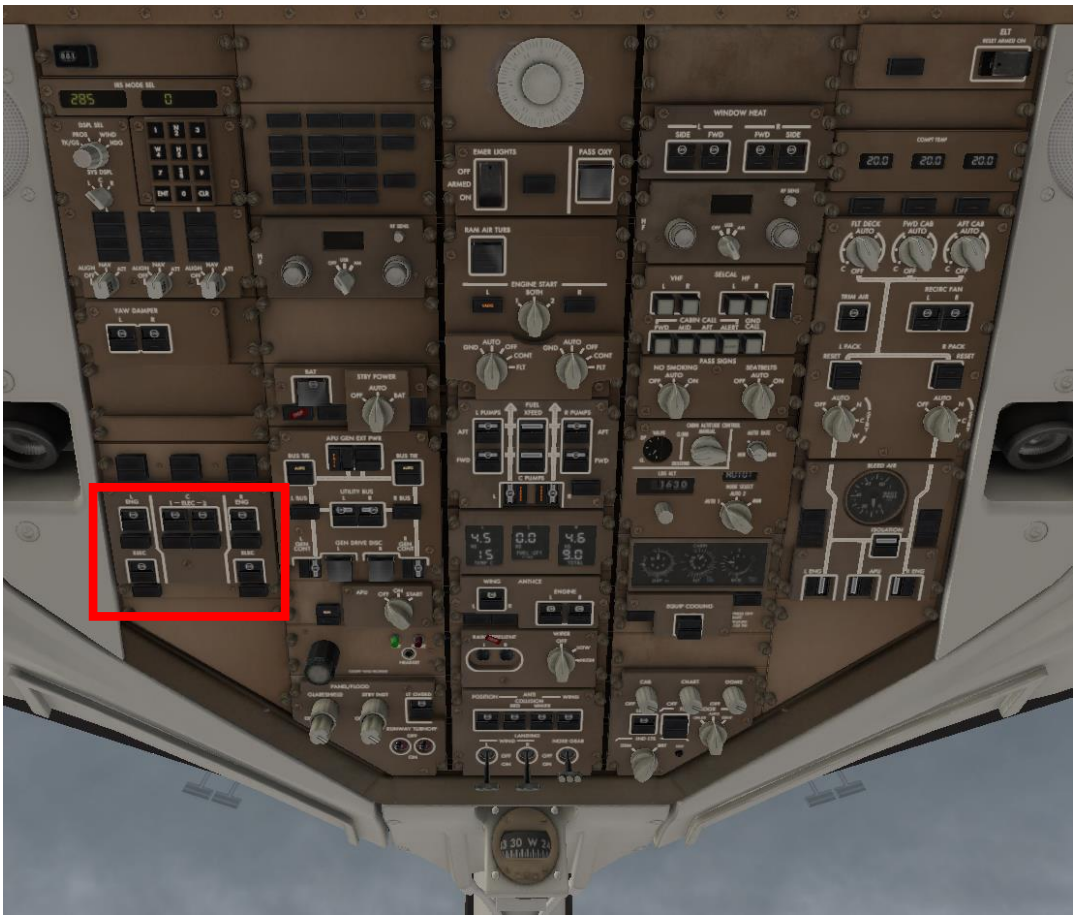
D.2. Check Takeoff Performance Data

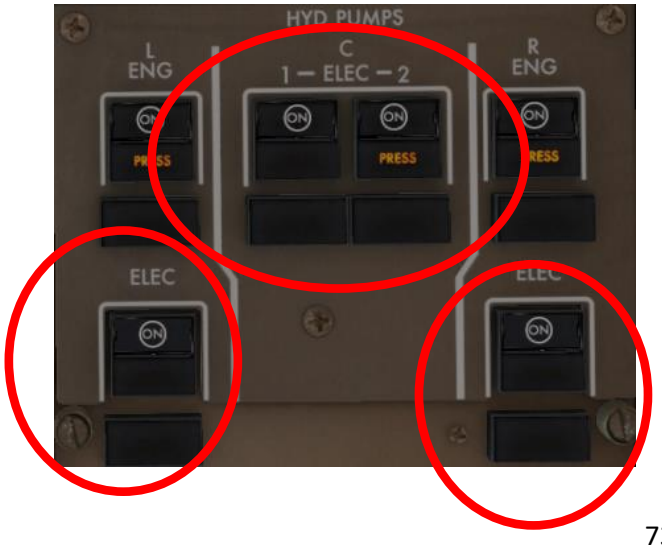
Check Performance settings at FMC; close doors and hatches.



D.3. Check Hydraulic

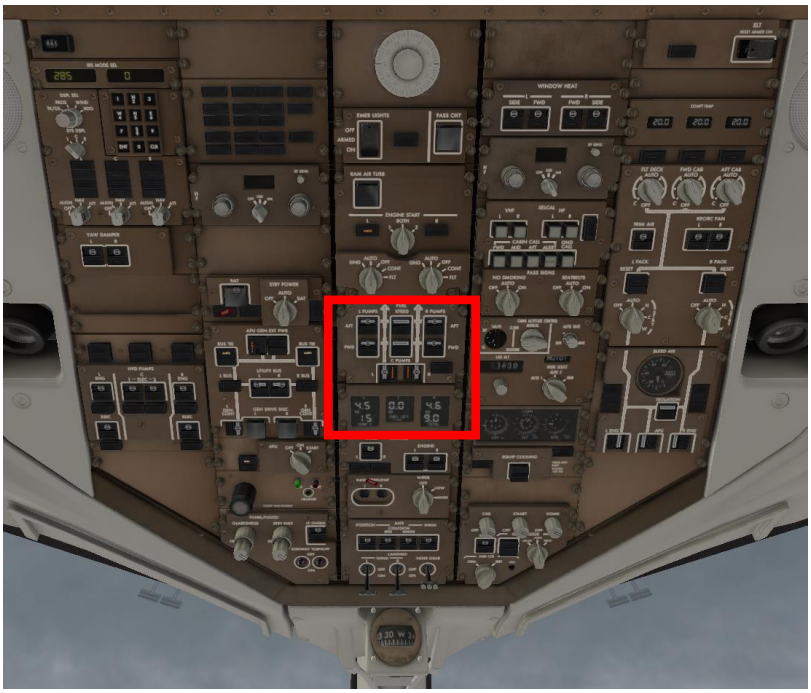
HYDRAULIC panel
Right ELECTRIC pump switch . . . . . ON
Verify that the PRESS light is extinguished
C1 C2 ELECTRIC pump switches . . . . . ON
Verify that the center 1 PRESS light is extinguished
The center 2 PRESS light stays illuminated until after the engine start because of load shedding
Left ELECTRIC pump switch . . . . . ON
Verify that the PRESS light is extinguished

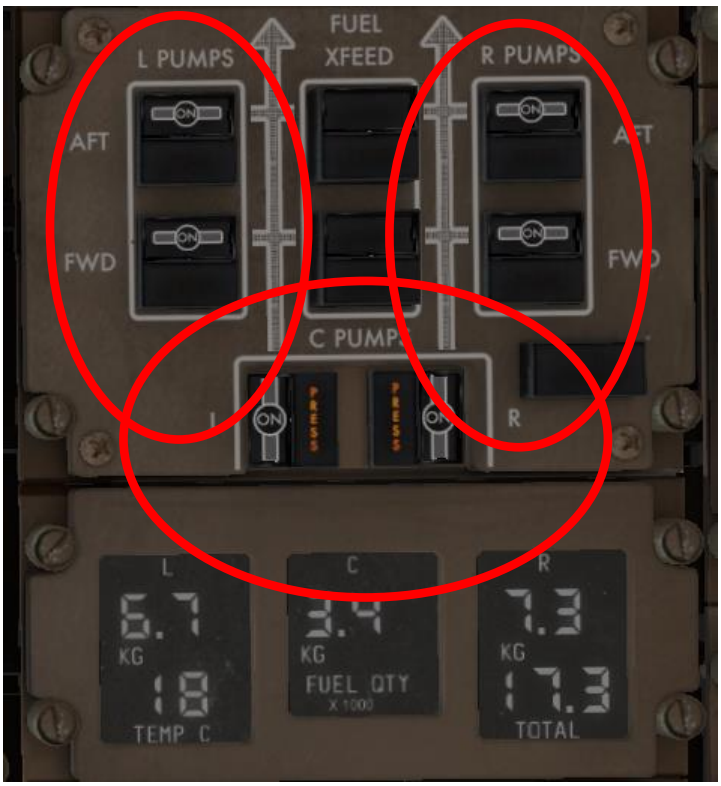




D.4. Check fuel pumps

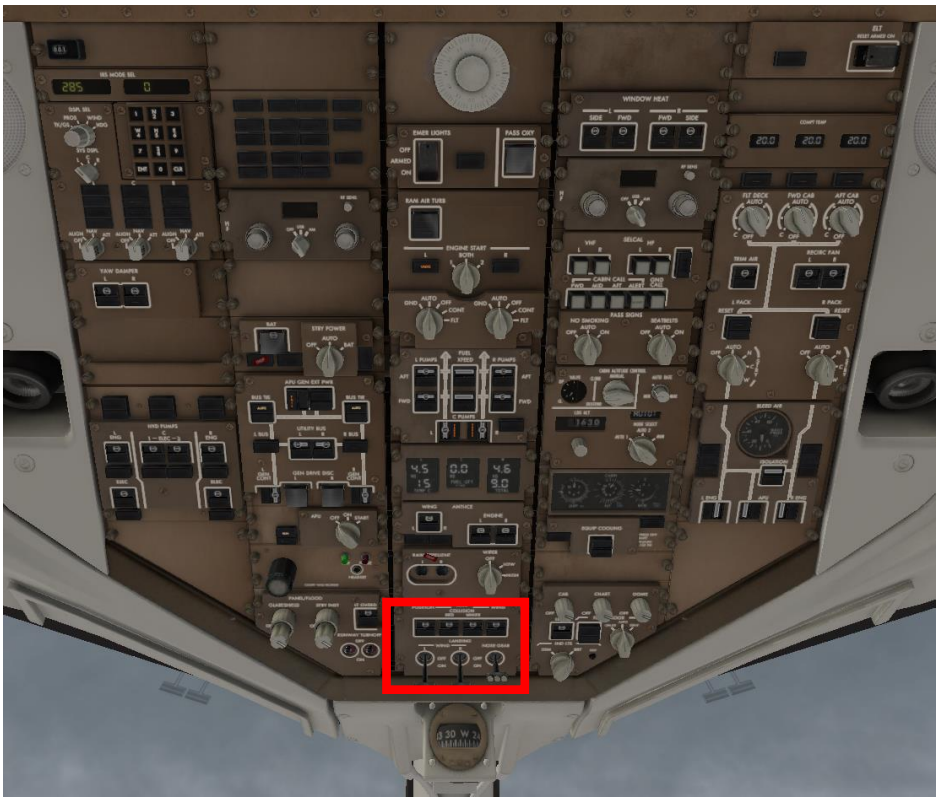
Fuel panel
LEFT FUEL PUMP switches . . . . . ON
RIGHT FUEL PUMP switches . . . . . ON
Verify that the PRESS lights are extinguished
If there is fuel in the center tank:
R CENTER FUEL PUMP switches . . . . . AS REQUIRED
Verify both PRESS lights are illuminated and CTR L FUEL PUMP and CTR R FUEL PUMP messages are shown





D.5. Antikollisionlight

Switch on red anticollision

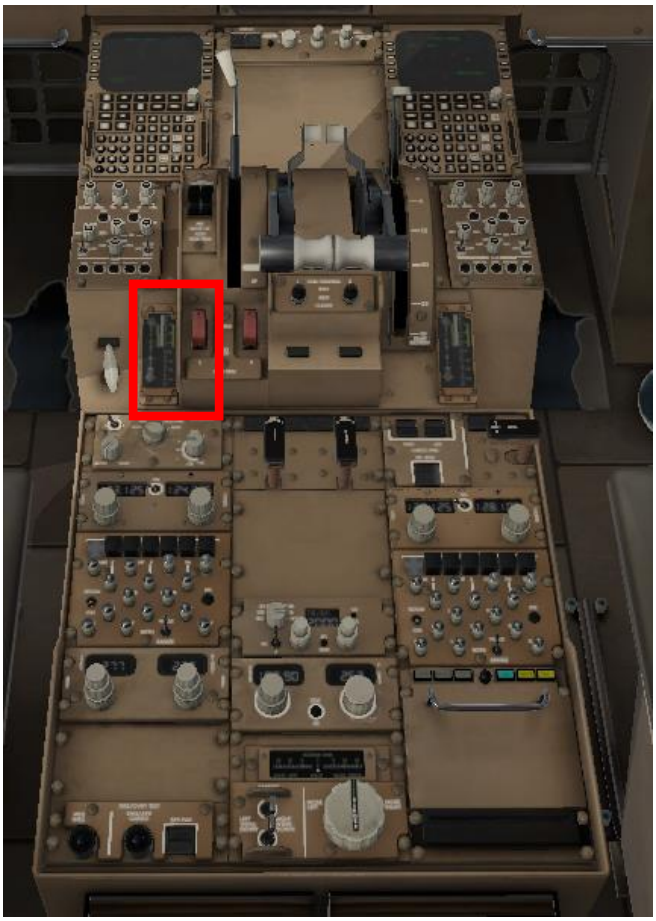


D.6. Check alarms (Recall)

Recall Switch PUSH

D.7. Check trim

Check trim



D.8. Check doors and hatches

Must be closed until now.

Say goodbye to ground supply.

in the menu Operations/Airplane bzw. ... /Ground.

E. Pushback and Starting engines with X-Life: (if you fly without X-Life, click here)

Click GROUND, then ‚Request Push and Start'

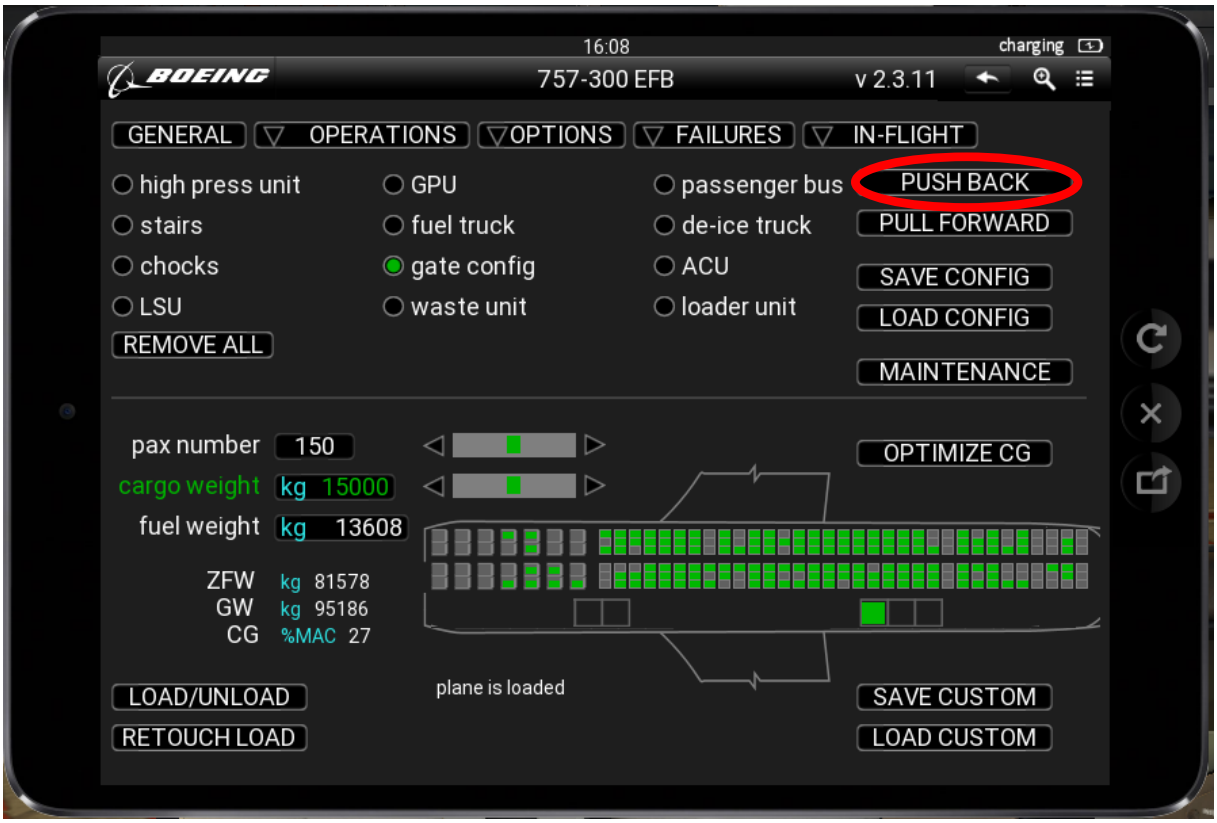
Push and Start will be approved.

Confirm with Readback.

E.1. Pushback with the Onboard-System:

(if you use ‚Better Pushback', click here)

Menu Operations/Ground: Click PUSH BACK



Truck will dock.

Release parkbrakes. Truck can be steered by thrust lever and pedals.

After pushback, set parkbrakes again and release the truck by clicking PUSHBACK on the Operations/Ground page again.

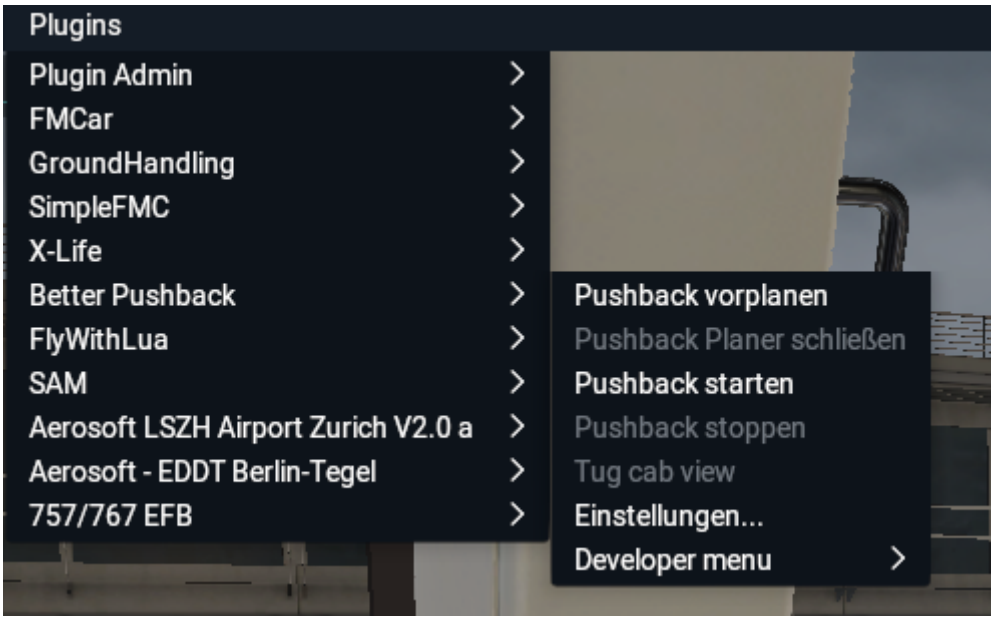
For pulling the plane, click PULL FORWARD.

E.2. Pushback (Addon ‚Better Pushback') (if you do not use ‚Better Pushback' click here)

Call the Pushback Truck with the X-Plane Plugins Menu.

You are asked for the pushback track. Enter the track by your mouse and click ENTER.

As soon as you are ready for pushback, click ‚start pushback'.



The truck will come and connect with the plane.

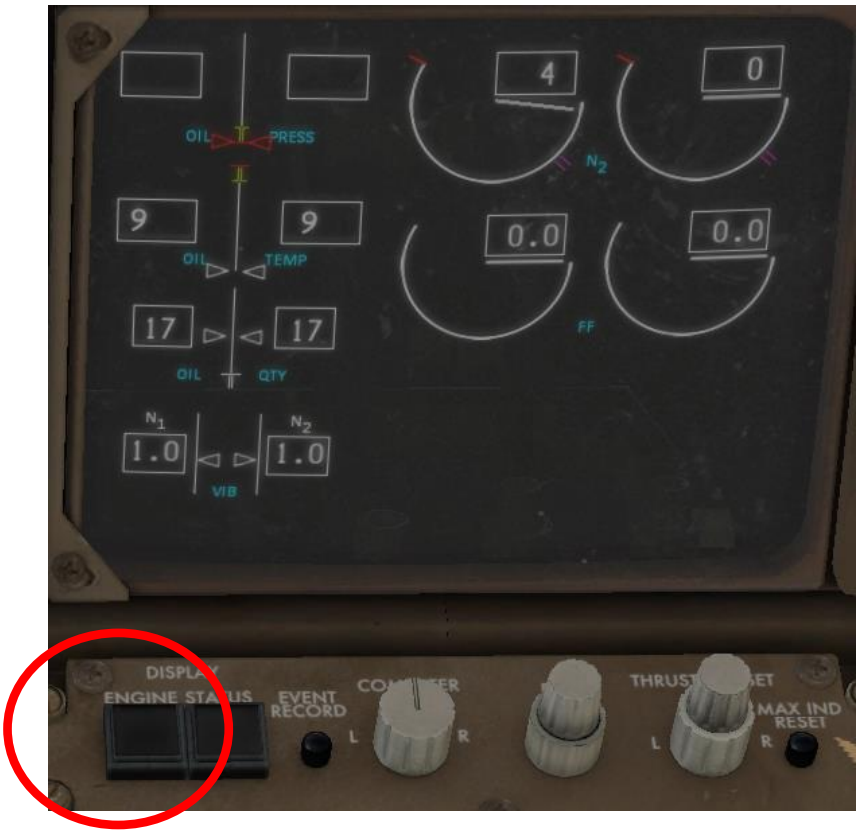
The Trucker checks doors and hatches and connects the truck.

Release parkbrakes now.

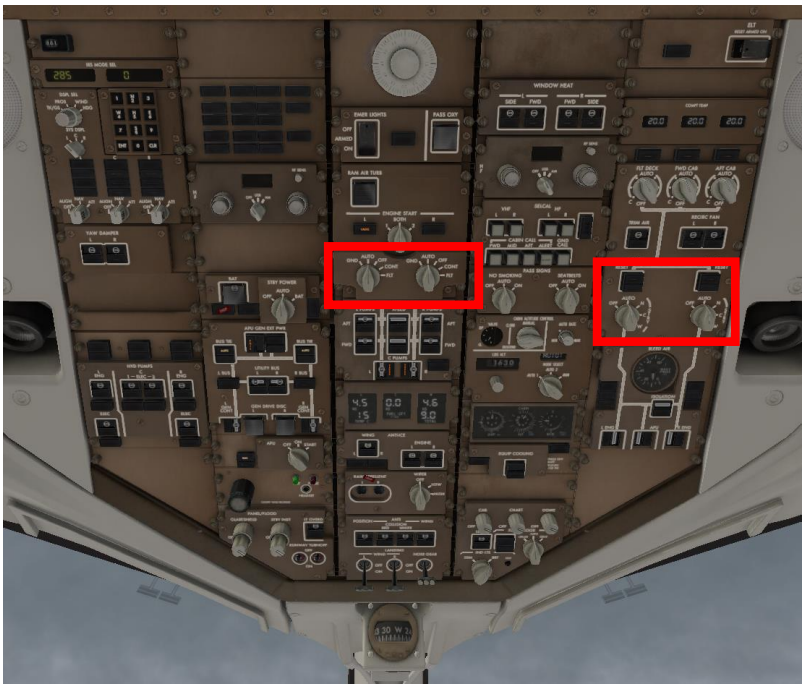
Trucker will inform you, that engines may be started.

E.3. Engine Start:

Show ENGINE CONTROL at the Control Display



Pack Control Selectors to OFF



Left Starter to GND

In the ‚FLT' position engines can be started during flight.

In the ‚AUTO' position, ignition will be managed automatically.

In the ‚CONT' position, there will be continuous ignition, necessary in the case of bad bleed air supply due to bad angle of attack after engine failure.

Engine data will be displayed in the **EICAS-Display**:

In the upper display we can see the primary values (EPR, N1, EGT), in the lower display the secondary ones (N2, Fuel Flow).

In the upper display all warnings will be indicated.

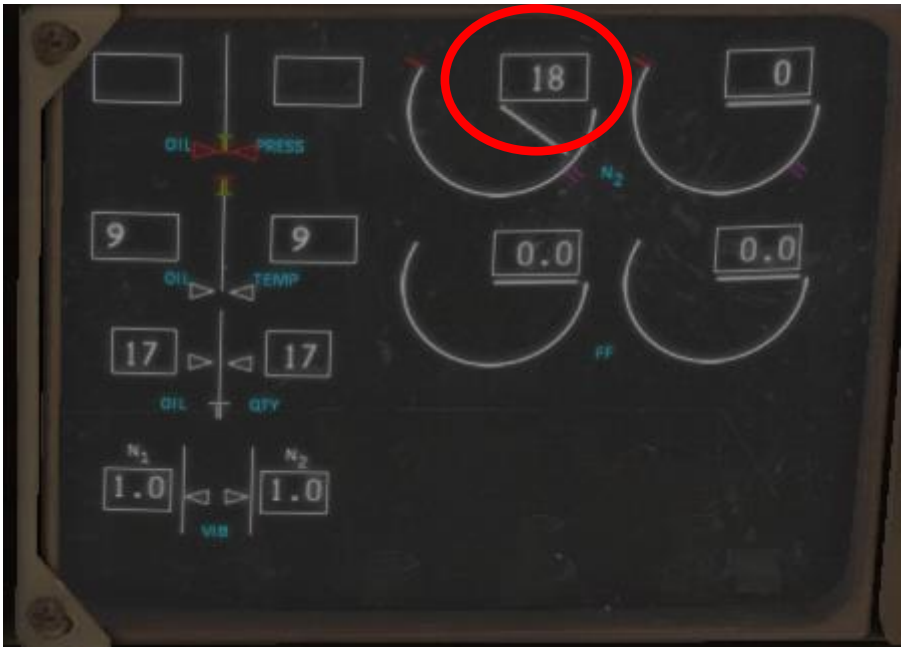
Red indications require immediate reaction

Yellow indications require reaction as soon as possible.

Other indications: occasional reaction required.

You can extinct warnings at the panel left to EICAS display. In case of EICAS failure, these informations are available at the Standby Engine Indicator (must be switched from AUTO to ON).

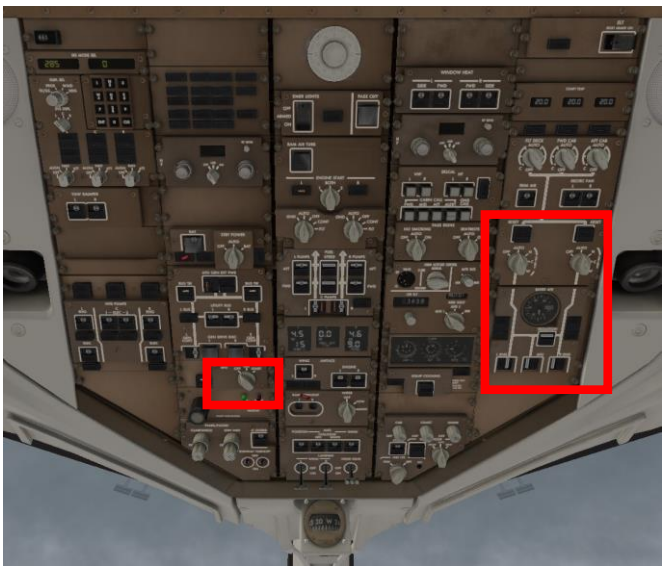
As soon as N2 exceeds 18 %, …



… switch FUEL CONTROL for left engine to RUN.

After left engine has stabilized, start right engine correspondingly.

After stabilization of both engines, switch PACKs to AUTO again, and Isolation switch to OFF.



Switch off APU

Shutting off the engines in case of emergency is possible at the Center Pedestal.

If you do not use Better Pushback, click here!

Pushback trucker will call for setting parkbrakes. Trcuk will be seperated from the plane.

You now have the possibility to redock the truck or to finish pushback.

Trucker tells you from which side he will give you the sign that pushback is finished.

Your are ready for taxiing now.

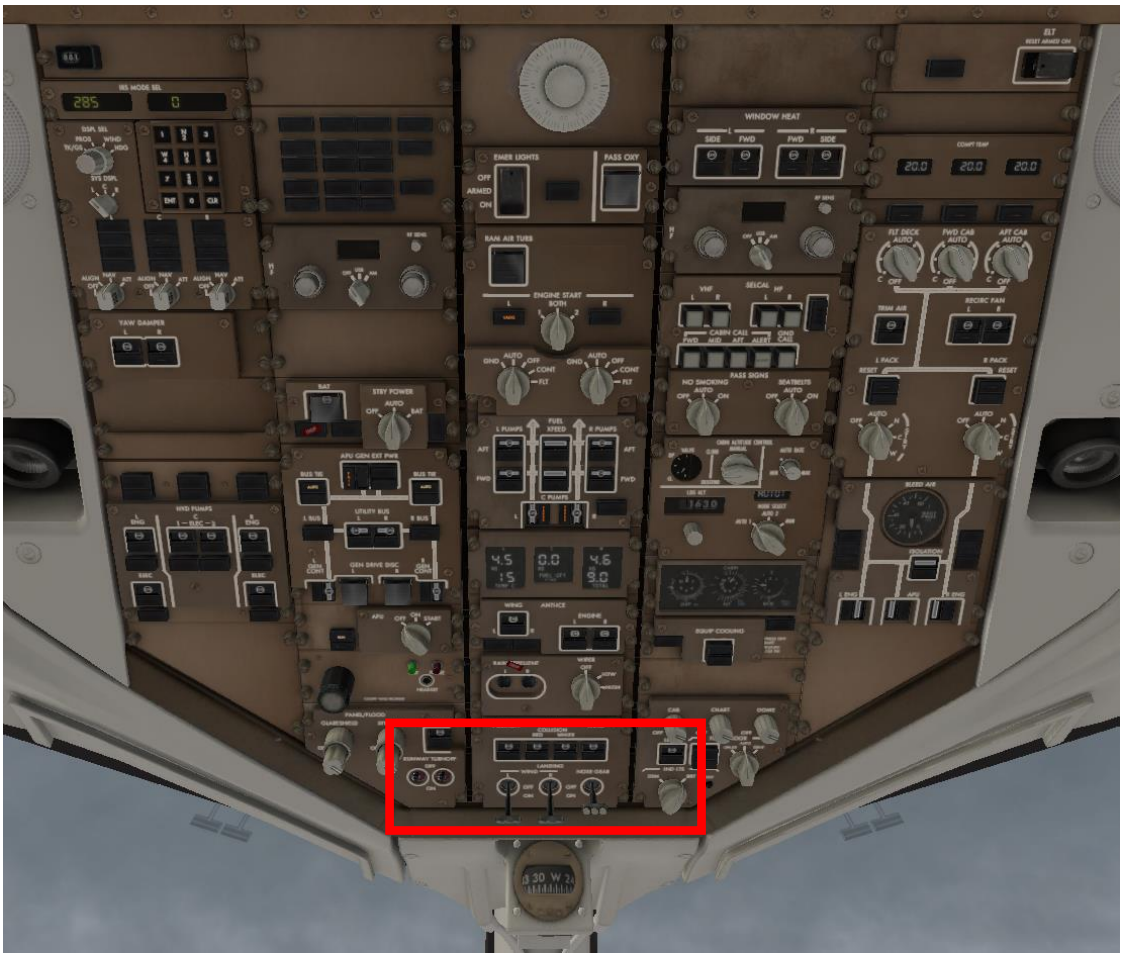
F. Taxiing

F.1. Preparations

F.1.1. At the plane

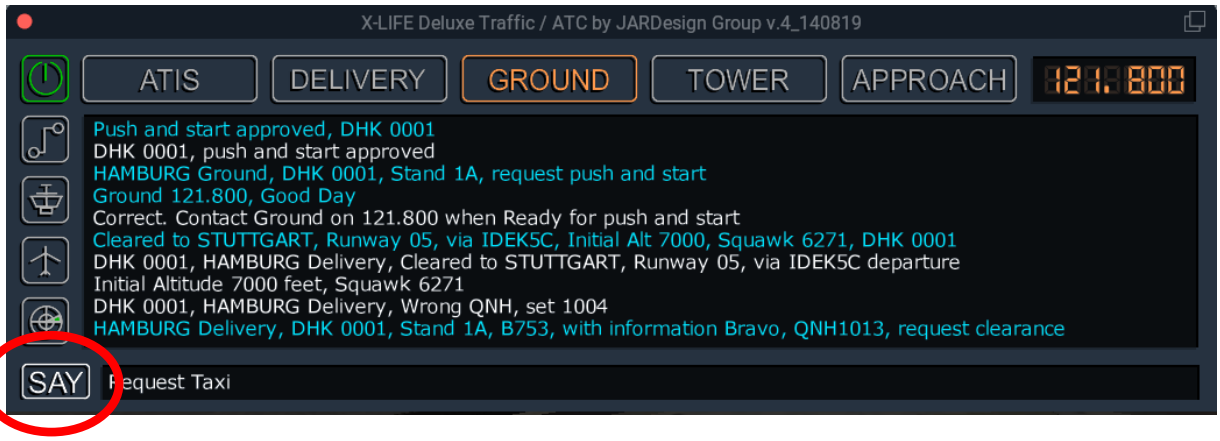
Set flaps, check Flight Controls and Transponder.

RUNWAY TURNOFF light switches . . . . . ON
LOGO LIGHT . . . . . SET
Turn ON if dark

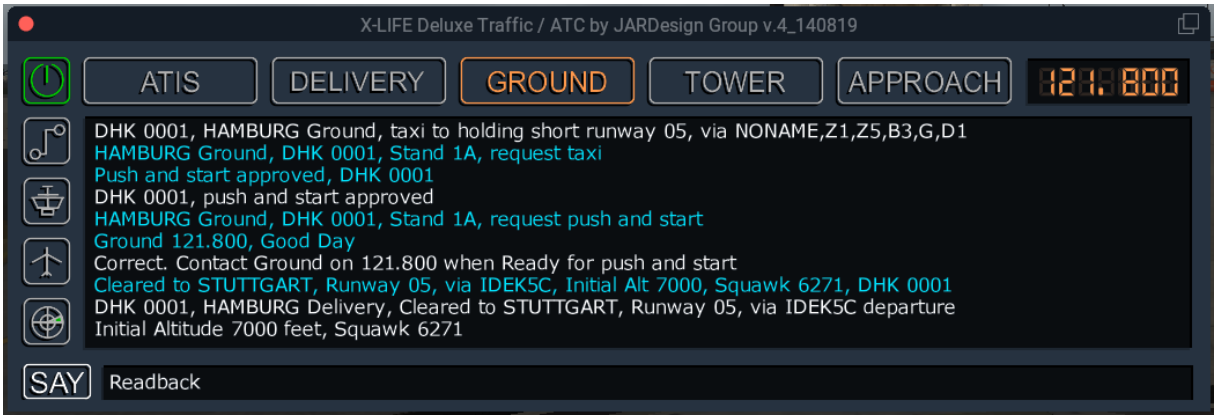


F.1.2. **Taxi clearance** (if you fly without X-Life, click here)

Request taxi clearance from ATC:



ATC tells you the taxi way.



Confirm with Readback.

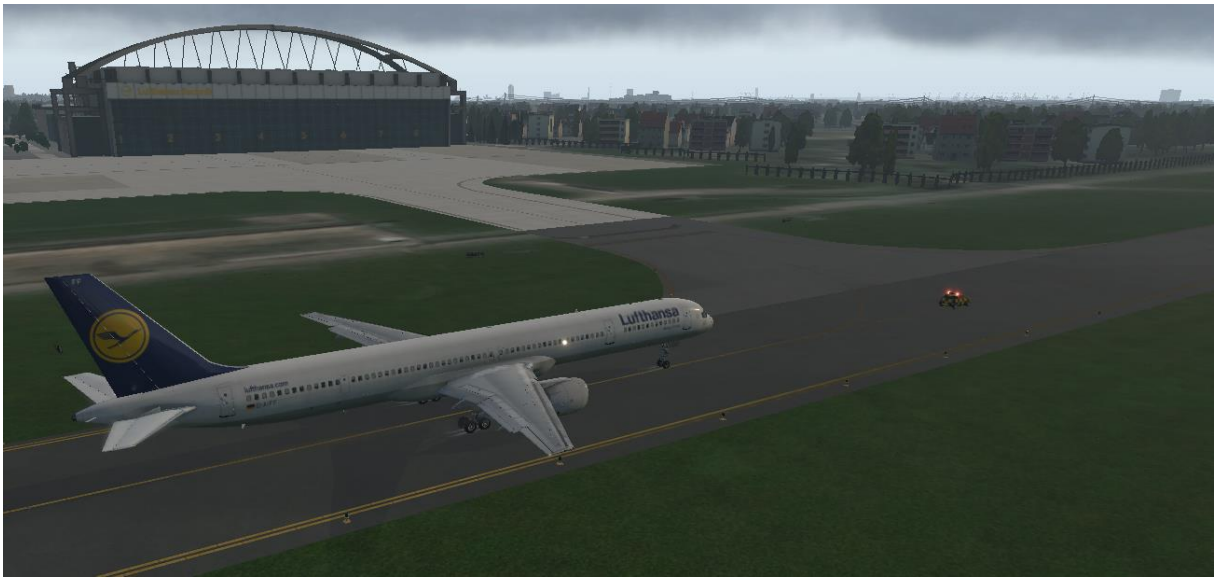
Call the followme car. It will be announced by ATC.

Confirm with Readback.

F.2. Taxiing

FollowMeCar stands ahead of you;

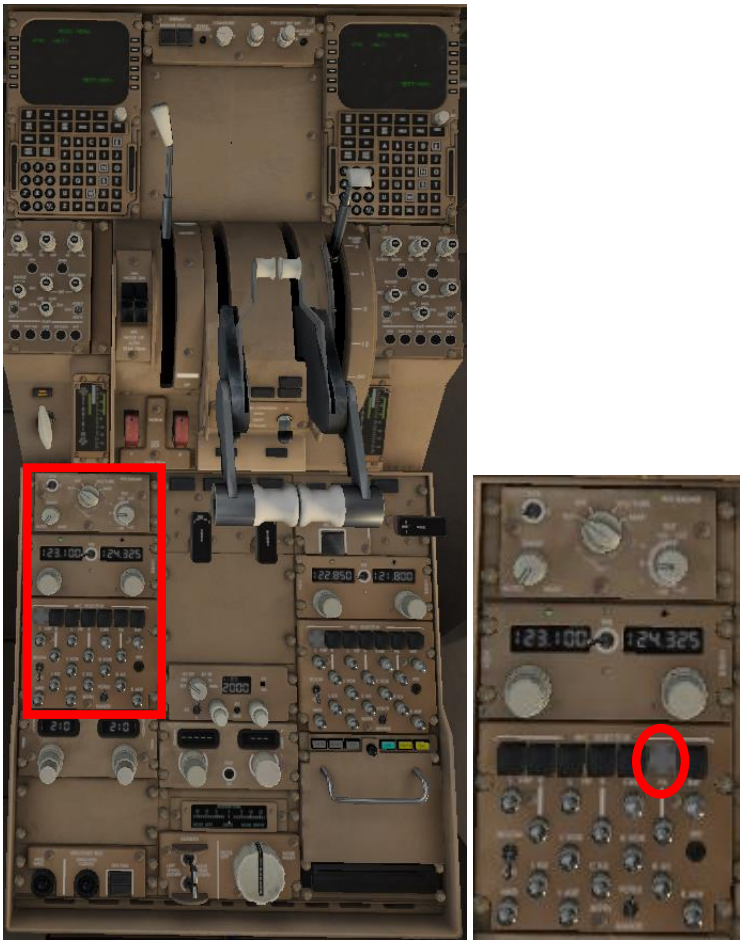
Follow FollowMeCar to HoldingPoint of your departure runway.

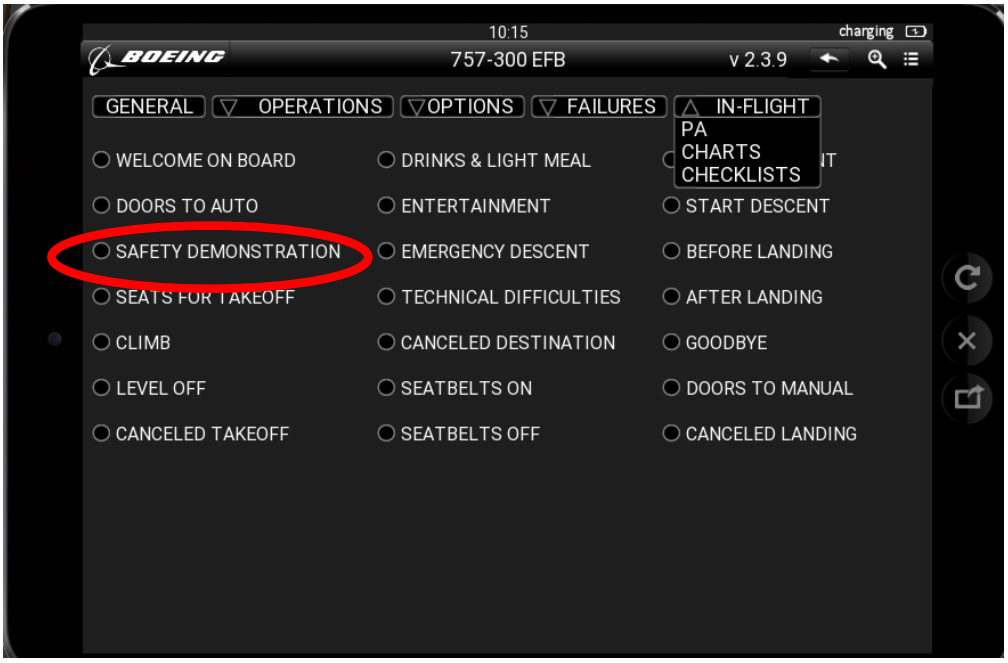


F.2.1. Safety Demonstration

On the way to the Holding Point: SAFETY DEMONSTRATION

You can activate the PA page from the radio panel.





F.2.2. At Holding Point

F.2.2.1. Communication with ATC (if you fly without X-Life, click here)

Tell GROUND reaching holding point.

You will be requested to contact TOWER.

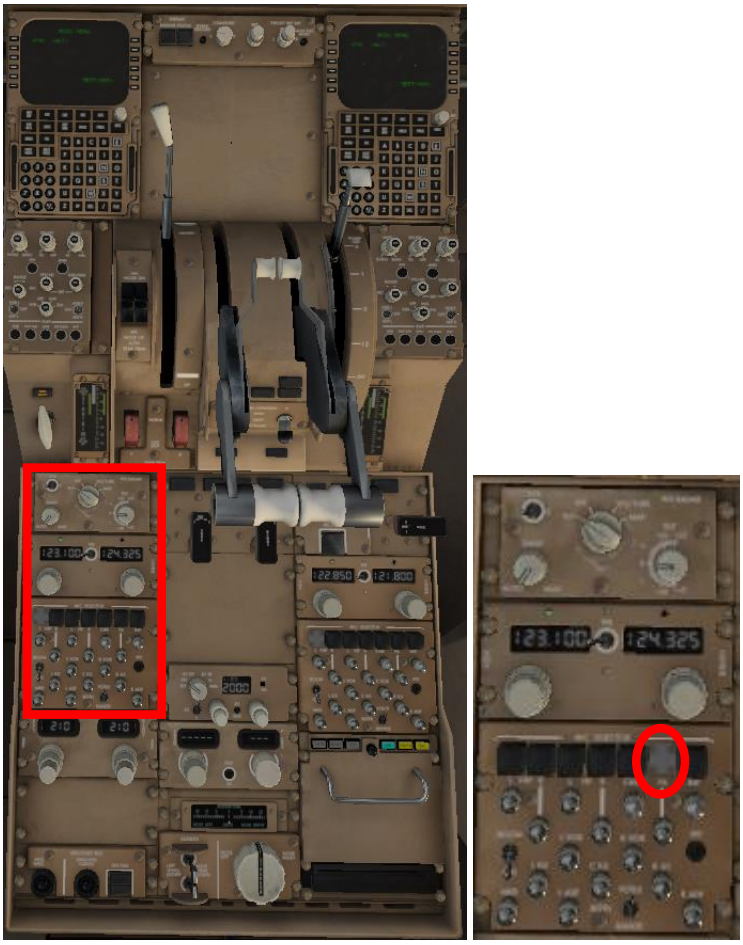
Confirm with Readback and click TOWER, then ‚Approaching Holding short' again.

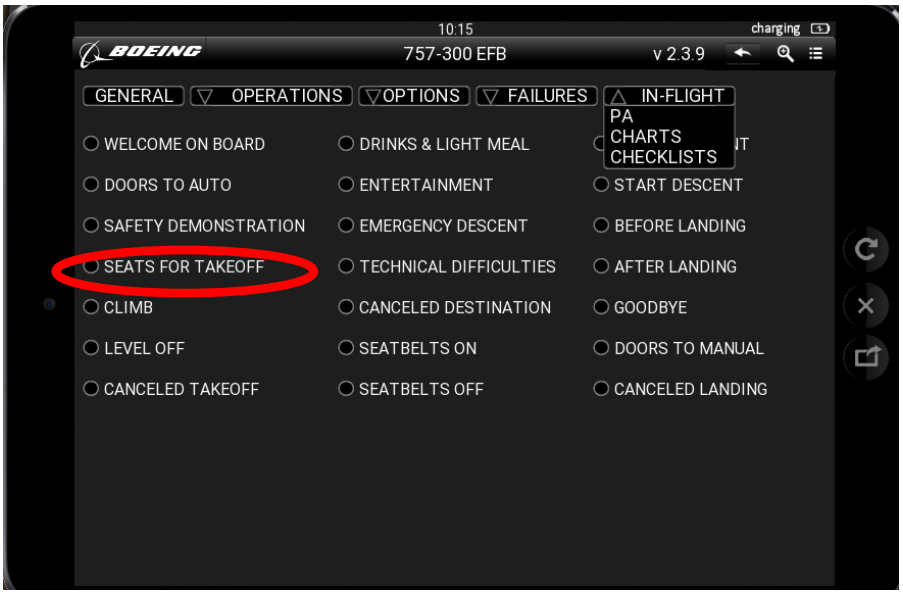
In case of incoming traffic, you will have to wait.

F.2.2.2. Cabin Announcement (Seats for Takeoff)

Seats to takeoff position (info to cockpit).

Call the Announcement page from the radio panel.





F.2.2.3. Lining Up (if you fly without X-Life, click here)

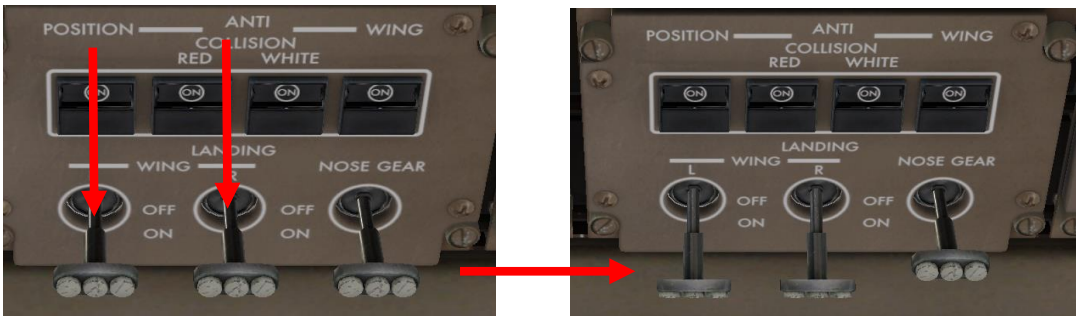
After the runway is no more busy, you receive clearance for lining up.

Confirm with Readback and taxi to runway threshhold.

You will now receive takeoff clearance and final wind information.

Confirm with Readback.

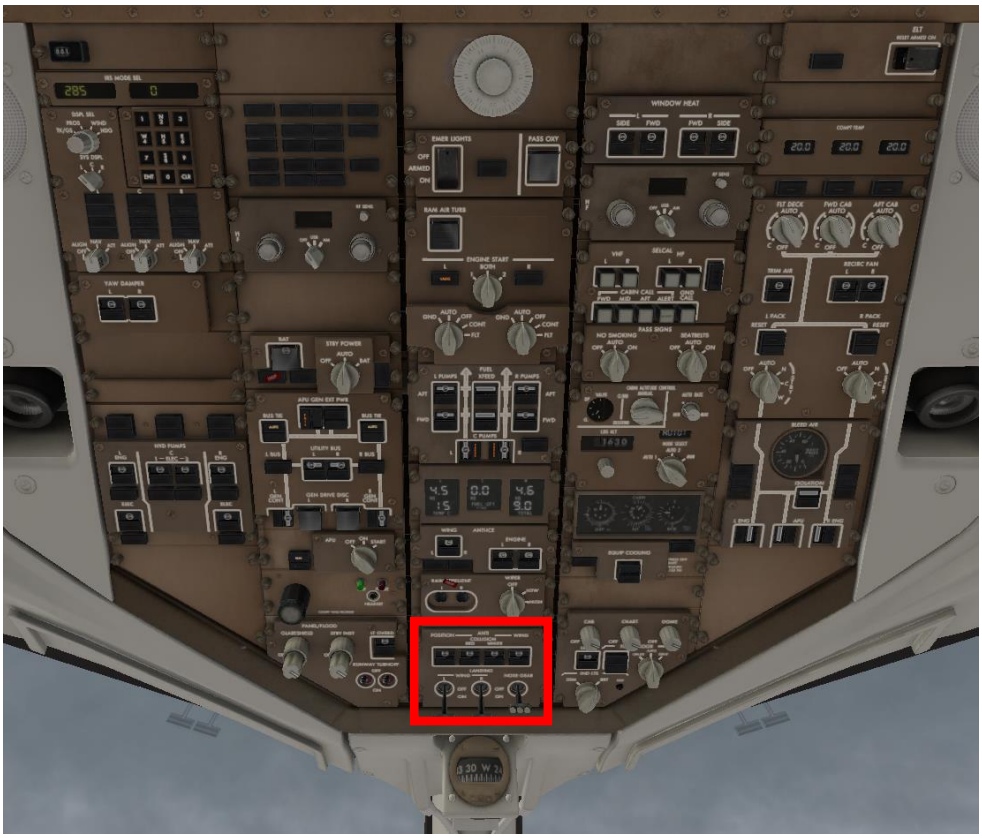
After takeoff clearance: Both WING LANDING Lights to ON



G. Takeoff

G.1. Preparation

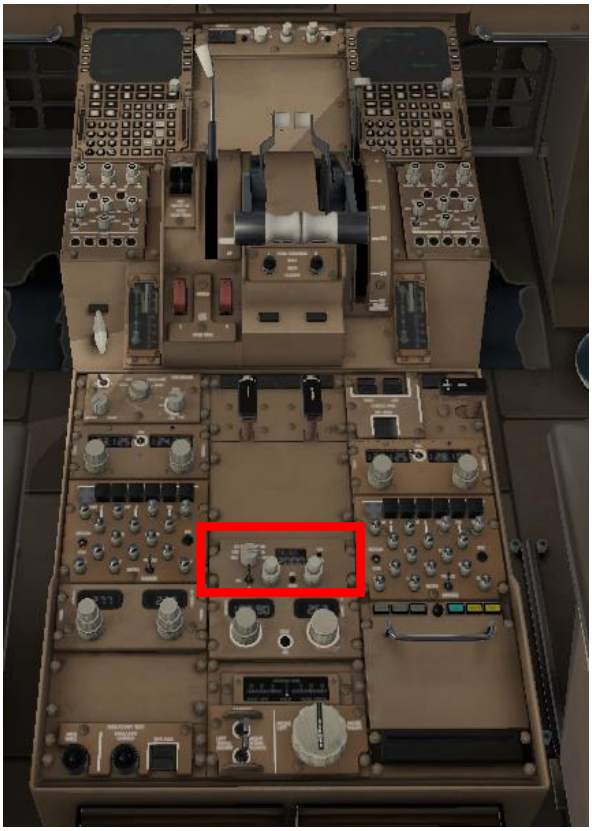
WHITE ANTICOLLISION Light ON



Runway Turnoff Lichter to OFF

If you fly without X-Life, click here!

Transponder to ‚TA/RA‘



Autobrakes to ‚RTO' (maximum braking effect in case of rejected takeoff)

G.1.1. Thrust control at Takeoff (Auto Throttle System):

Activate Auto Throttle System for Takeoff with automatic thrust control.

This system provides automatic thrust control during takeoff, climb, crusie-Phase, descent, automatic landing. or goaround. Auto Throttle function does not depend on the function of Flight Director and autopilot (FMC).

The Auto Throttle System consists of (1) the Mode Control Panel at the Glareshield,

Mode Control Panel,

(2) the Thrust Mode Select Panel at the Glareshield


Thrust Mode Select Panel

and (3) the Thrust Mode Computer, which moves both throttles by servomotors.

The system will be activated with the A/T ARM switch.

at the Mode Select Panel.

4 Mode Selector switches determine the way, the Auto Throttle modes work: The THR (= EPR)-switch, the SPEED-switch, the VNAV- switch, and the FL CH-switch.

The THR- and the SPD-switch determine the Auto Throttle exclusively;
the VNAV- and the FL CH-Schalter determine the Auto Throttle and the autopilot.

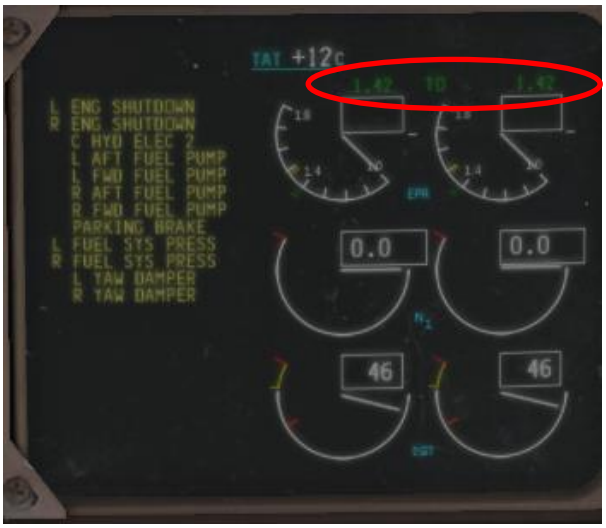
There are 5 Auto Throttle Modes:
EPR, Speed, FL Change, Idle and Goaround, and the submode AUTO THROTTLE HOLD.

The active Auto Throttle Mode is indicated in the PFD.

EPR-Mode:

In the EPR-Mode, the thrust will be used according to the setting in the Thrust Mode Select Panel: TO or TO-1 or TO-2 Takeoff, CLB or CLB-1 or CLB-2 or limited by the Thrust Reduction Temperature, (Derated Thrust; D-TO) or in the FMC on the Takeoff Performance page 1/2, entered with LSK 2L.

Thrust mode is indicated in the EICAS; in our example: TO with Thrustlimitation at EPR 1,42.



For takeoff push both levers to EPR 1,1, then push the THR-knob.

Now both levers will be pushed forward by the servos until thrust limit is reached.

As soon as one of the engines has reached the thrust limit, lever position will be locked. If both levers stop at different positions, the difference must be compensated manually.

At a speed of 80 kts the system switches into the submode ‚Throttle Hold' automatically. This will be shown in the PFD. The servos will be undocked to enable manual handling.

(The levers can now be pulled back to idle position if takeoff has to be cancelled. This is not possible at speed below 80 kts..)

After takeoff, thrust must be controlled manually up to the Thrust Reduction Altitude (i. e. at about 1000 ft above ground). Then ‚FL CH' must be activated.

Takeoff phase ends here, climb phase starts.

By activating FL CH, servos will be docked again to the thrust levers. Thrust will be controlled according to CLB settings in the Thrust Mode Select Panel. Speed will be held constant by regulating the pitch.

If the levers will be moved manually in this phase, the system switches into the Throttle Hold Mode; indicated in the PFD as ‚THR HLD'.

The Speed-Mode will be activated by clicking the SPD knob. In this mode the speed will be controlled according to the setting in the glareshield, respecting the thrust reduction as tuned in the Thrust Mode Select Panel.

Shutting off Auto Throttle Modus:

Click A/T ARM knob at the glareshield.

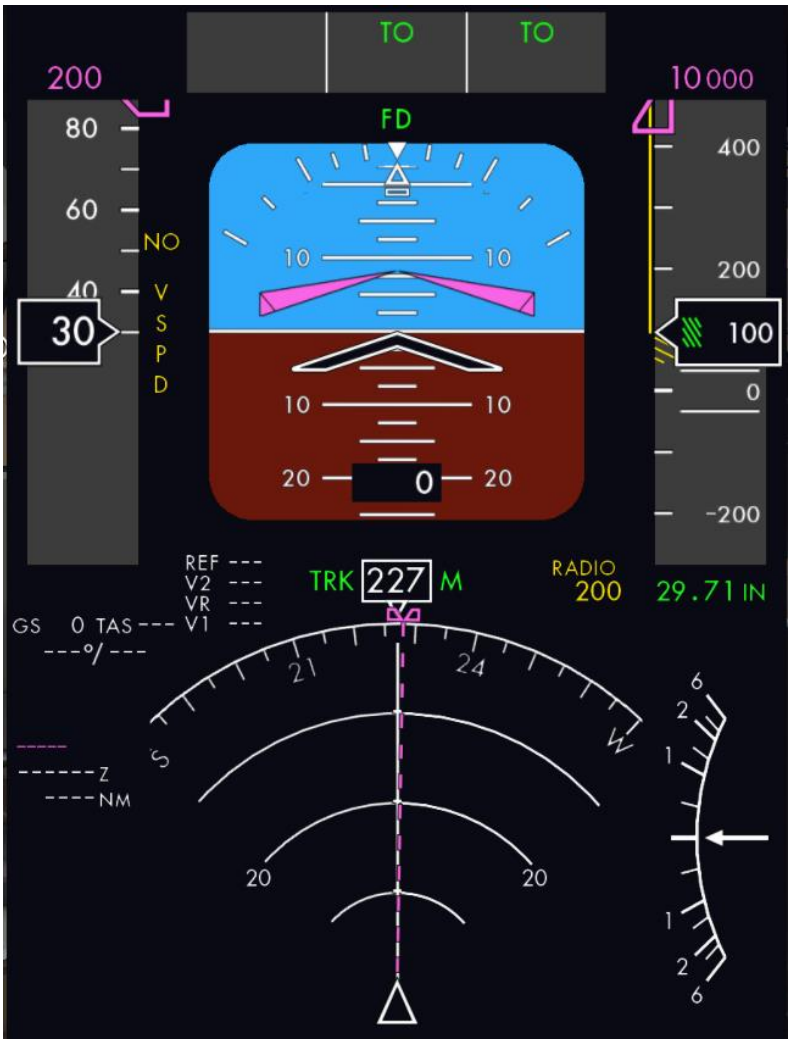
G.2. Flight Director Take-off with automatic thrust control

This mode can only be activated on ground and with all autopilot switches OFF.

Truning the F/D switch ON, the system activates the Takeoff-Mode (T/O).

‚TO' is indicated in the PFD.

Pitch indicator shows ca. 8° nose up.



There are 2 possibilities for FD takeoff: the ‚RNAV-Takeoff' and the ‚HDG HOLD-Takeoff'.

With the RNAV takeoff, a SID will be flown by radio navigation.

With HDG HOLD takeoff, the Runway Heading will be flown until ATC gives new instruction.

In both modes, runway heading must be tuned at the glareshield. For RNAV takeoff click ‚LNAV', for Heading Hold takeoff click ‚HOLD'.

In both variants fly along the RW heading (look at the Roll Bar in the PFD), up to at least 200 ft. above ground, the activate the der autopilot (A/P).

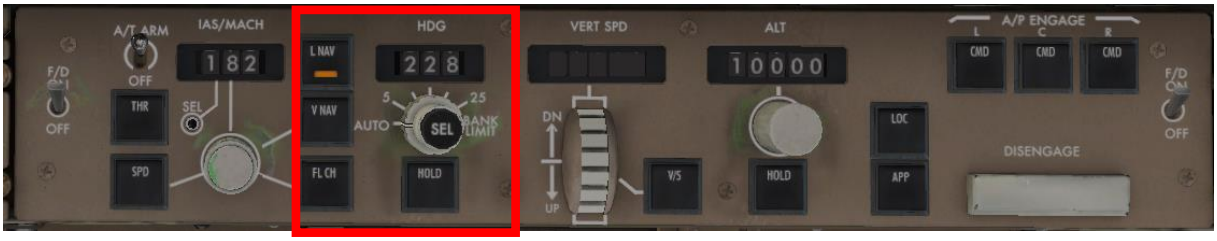
If LNAV is activated, the autopilot will fly along the SID (RNAV takeoff), if HOLD is activated, the autopilot will maintain RW heading (HDG HOLD takeoff), until a new heading is tuned.

RNAV takeoff will be described next; a HDG HOLD takeoff will be performed accordingly.

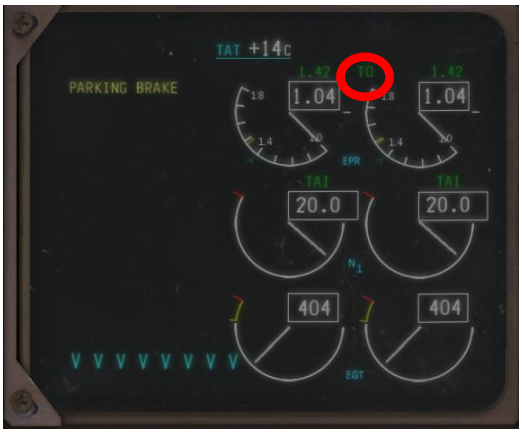
G.3. RNAV-Mode takeoff:

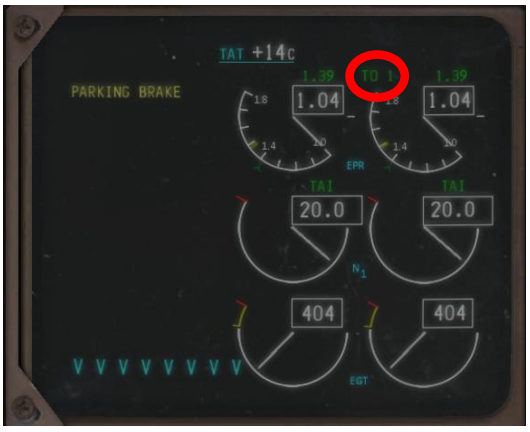
Tune Runway HDG, confirm with SET (Click)

For the RW 23 at EDDH RW Heading is 228°. Click LNAV for RNAV-Takeoff.



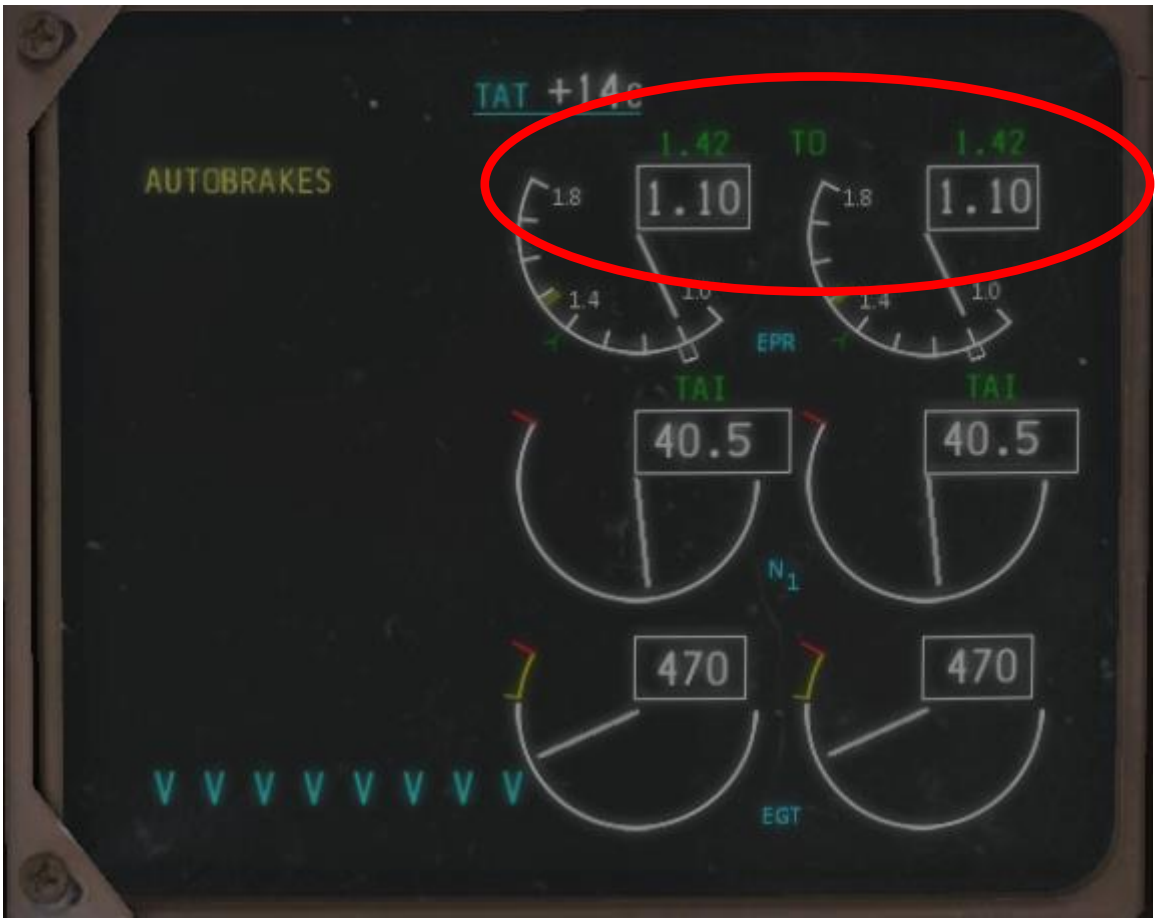
Select Thrust Mode at the Thrust Mode Select Panel (TO oder TO 1 oder TO 2, if not in the FMC on the performance page a Flex Temp had been entered). The EICAS-Display shows the setting (TO, D-TO for derated takeoff, TO 1, TO 2):



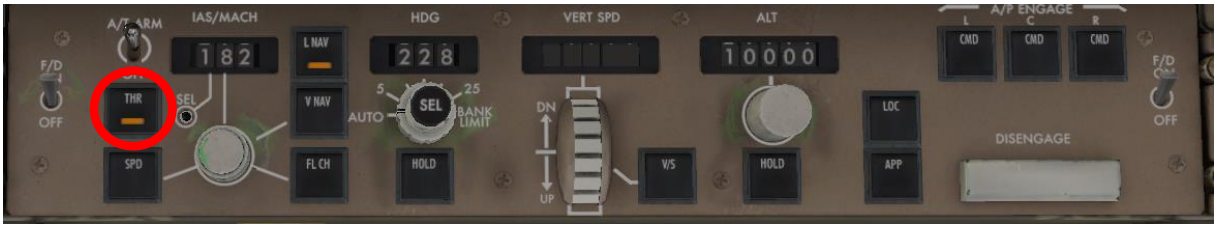


Release Park Brakes, but brake the plane by the pedals (‚static takeoff').

Push the throttles until EPR 1.10 for both engines (‚stabilization step').

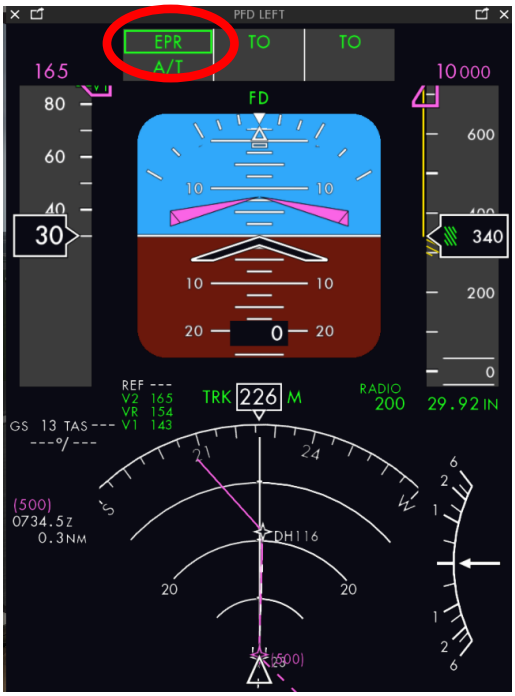


Then activate Auto-THR (= EPR), ...



.... and release brakes.

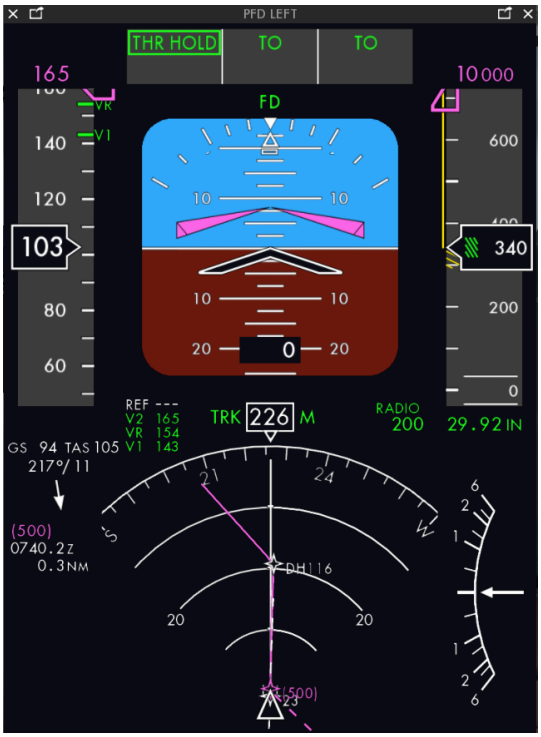
We see‘ EPR‘, boxed at first, then without box. in the PFD:



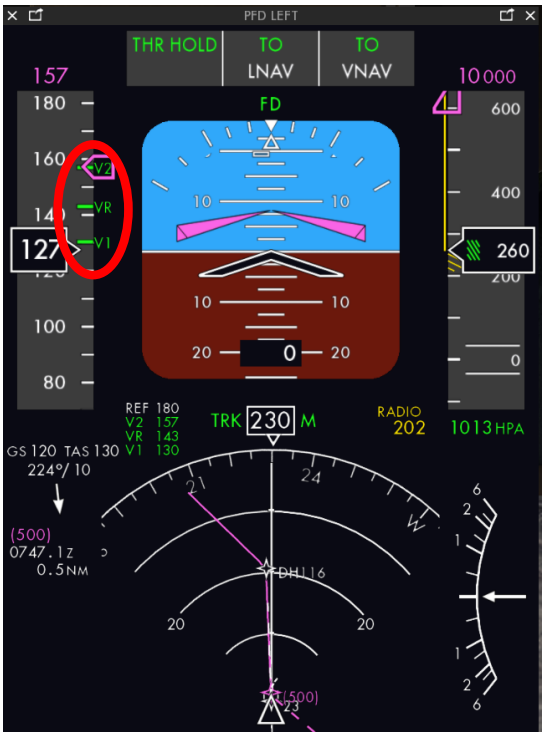
Now both levers will be pushed forward by the servos up to the thrust reduction limit (TO or TO-1 or TO-2) or according to the Thrust Reduction Temperature, as entered in the FMC on the Performance page TAKEOFF REF 1/2 or at the TEMP SEL knob (Derated Thrust; D-TO).

Shortly before reaching 80 kts, the thrust levers must be pushed forward manually, because now the Thrust Submode ‚Throttle Hold‘ will be activated, and the servos will be undocked. Thrust must be controlled manually now up to V2.

At 80 kts THR HOLD is displayed in the PFD.



Control thrust manually now!

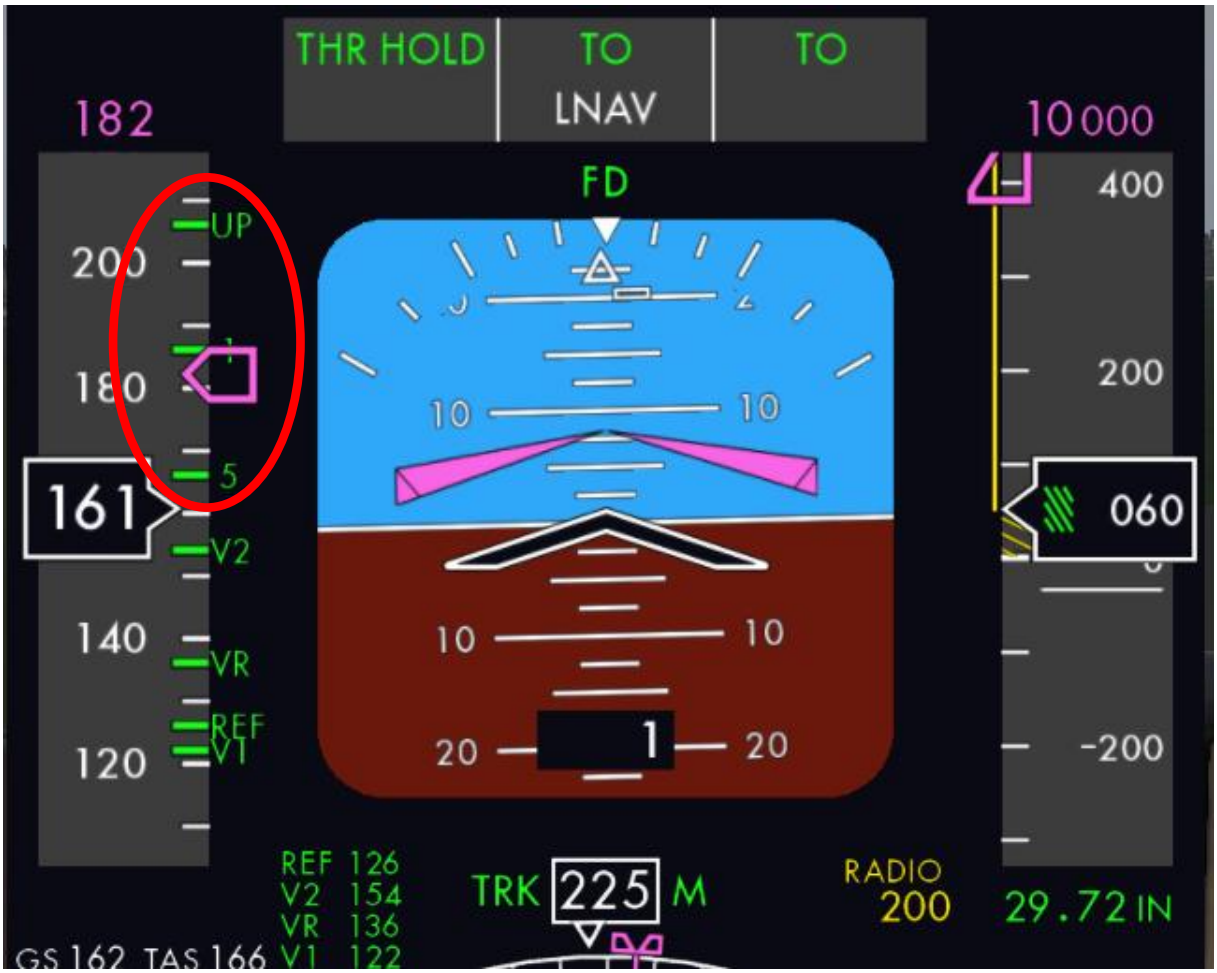


V1, VR and V2 will be displayed at the Speed Indicator. Rotate at VR (pitch attitude 15° up).

‚Gear up' with positive climb.

AUTO BRAKES switch from RTO to OFF automatically.

Retract flaps according to indicators in the PFD. (for Flaps 5, Flaps 1 and ‚UP').



Activate the autopilot above 200 ft. above ground. Now the computer will fly according to the lateral navigation data; altitude above ground is displayed in the PFD.

PFD shows according to settings in the MCP: SPD, Vertical Speed (V/S), Lateral Navigation (LNAV), and 'Command' (CMD) for autopilot to be active.

H. Climb Phase

Takeoff phase ends at Thrust Reduction Altitude (entered into page 2 of the TAKEOFF REF page.
Climb Phase begins. Flight Mode switches to CLB (Climb Mode) automatically.

Activate ‘VNAV’ (with HDG HOLD Takeoff: ‘FL CH’)! ‚CLIMB Thrust‘ should activate by itself (check in the EICAS-Display); otherwise: activate CLB manually at the Mode Select Panel.
THR mode (EPR mode respectively) switches to SPEED mode; servos will be docked to levers again.

Enter speed Vref30 + 80 at glareshield.

In this position speed will be maintained by adapting pitch independent from climb or descent.

During climb thrust will be adjusted in respect to the entries of maximum EPR (CLB or CLB1 or CLB2) at the Thrust Mode Select Panel (indicated on the EICAS display).

During descent throttle goes to idle position. Pitch will be adjusted in a way providing enough bleed air.

In case of manula movement of the levers during climb or descent, mode switches to THR HOLD.

Speed Mode can be activated at the glareshield:

Auto Throttle System will keep speed respecting maximum EPR as entered in the

Thrust Mode Select Panel  .

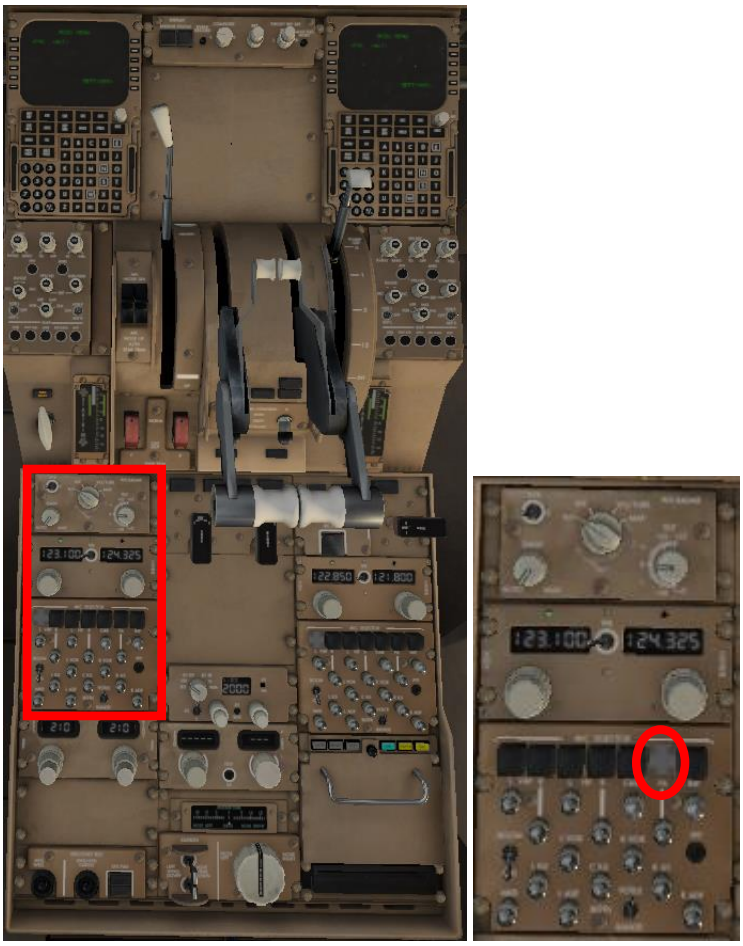
Increase speed (IAS/MACH) at glareshield as required.

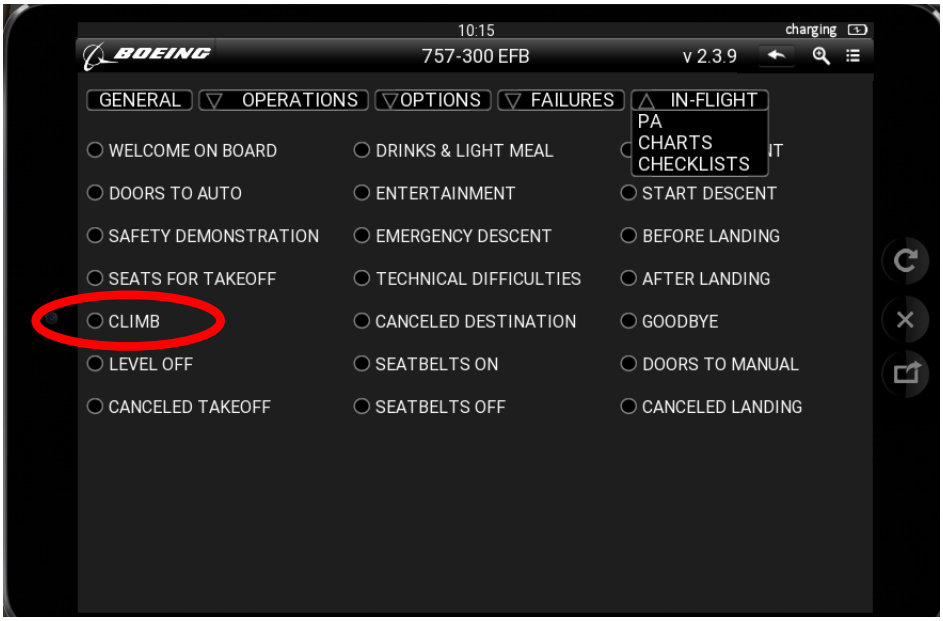
Set lights as required.

Fly manually in order to capture the flight path if necessary after deviation

H.1. Cabin Announcement (Climb)

During climb: ‚CLIMB‘





H.2. **Communication with ATC** (if you fly without X-Life, click heree)

ATC wants you to contact HAMBURG APPROACH.

Confirm with Readback, then click APPROACH.

Follow ATC instrcutions.

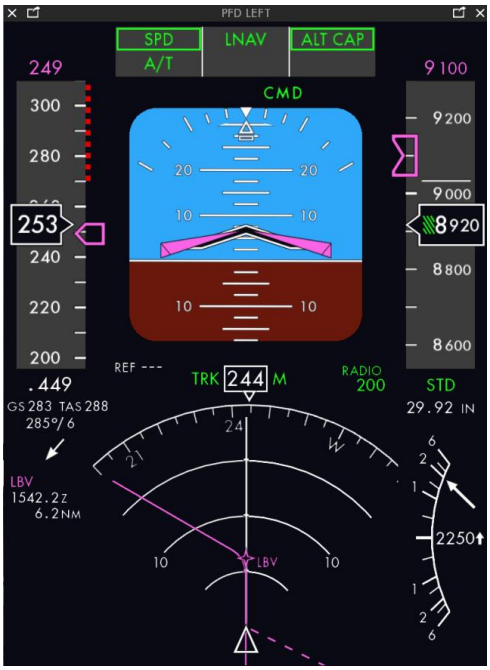
Passing Middle Markers (MM) and Outer Markers (OM) will be indicated in the PFD.

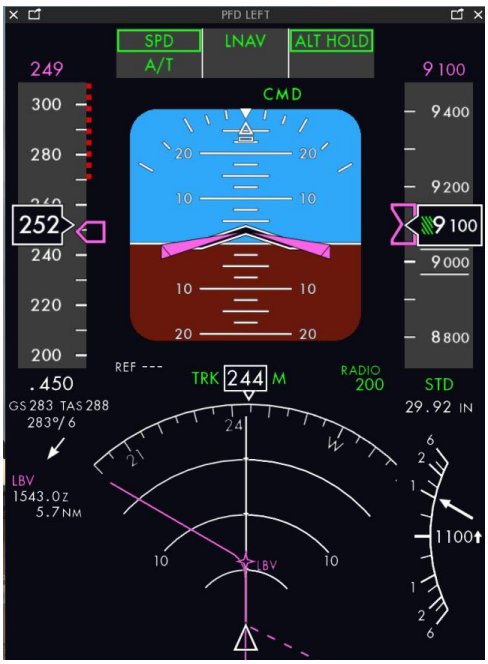
Plane will continue climbing.

Passing 5.000 ft (Transition Altitude für EDDH) set QNH to standard (= 29.92 mm Hg or 1013.25 mbar).

Passing 10.000 ft switch off Landing Lights.

Before reaching tuned altitude (flight level) ALT CPT will be displayed in the PFD, after reaching final altitude, indication will change to ALT HOLD.



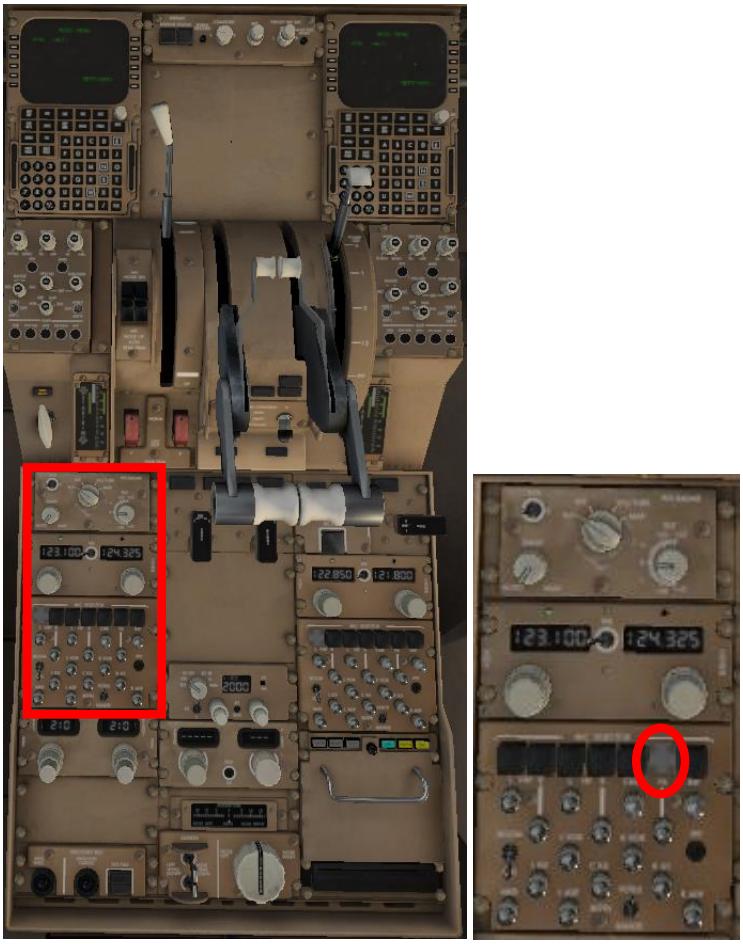


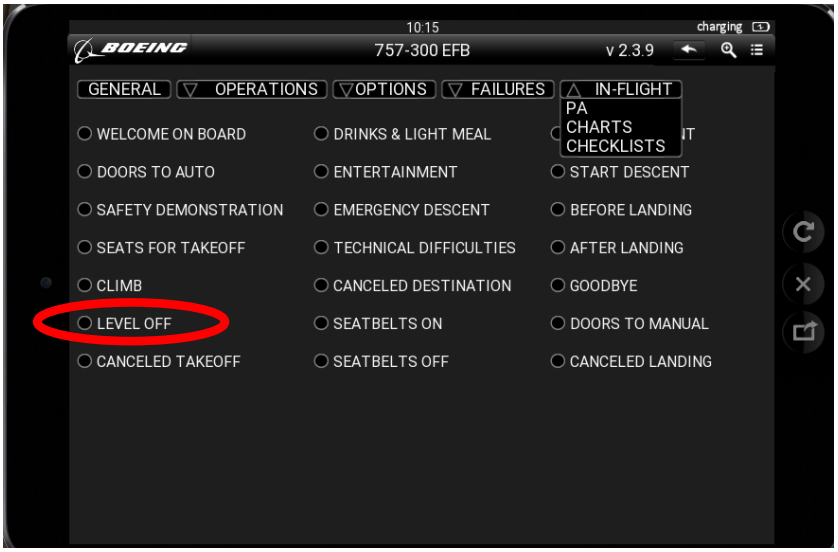
H.3. Initial Altitude

Switch off seat belt signs at final altitude.

Announcement: LEVEL OFF

Call announcement page from radio panel.

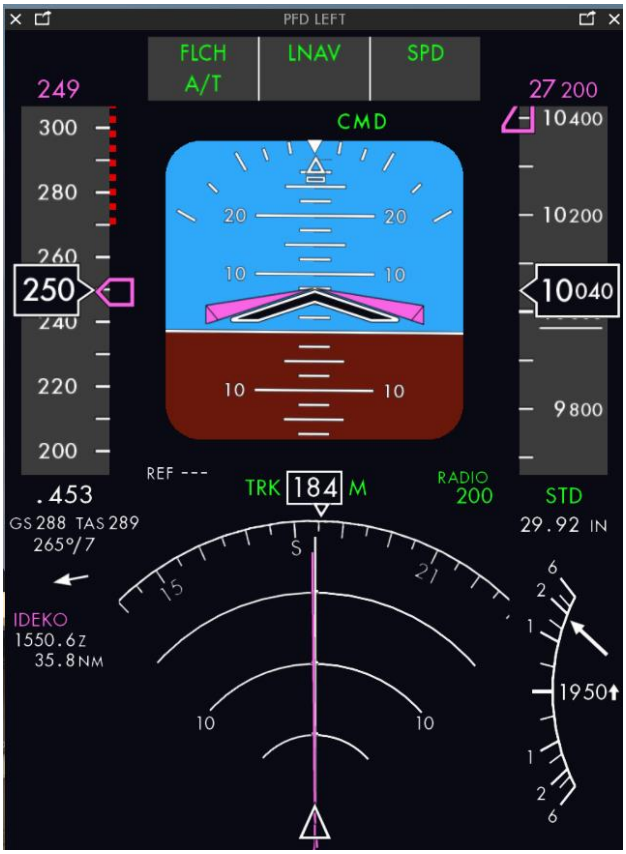




H.4. Flight Level Change

For flight ldvel change tune new altitude at glareshield and click FL CH.

New final altitude and climb mode will be indicated in the PFD.



Autopilot will control speed now:

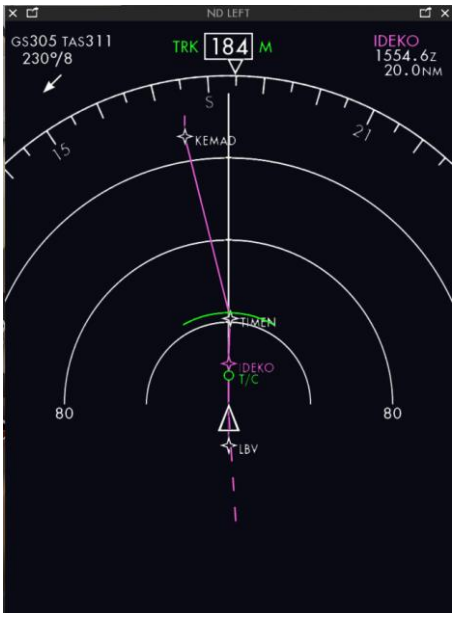
,

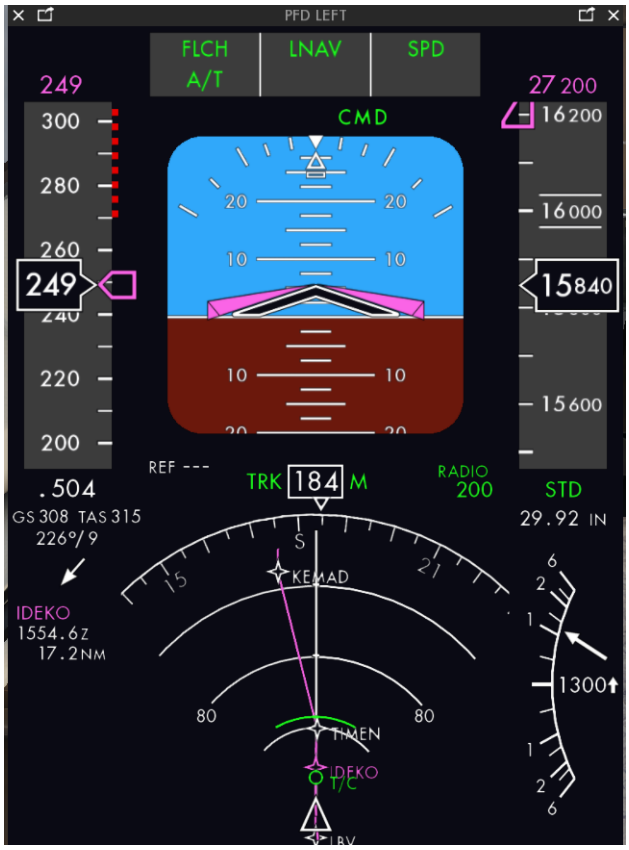
VNAV Button light goes out.

Follow ATC instructions until final altitude.

Check Flight progress on the FMC PROG page.

Next waypoints are shown in the ND and PFD in white color, following waypoints in magenta, green arc shows the point when final altitude will be reached (Top of Climb – T/C).





Throttle will be retracted at T/C automatically.

Primary flight Display shows managed parameters:

Speed, Vertical Navigation/changes of FL, Lateral Navigation, and autopilot to be active.

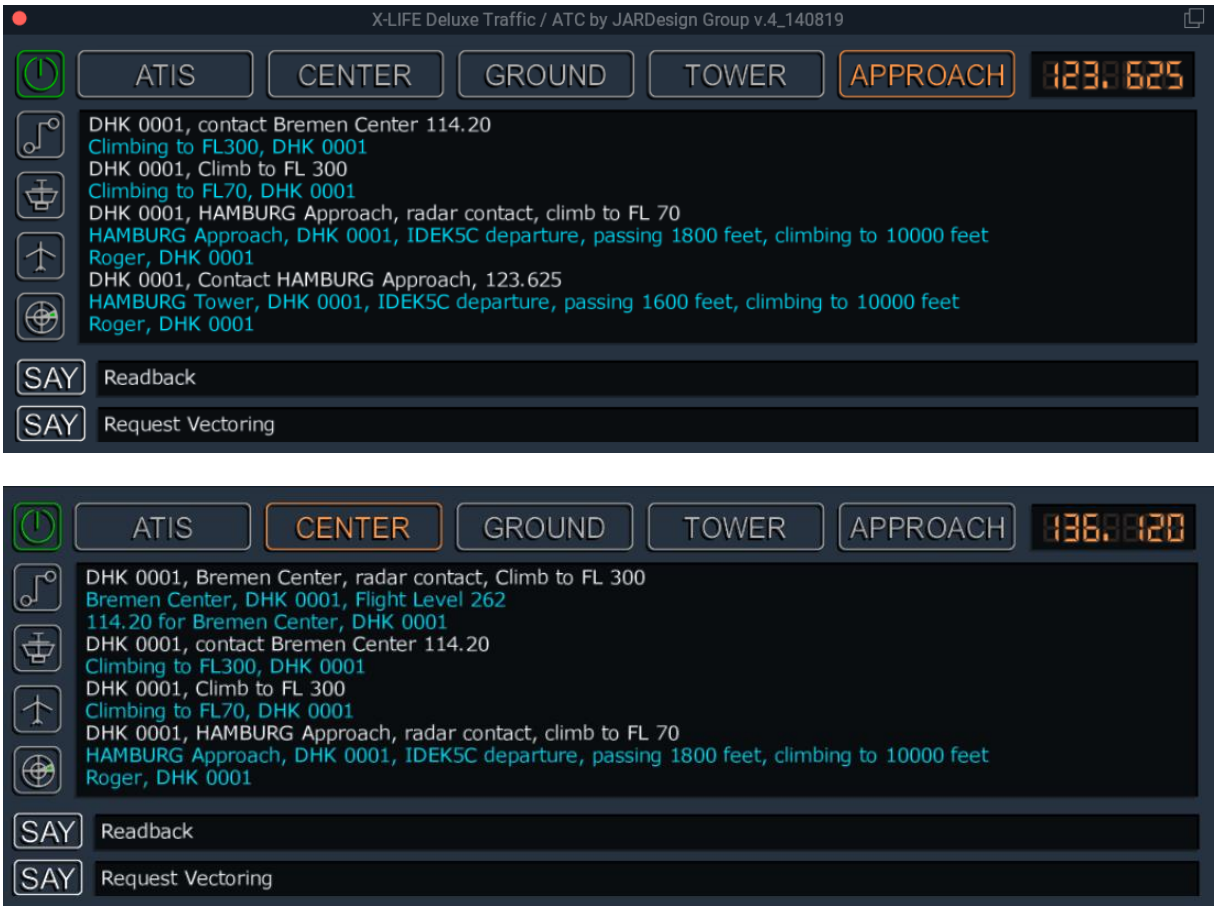
I. Cruise Phase

Cruise-Phase starts at Top of Climb (T/C).

Cruise Flight Modus (CRZ) will be activated automatically.

Thrustlimit as programmed with the Thrust Mode Select Buttons will be effective.

WX-Radar as requiredf; Wing Landing Lights OFF


X-LIFE Deluxe Traffic / ATC by JARDesign Group v.4_140819
ATIS
CENTER
GROUND
TOWER
APPROACH
123.625
DHK 0001, contact Bremen Center 114.20
Climbing to FL300, DHK 0001
DHK 0001, Climb to FL 300
Climbing to FL70, DHK 0001
DHK 0001, HAMBURG Approach, radar contact, climb to FL 70
HAMBURG Approach, DHK 0001, IDEK5C departure, passing 1800 feet, climbing to 10000 feet
Roger, DHK 0001
DHK 0001, Contact HAMBURG Approach, 123.625
HAMBURG Tower, DHK 0001, IDEK5C departure, passing 1600 feet, climbing to 10000 feet
Roger, DHK 0001
SAY
Readback
SAY
Request Vectoring

ATIS
CENTER
GROUND
TOWER
APPROACH
136.120
DHK 0001, Bremen Center, radar contact, Climb to FL 300
Bremen Center, DHK 0001, Flight Level 262
114.20 for Bremen Center, DHK 0001
DHK 0001, contact Bremen Center 114.20
Climbing to FL300, DHK 0001
DHK 0001, Climb to FL 300
Climbing to FL70, DHK 0001
DHK 0001, HAMBURG Approach, radar contact, climb to FL 70
HAMBURG Approach, DHK 0001, IDEK5C departure, passing 1800 feet, climbing to 10000 feet
Roger, DHK 0001
SAY
Readback
SAY
Request Vectoring

After clearance for a new FL, tune new altitude at glareshield and click FL CH at glareshield.

ALT HLD light and SPD light go out, FL CH goes on, PFD shows ‘FL CH’.

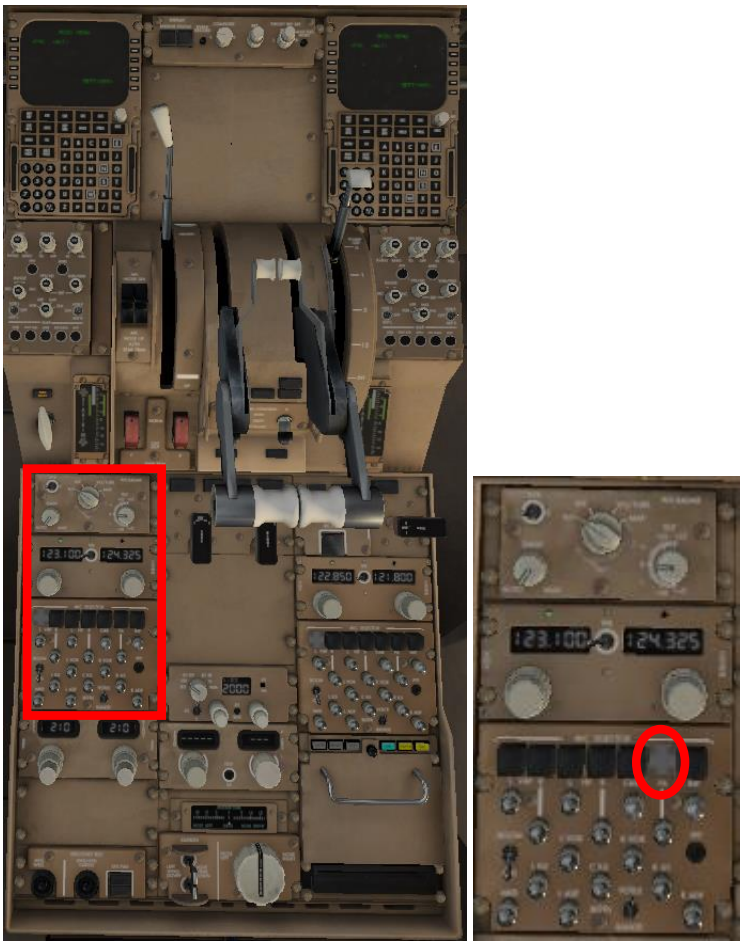
If you fly without X-Life, click here!

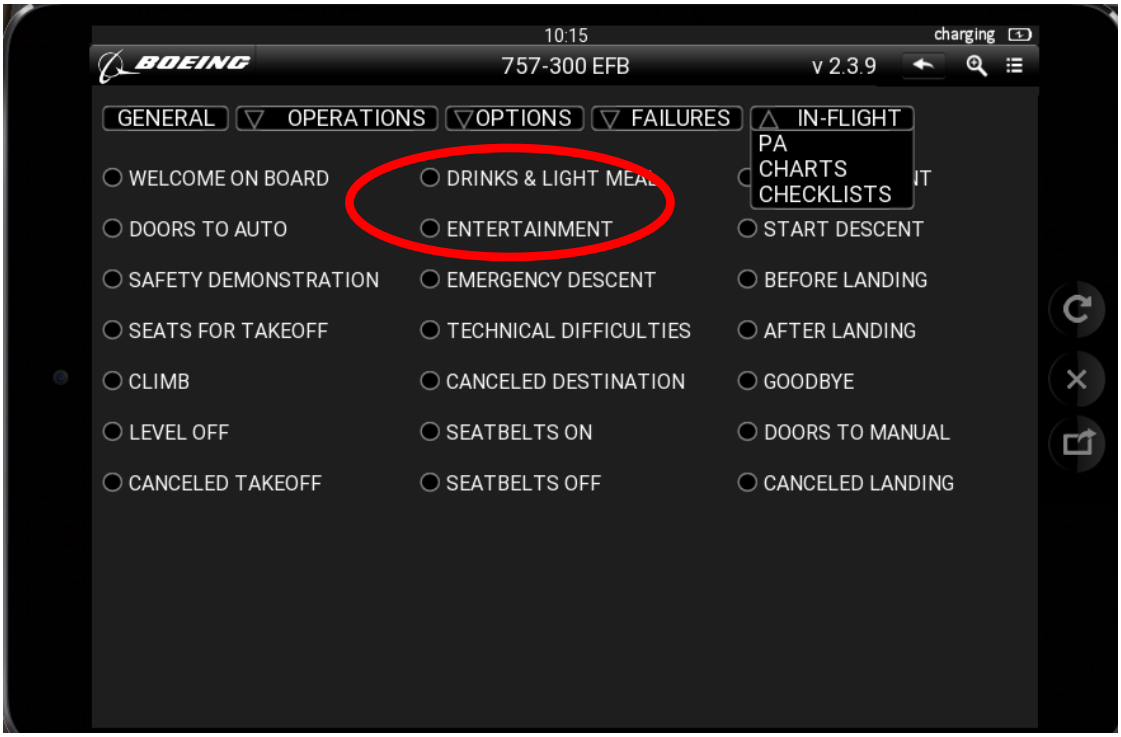
On your flight from EDDH to EDDS you will be guided by BREMEN CENTER and LANGEN RADAR.

You now have the opportunity to ask for a new FL, and to report Top of descent (T/D).

I.1. Cabin Announcements

DRINKS & LIGHT MEAL, ENTERTAINEMENT, as you wish.

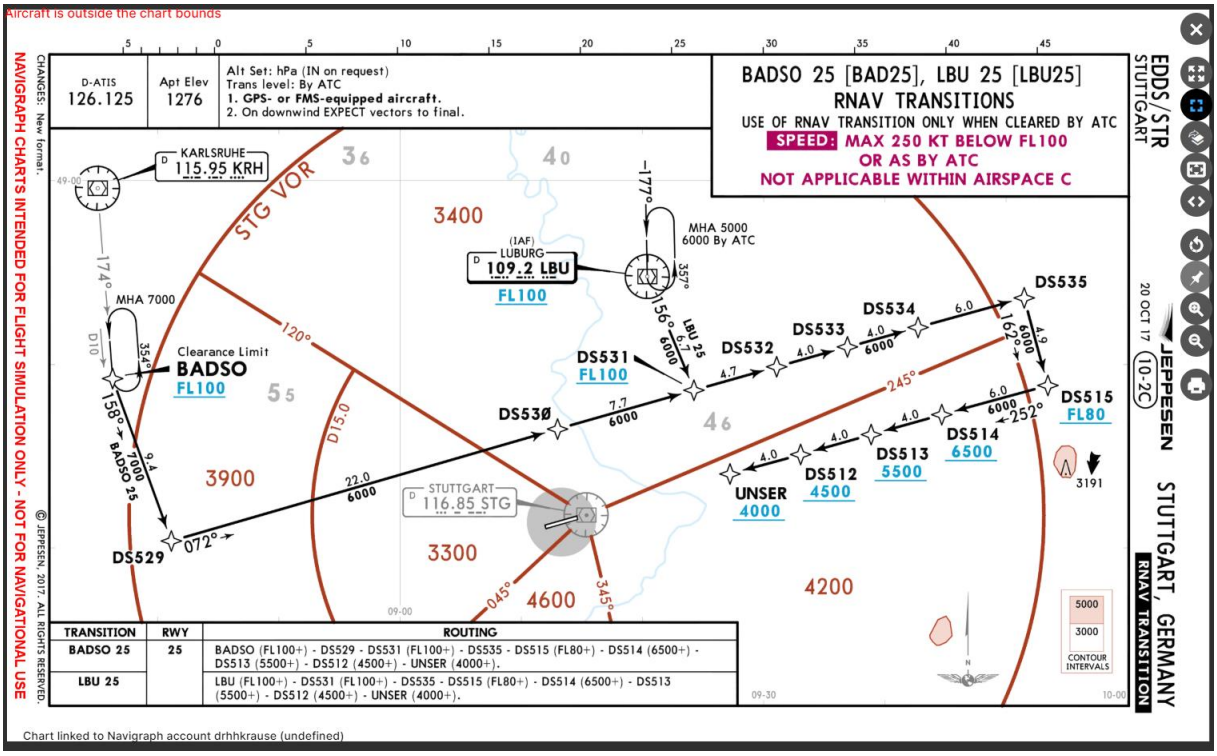




I.2. Programming Holding Pattern

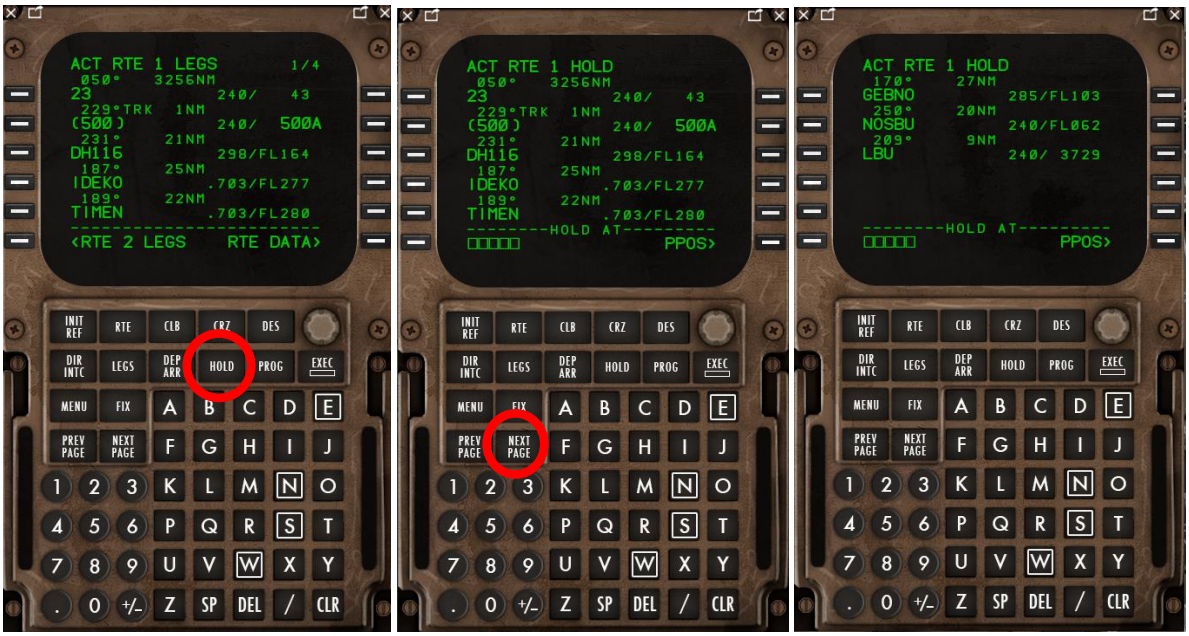
Example: Holding pattern at LBU.

(see Navigraph chart).



Following restrictions can be read from the chart: Heading of pattern, minimum altitude.

Call the LEGS-Page of FMC, click HOLD. Switch to the page showing LBU:

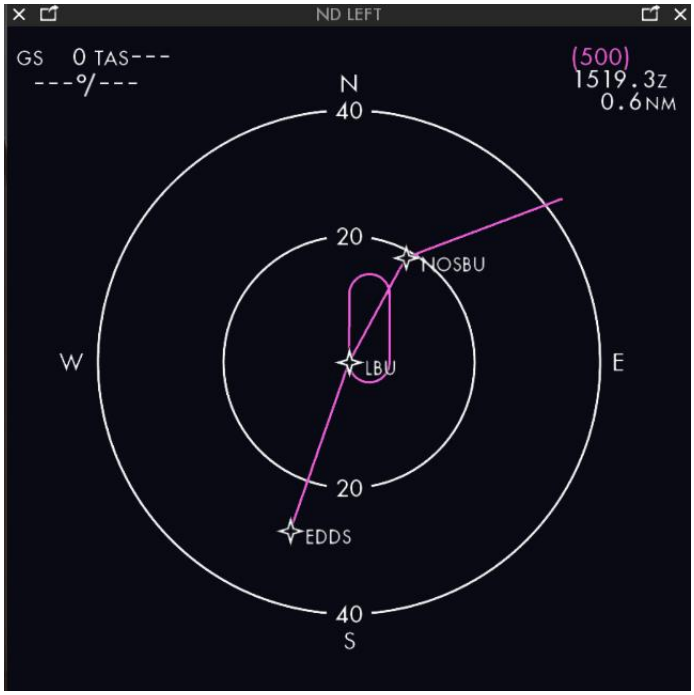


Copy LBU and paste into line 6 with LSK 6.

Inbound course (in direction to LBU) is 177°, outbound course (away from LBU) is 357°. Coming from north, turn left at LBU capturing outbound course (357°). Inbound course (177°) with leftturn at LBU has to be entered as ‚177/L' into the FMS scratchpad (line 3 at the left – LSK 3).

Time for 1 leg ('leg time') is 1 minute, normally, but is at your choice (LSK 4)

Click EXEC and return to the legs page. You now find there the entry HOLD LEFT LBU which means that you have programmed a left turn holding pattern at LBU. This pattern will be displayed in the ND.



J. Descent

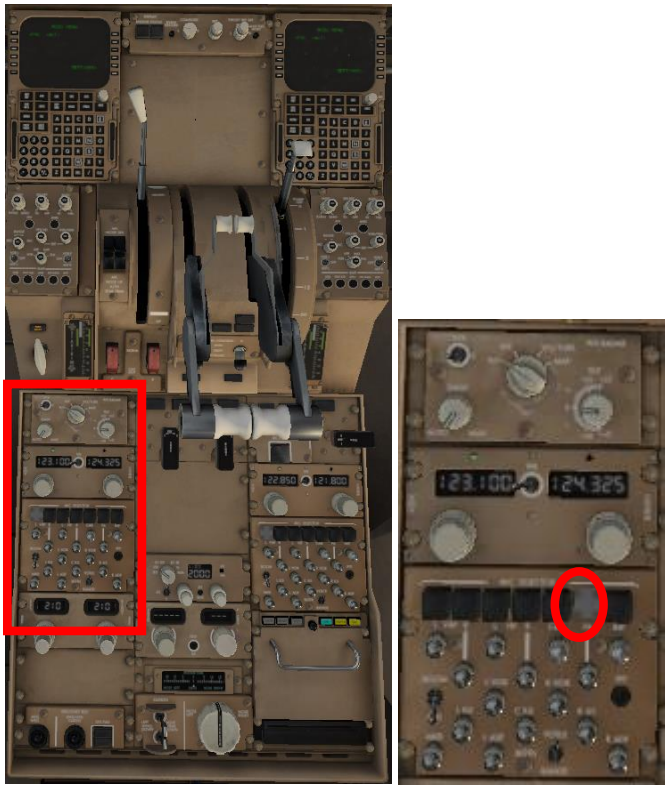
Descent starts at the Top of Descent (T/D).

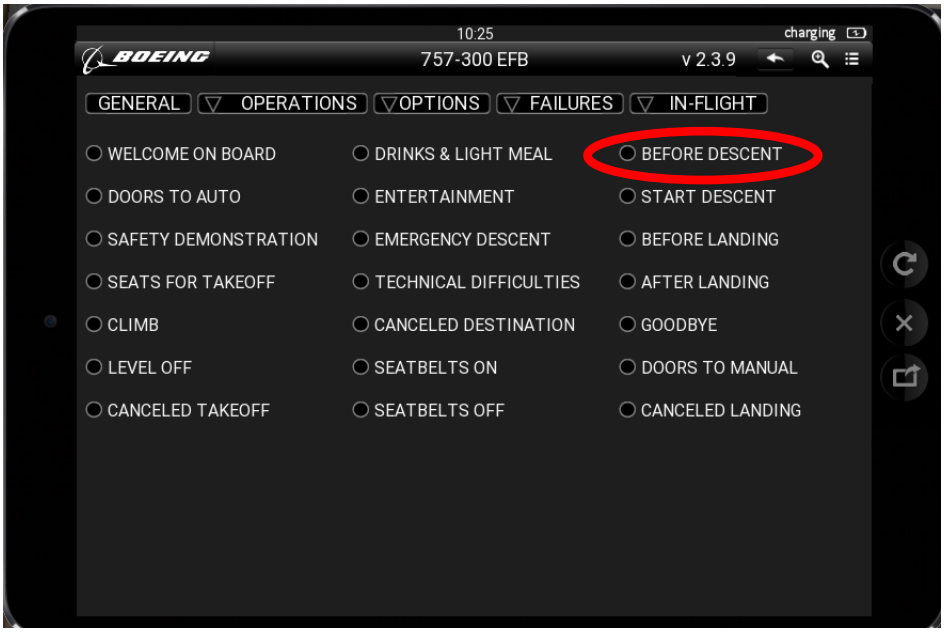
J.1. Descent preparation

J.1.1. Cabin Announcement

Announcemnet: BEFORE DESCENT

Call the announcement page from the radio panel.

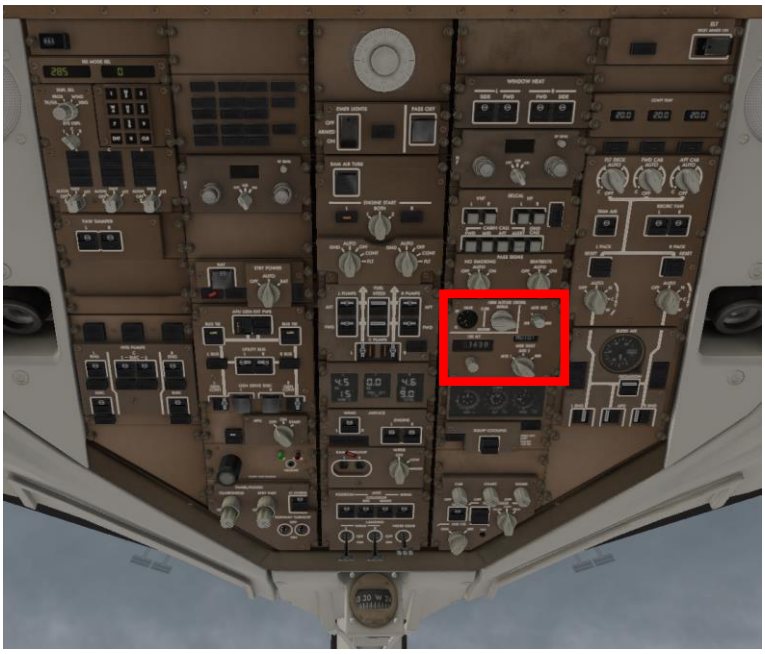




J.1.2. Checks

Prepare descent 40 nm before reaching T/D.

Check cabin pressur setting at overhead panel.



Check EICAS informations.

J.1.3. Transition Level

ATC or ATIS will tell you transiitoin level.

Click DES at the FMC. The page ECON DES 3/3 apperas. Now click on LSK 5R ‚FORECAST'.

Enter the transition level into line 1 (LSK 1L).

Passing this level, QNH has to be changed from standard to actual barometric pressure.

J.1.4. **Communication with ATC** (if you do not fly with X-Life, click wenn Sie ohne X-Life, click here)

Click Report TOD

You will be informed about new Flight Level, STAR, and die active runway.

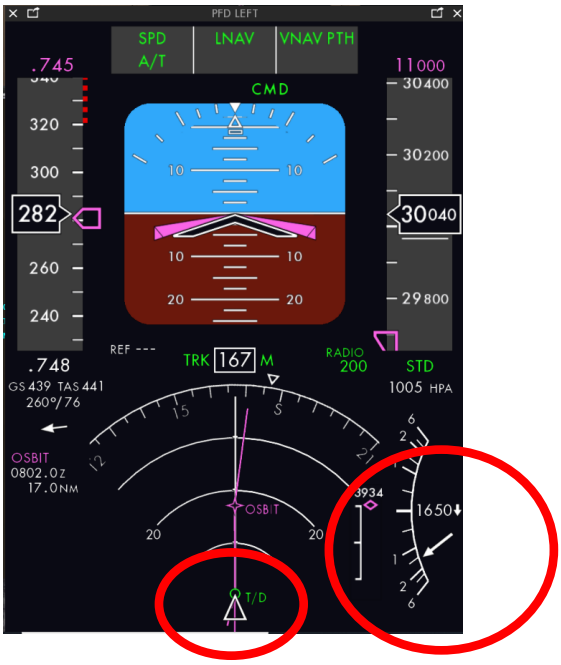
This is the RW 25 with STAR BADS2A, today.

Confrim with Readback and tune new FL at glareshield.

J.2. Performing Descent

J.2.1. At the Top of Descent (TOD or T/D)

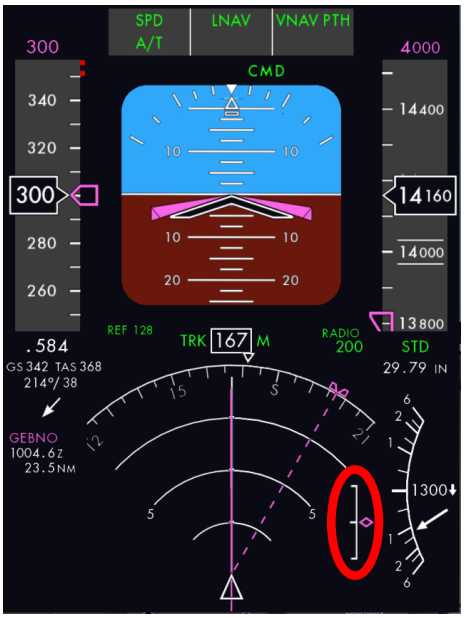
Passing the T/D, descent will start automatically.



If not, it may be the case, you are flying at a FL not prescribed in your descent profile. ALT HOLD will be indicated then.

In this case: Enter the FL (as tuned in the glareshield) into the PROG page of the FMC. Then activate VNAV for beginning (or continuing) descent.

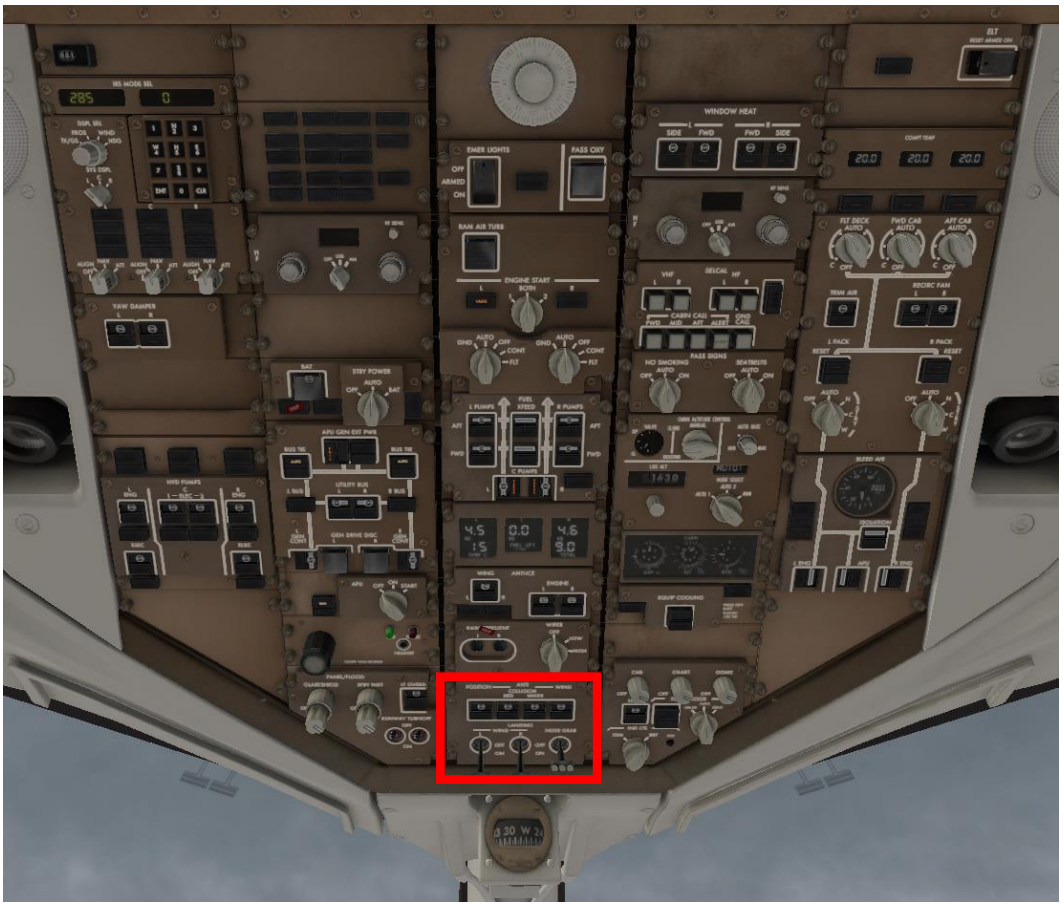
The level of your plane in respect to the prescribed flight plan descent profile is indicated in the ND:



If you want to start your descent within < 50 nm before the T/D, set the value of your actual altitude into the FMC PROG page. Then call DES and click DES NOW (LSK 6), then EXEC.

Perform descent at > 50 nm before T/D with FL CH option.

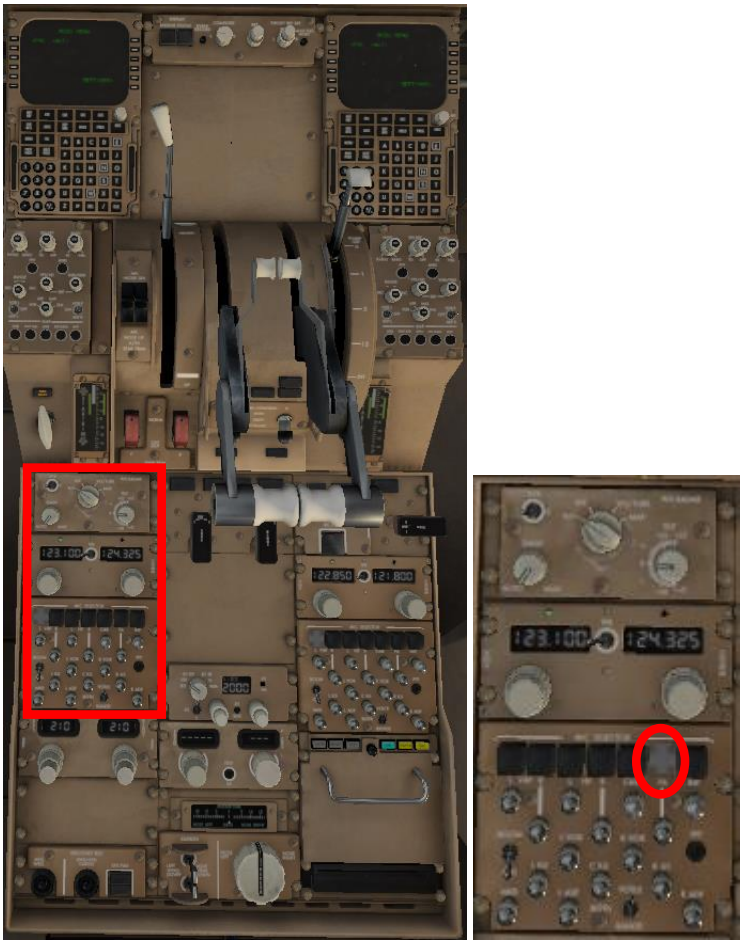
Switch on Landing Lights at FL 100.

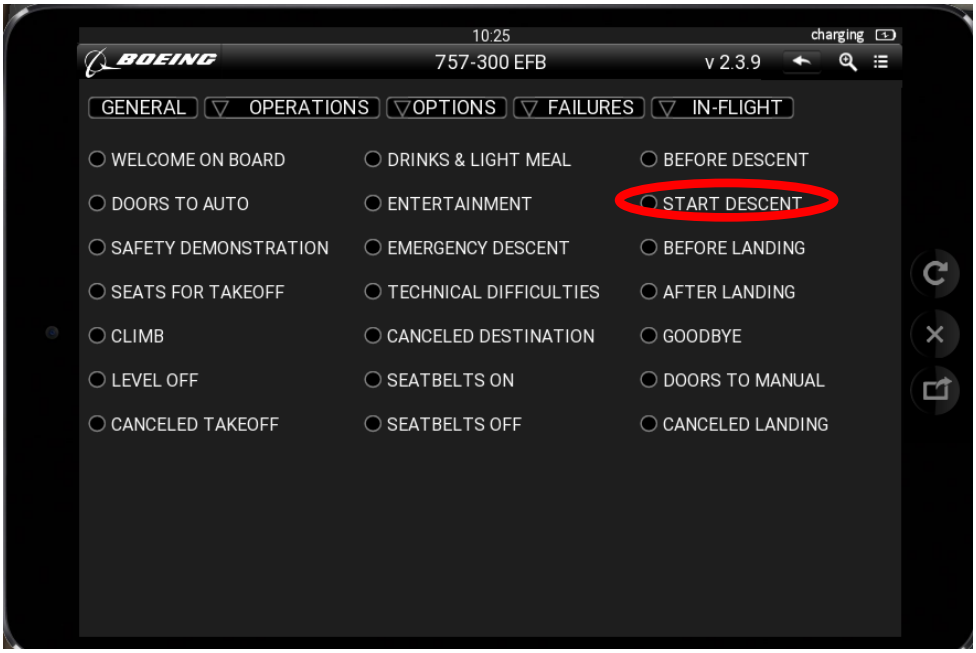


J.2.2. Cabin Announcement

Announcement: START DESCENT

Call announcement page from from radio panel.





K. Approach

K.1. Preparation

K.1.1. Programming STAR and Arrival Runway (FMC)

Click FMC DEP/ARR and choose RW 25 and STAR BAD2A.

Click EXEC.

Check legs again. Jetzt muss die neue Flugroute überprüft werden:
Switch to PLAN at the EICAS-Panel and call the FMC LEGS-Page.

You can find there the last waypoint of your flight plan (which is LBU int this case). Here you can see the holding pattern, after that a discontinuity, then the waypoint BADSO, after this LBU again, then UNSER (beginning of the ILS approach), and EDDS 25 (our runway).

Check this route on the PFD/ND.

It does not make sense to fly to LBU first for a holding pattern, then to BADSO, then to LBU again. Therefore, delete first LBU and the holding pattern entry. You get a couple of discontinuities which must be deleted, too. Your new plan is from GEBNO via NOSBU, BADSO, and LBU to UNSER and to the ILS approach from UNSER.

A new T/D has been created. Until passing this new T/D, the plane will maintain actual FL.

K.1.2. VREFs for Approach

VREF is the speed you have to fly at the runway threshhold with flaps 30°.

You have to calculate Vref, which is determined by the gross weight at landing:

$GW_{Landing} = GW_{actual} – (Fuel\ Weight_{actual} – Fuel\ Weight_{landing})$

You can read actual gross weight and actual fuel weight from the FMC PERF INIT page.

Expected fuel weight at landing can be read from the FMC PROG page in the line ‘EDDS’.

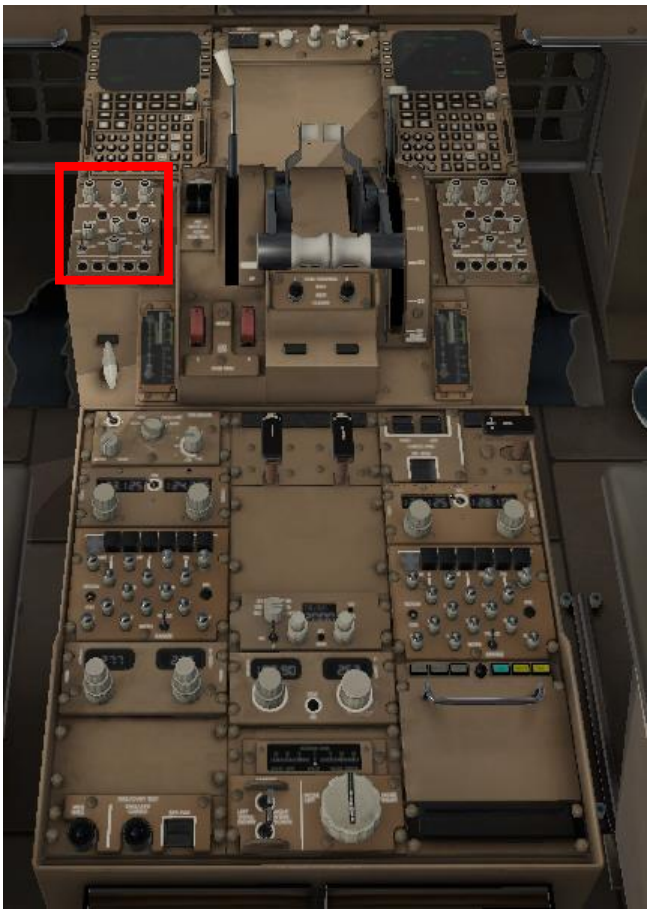
Expected gross weight at landing will be 75.9 – (11.3 – 10.3) = 74.9

Enter this value into the APPROACH REF line with LSK 1L.

FMC now calculates VREFs for flaps 20, 25, and 30.

Paste the value for flaps 30 (Landing Konfiguration) into the line FLAP/SPEED

Tune the APPR REF Speed at the DCP and confirm with mit SET; value will be displayed in the PFD; values for +40 and +80 will be calculated and displayed by clicking SET repeatedly.



With decreasing speed, the entries of flaps position and speed are displayed in the PFD.

K.1.3. Autobrakes

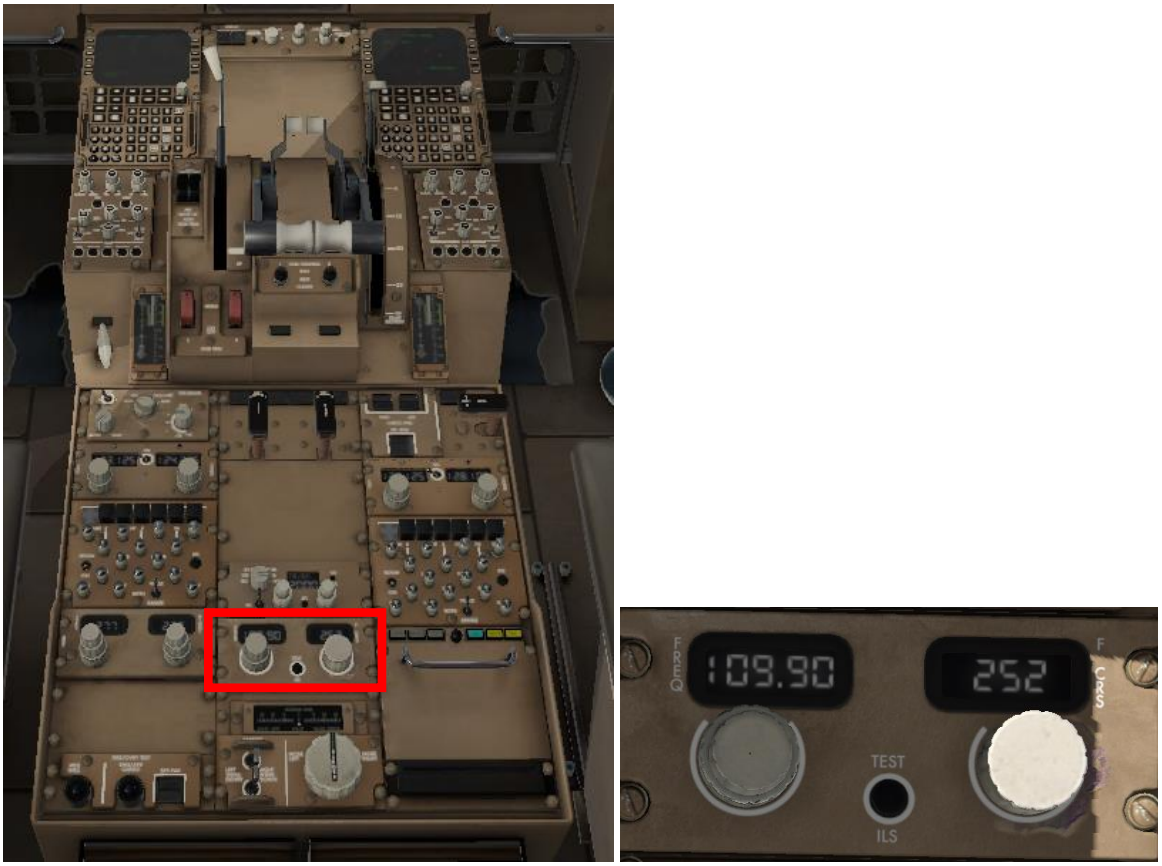
Switch ‚AUTOBRAKES' to MAX:

K.1.4. Programmierung Final Approach

Go to FMC INIT REF page, thenn via INDEX to APPROACH

Check ILS/RW, and front course to be correct.

Enter ILS frequency and den front course at the Center Pedestal/ILS Panel; display is dotted first, will show numbers by tuning the wheels (shortly before arrival).

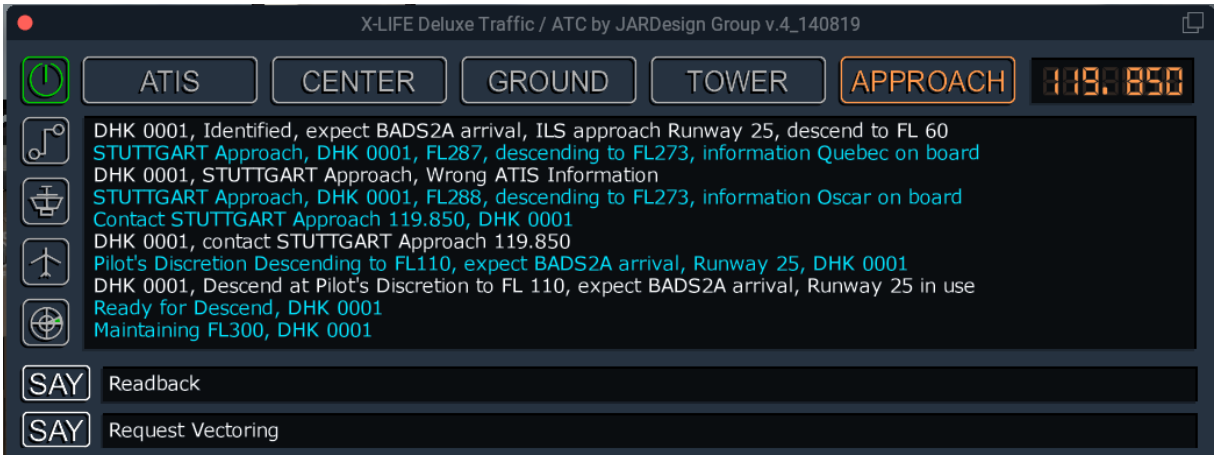


ATC switches to Stuttgart APPROACH weiter.

Update QNH.

K.1.5. **Communication with ATC** (if you do not fly with X-life, click here)

APPROACH instructs FL (FL 60) an.



Tune new FL at Glareshield.

K.2. Performing Approach

TOD klicken Sie auf FL CH am Glareshield, um den Sinkflug fortzusetzen.

Check course of plane with PFD.

Ignore magenta colourd diamonds in the PFD until end of STAR. Then only these diamonds belong to the relevant ILS signal.

Try to maintain a 3 ° glide slope.

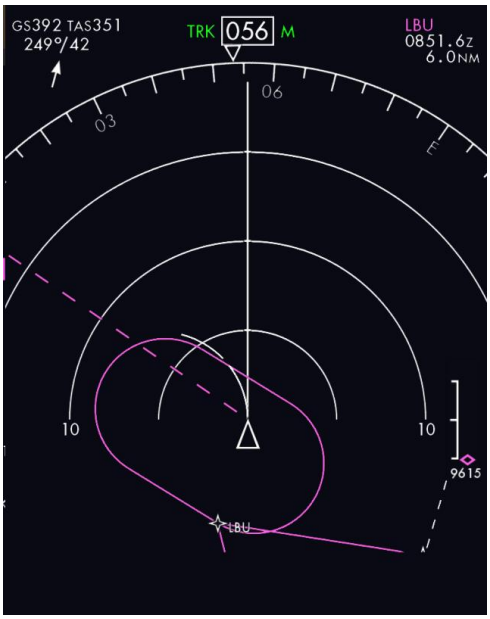
Calculate distnace for this by: actual altitude x 3/1000 + 10.

If sinkrate should not be sufficient, enter new sinkrate (VS) at glareshield.

After reaching new FL, actiavte VNAV again.

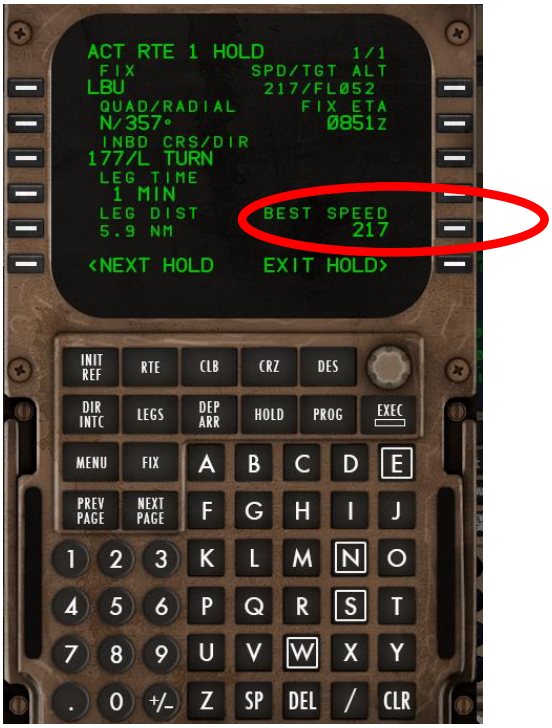
L. Flying Holding Pattern

As there is a holding pattern at LBU, plane will fly along this.



Click HOLD on FMC.

FMC shows ‚Best Speed', tu be enteres at glasreshield.



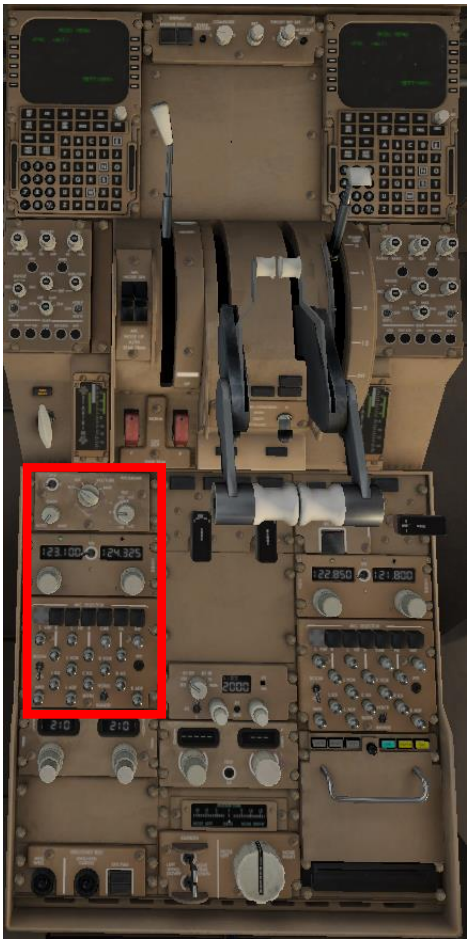
Leave holding pattern with LSK 6R (EXIT HOLD).

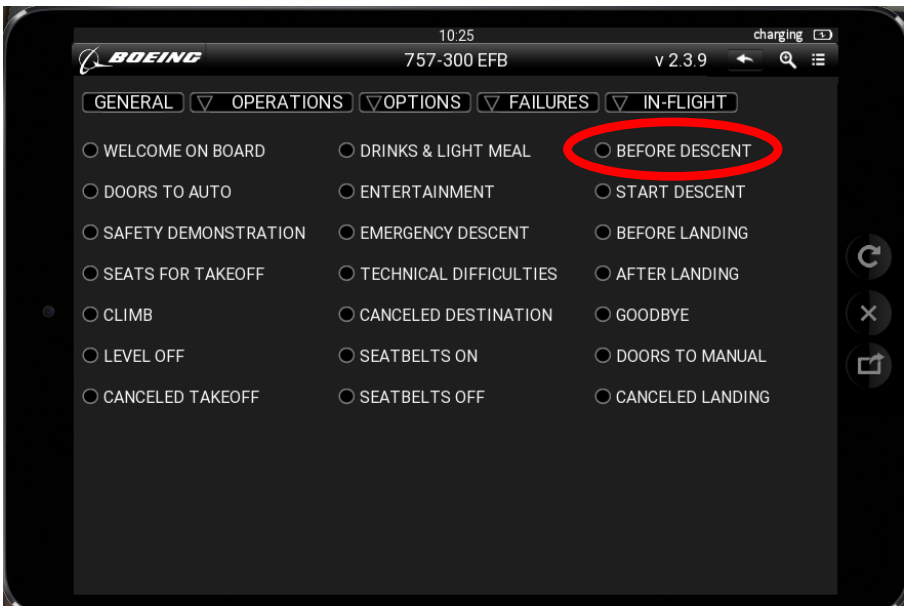
M. Landing

Approach phase starts at the 1st waypoint of your STAR.

M.1. Cabin Announcement (Before descent)

Call announcemnet page from radio panel.





M.2. **Communication with ATC** (if you fly without X-Life, click here)

ATC tells you new altitude (4000 ft), actual QNH (1013), and Transition Level (FL 50).

M.3. **Landing clearance**

Together with the landing clearance you are requested to inform ATC as soon as ILS glide slope and localizer are captured.

We leave holding pattern now. ‚EXIT ARMED' will be displayed in FMC.

Reduce speed to speed corresponding to ‚Flaps UP' Speed by entering this value at the MCP.

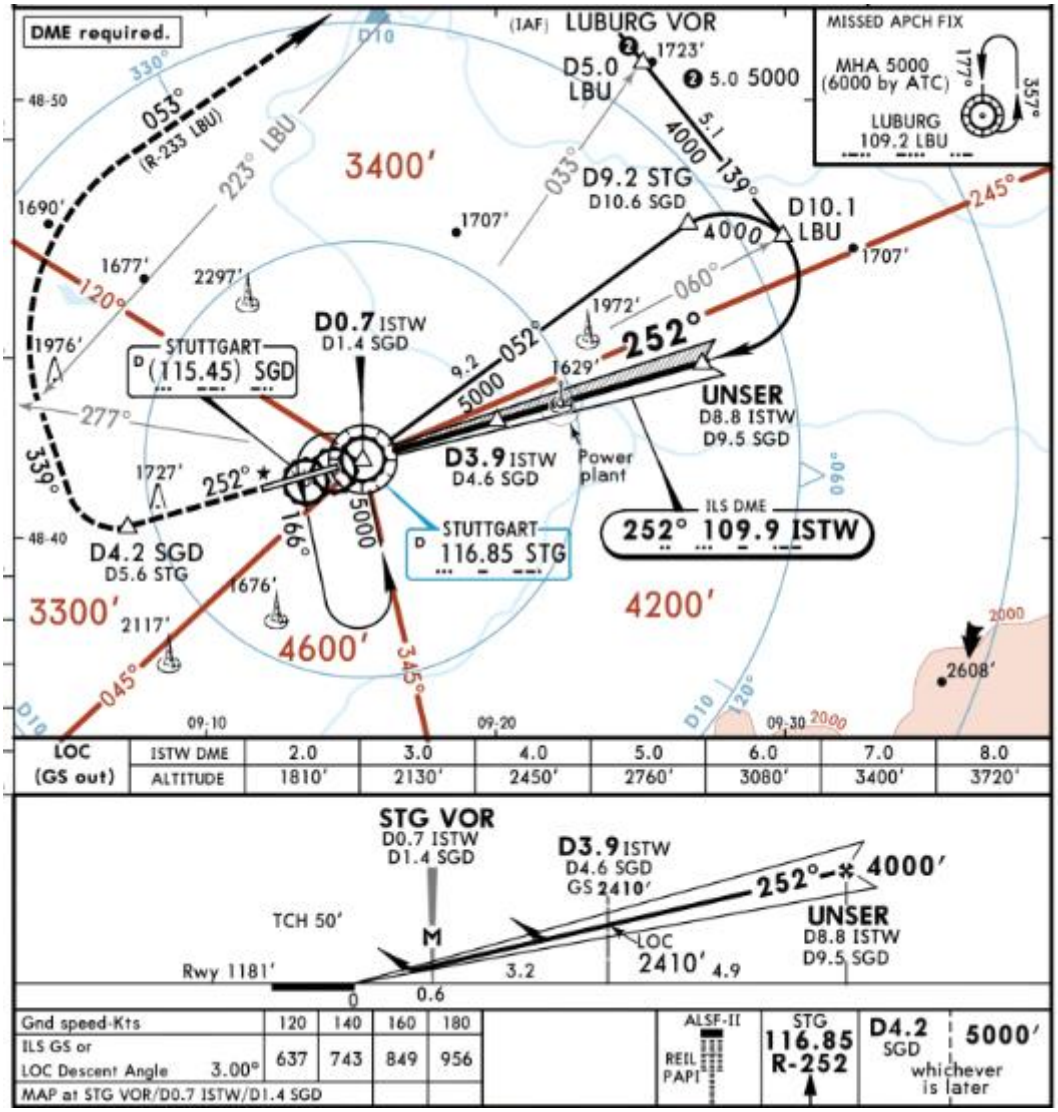
This is the optimum maneuvering speed for this flaps position.

Set flaps as necessary and adjust speed.

M.4. ILS (Glideslope and Localizer) – Autoland ILS

Plane will pass from LBU to UNSER; we expect ILS signal there.

Altitude at UNSER should be 4000 ft (see Navigraph chart).



Enter 4000 ft at Glareshield.

LOC and G/S diamonds appeare.

Activate all three CMDs at glareshield for higher precision.

APPR switch prepares FMC for capturing Glide slope (G/S) for pitch and Localizer (LOC) for roll.

LOC can be captured at a deviation up to 120°; G/S up to 80°.

Approach Mode can be quitted by switching Off both F/Ds and all A/Ps or by activating the Goaround mode.

As soon as G/S is captured, ILSFfequency can no more be changed.

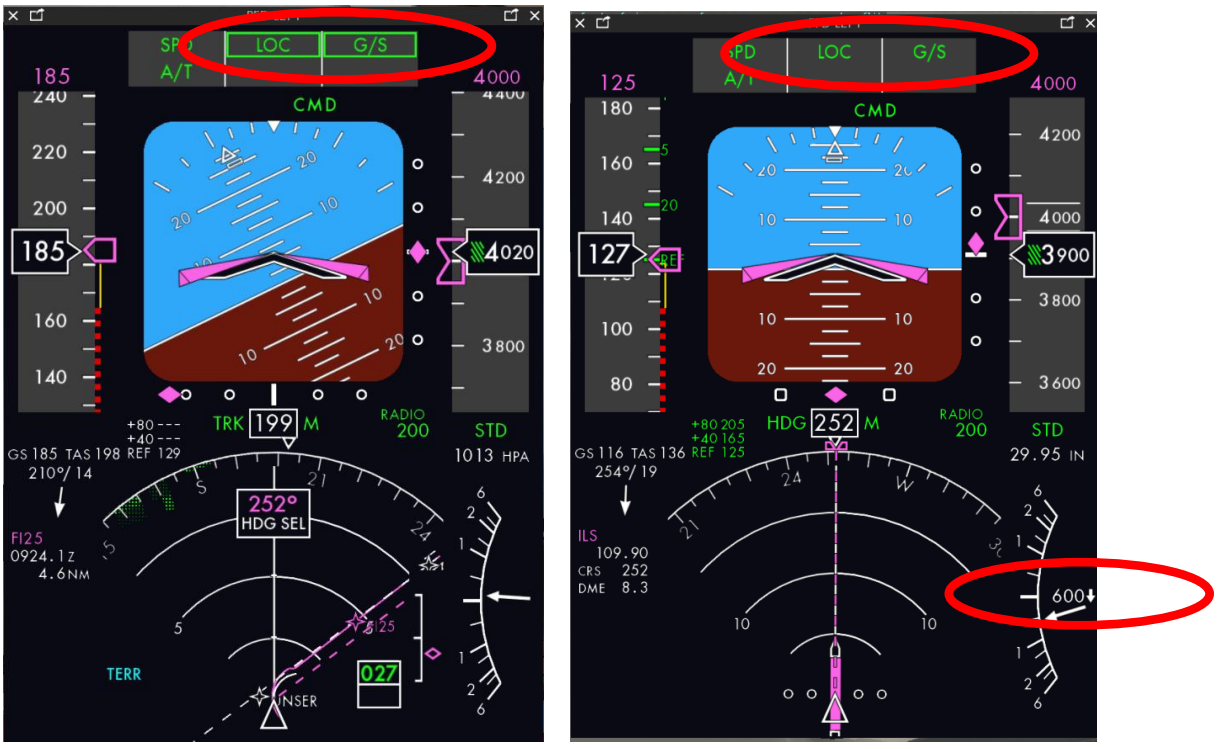
LOC Mode can be perfomred without G/S mode, too.

Switch to APP at the DCP.

PFD shows your plane in relation to the glied slope.

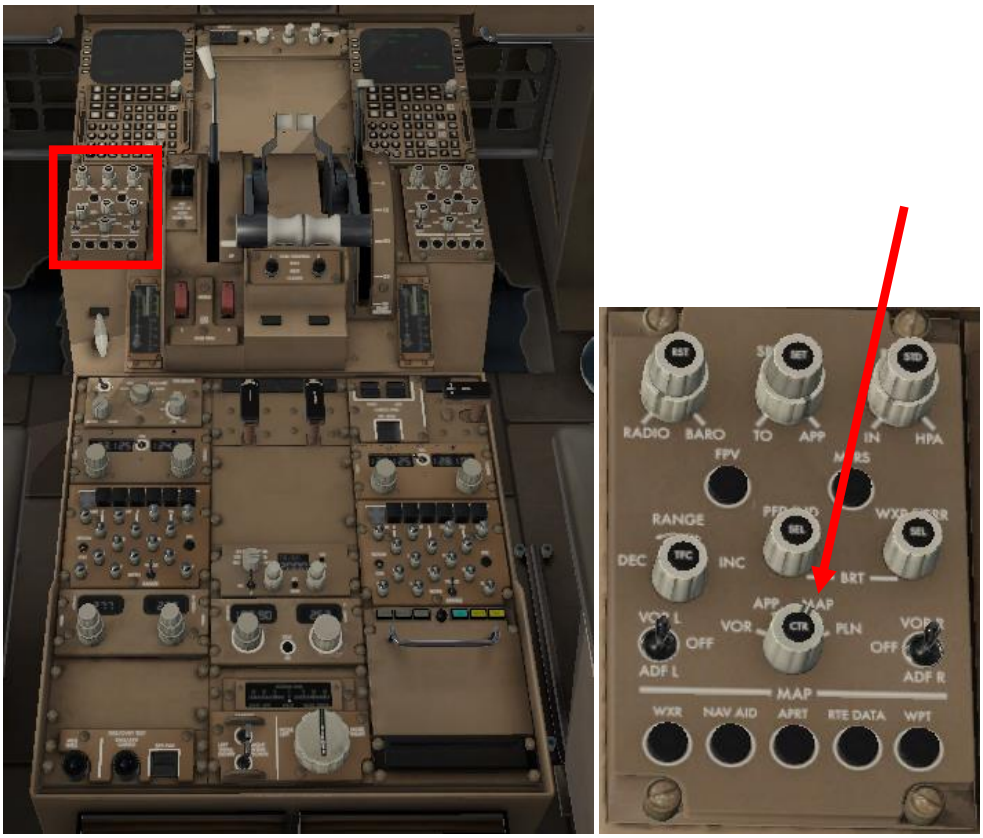
ILS frequency, front course, and distance to ILS sender are displayed, too.

In the PFD you can see ILS to be expected, and ‘established’, respectively.



LOC and G/S ‘to be ,established‘ or ,captured‘ show LOC und G/S unboxed.

Switch Navigation Display Mode back to MAP.



Tune goaraound altitude (5000 ft in our example) at glareshield, after gliedslope is captured.

After glideslope is captured, the goaround mode is armed automatically in order to provide sufficient thrust for this case (what can be seen in the EICAS display).

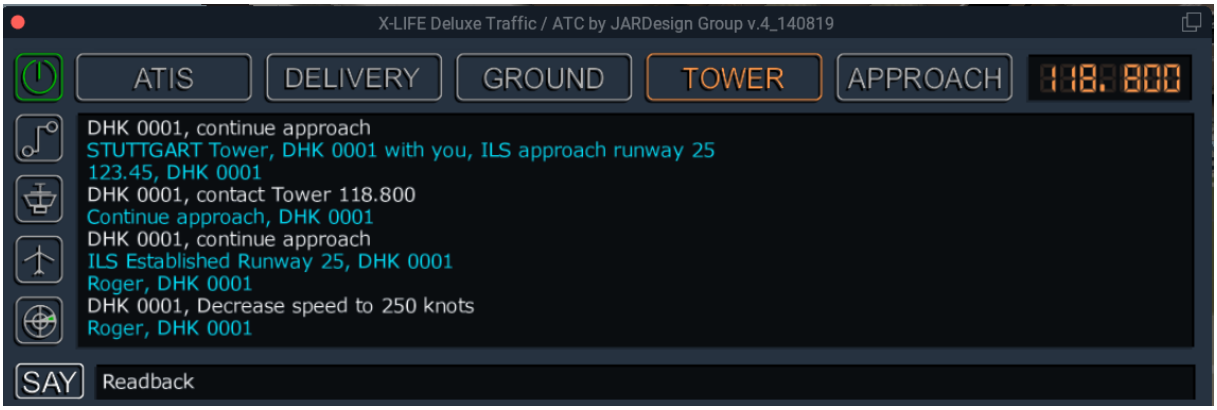
Die Autoland Status Annunciators (ASAs) zeigen, ob eine automatische Landung möglich ist.

M.5. Communicatin with ATC (if you fly withour X-Life, click here)

Tell ATC, that ILS is established.

You are requested to continue approach

and to contact TOWER



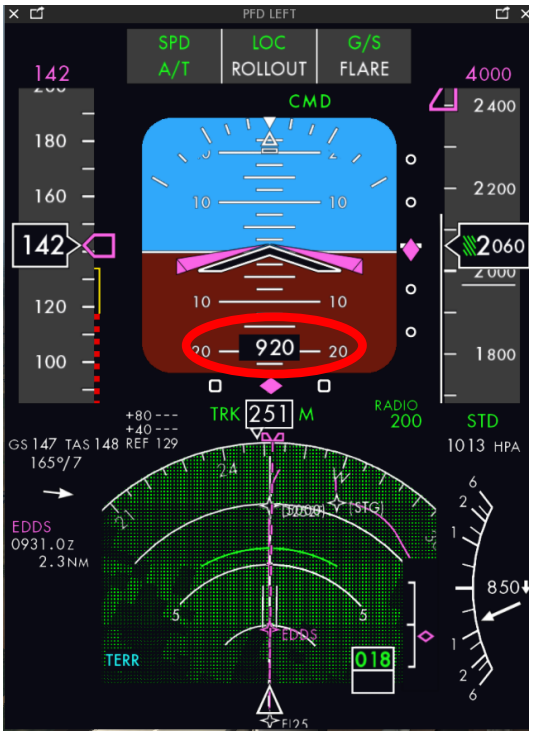
M.6. Flaps and gear

At 1.500 ft above ground: flaps 30°, gear down, speed brakes armed; tune speed to VREF + 5. CMDs are active, LAND 3 is indicated in the ASAs.

Rudder control is automatic now. Flare mode and rollout mode will be armed (corresponding display in PFD).

Runway comes in sight; the lamps left of RW (PAPI) show correct glide slope (outside lamps white, inside lamps red).

PFD shows altitude above ground.



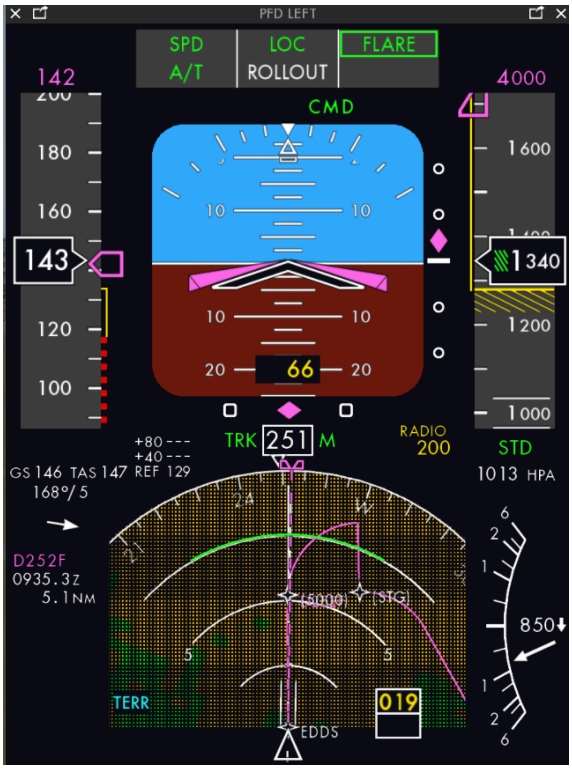
At 500 ft above ground plane goes direct to RW.

At 400 ft above ground, autopilot switches to LAND Mode. The number behind ‚LAND' indicates the number of active CMDs.

At 200 ft above ground runway symbol is shown in PFD.

M.7. Flare Mode

At 45 ft above ground autopliot switches to FLARE-Mode.



At 25 ft above ground, pull thrust levers to idle position if this does not happen automatically.

At 20 ft above ground pull nose up a bit.

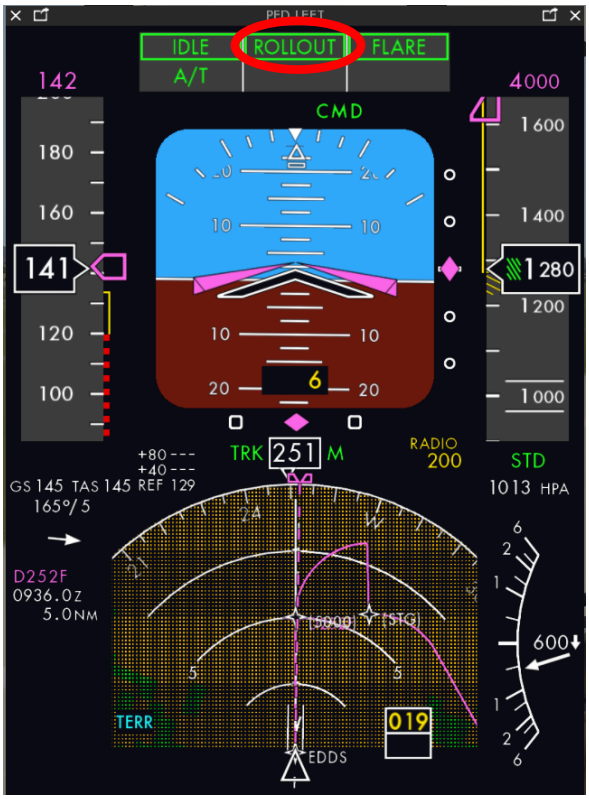
At 5 ft above ground rollout begins.; auto goaround option is blocked now.

M.8. Touchdown

At Touchdown: Pull nose down.

Autobrakesystem will slow the plane down.

Immediately after touchdown, PFSD shows ROLLOUT; The LOC-Signal will keep your plane along the middle of the RW.



N. After touchdown

Pull Throttle to IDLE,

activate reverse thrust (will be displayed in the EICAS display).

Switch off autopilots, retract flaps, switch transponder to standby.

Clear runway as soon as speed is slow enough.

N.1. Cleraing runway

Clear runway with next exit and taxi to gate.

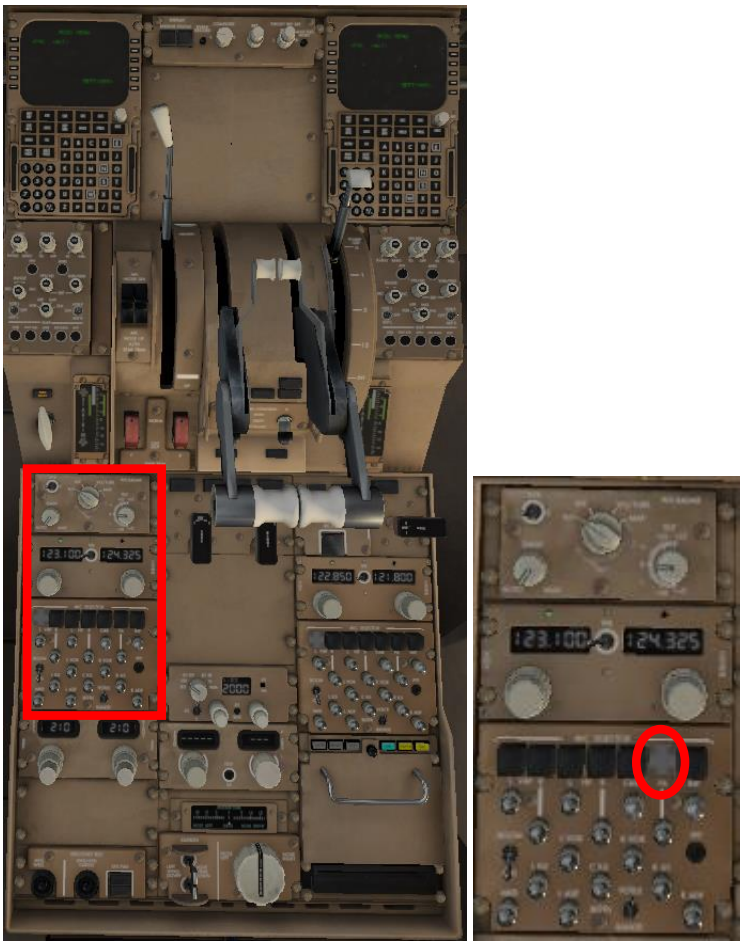
N.2. APU and APU-Generator

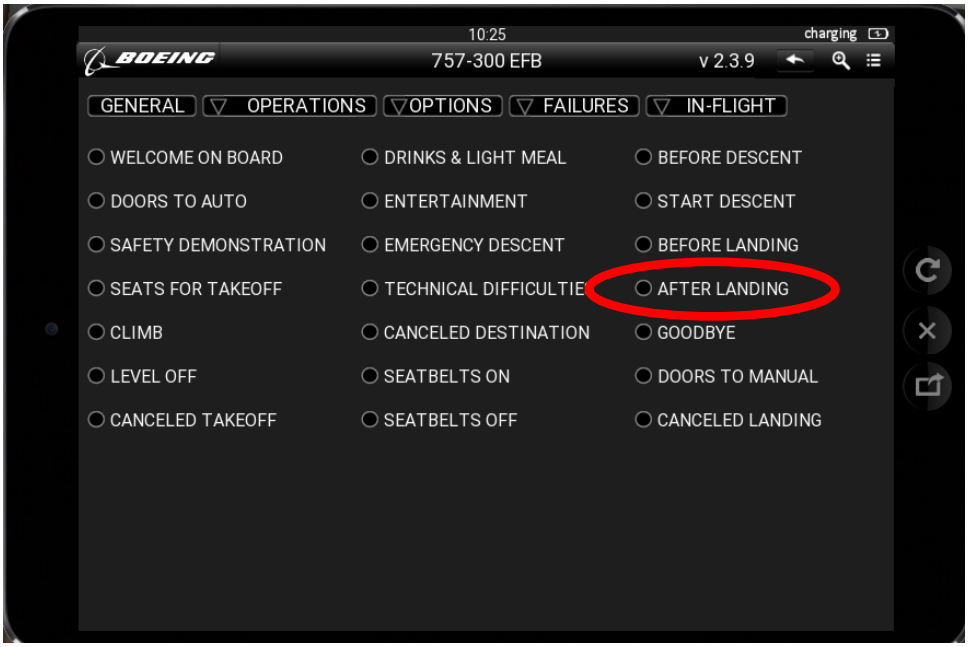
Switch on APU and APU generator for power supply after engines shutoff.

N.3. Cabin Announcement

Welcome your passengers (AFTER LANDING)

Call announcement page from radio panel.

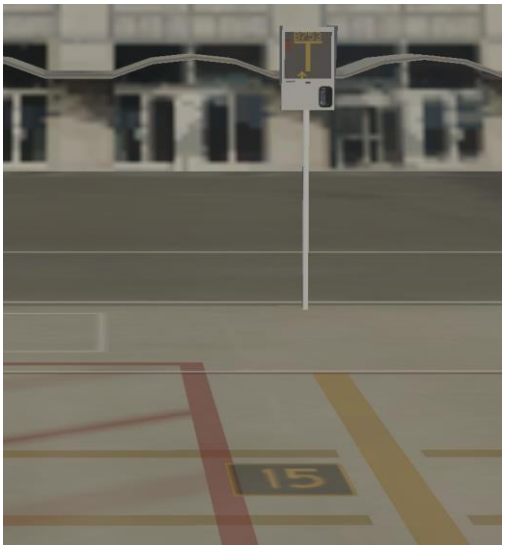




N.4. Taxiing to Gate/Parking Position

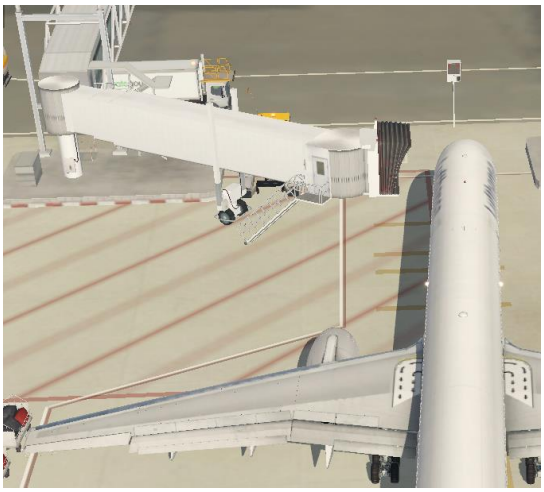
We roll to gate 15

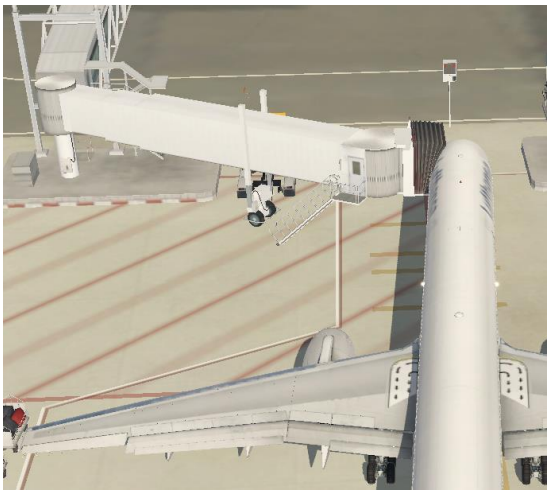
Docking system shows correct heading and distance.



Set parking brake and shut down engines by cuttin off fuel.

Hereafter, gate swivels to plane (autogate system).

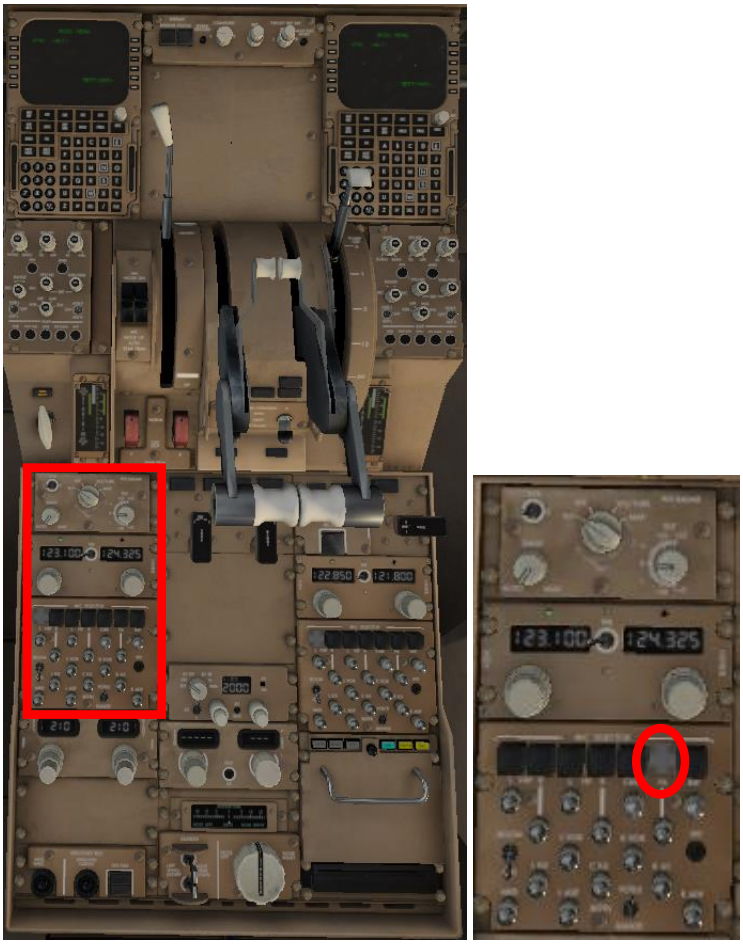


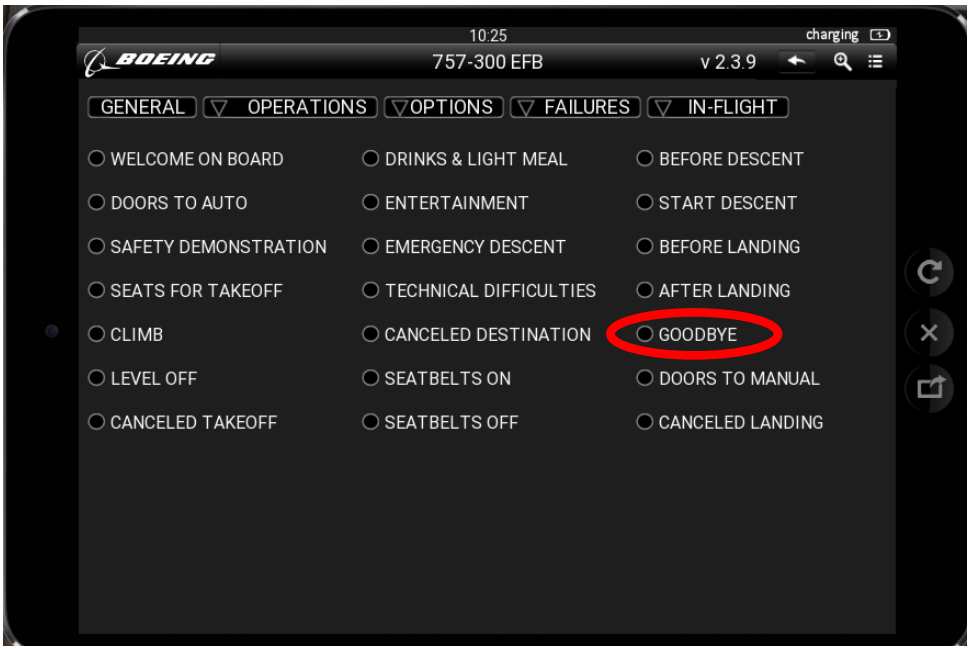


N.5. Cabin Announcement

GOODBYE

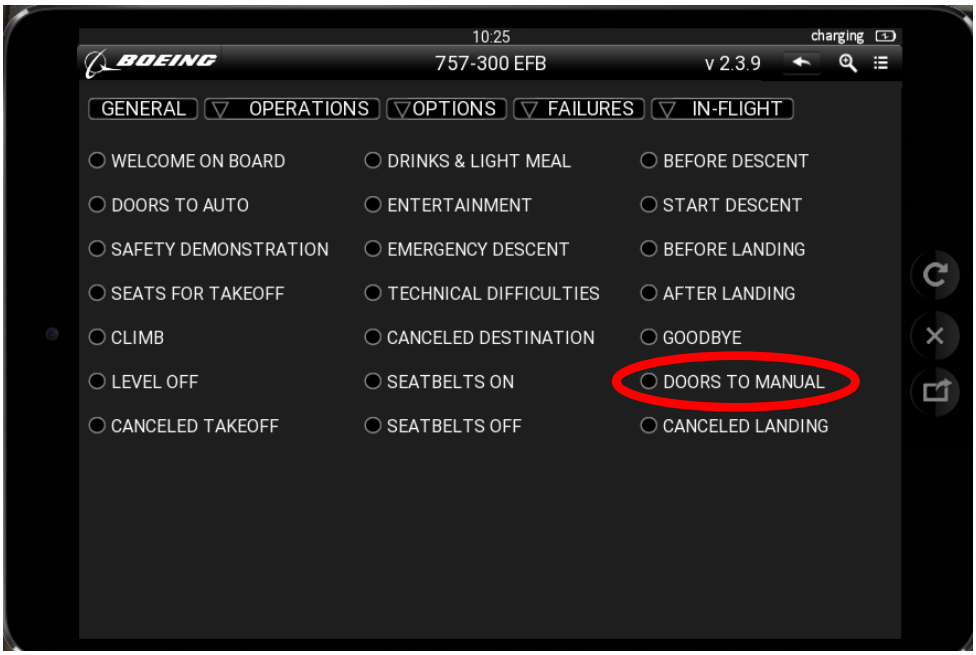
Call announcement page from radio panel.





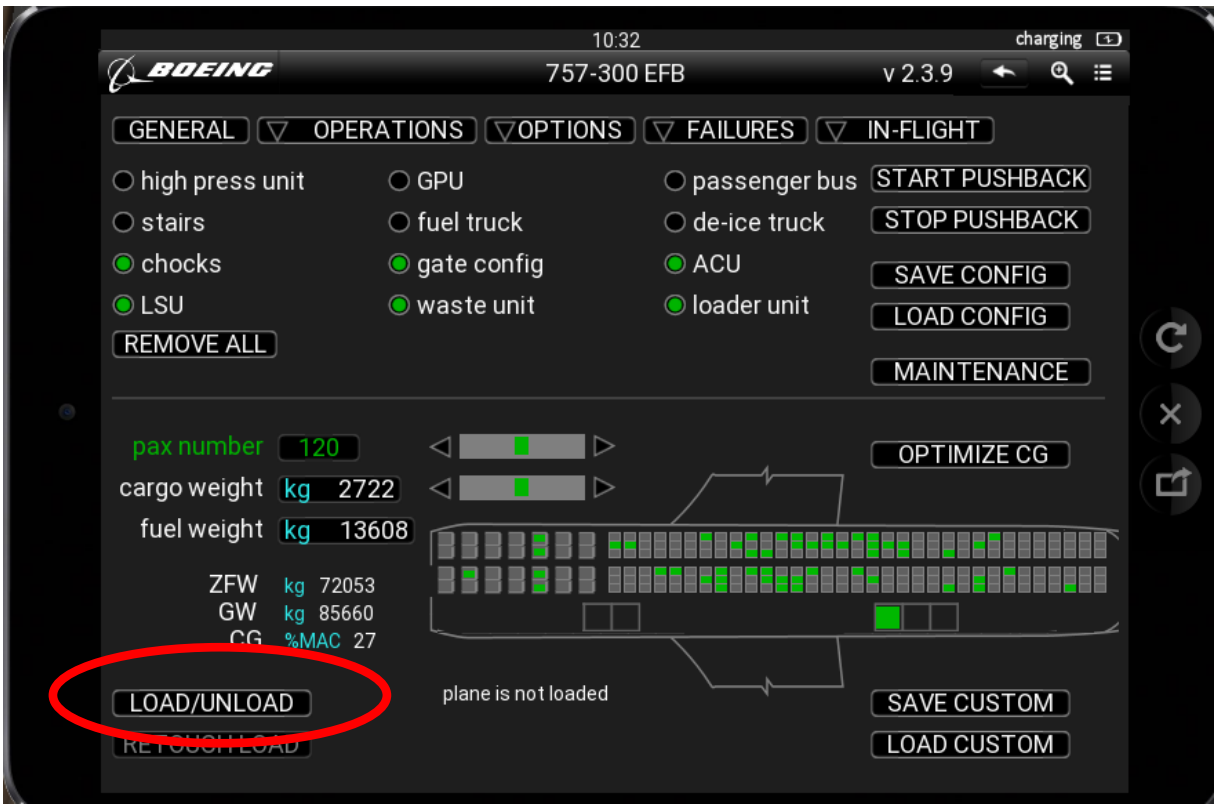
N.6. Unboarding and unloading

Switch doors to manual: DOORS TO MANUAL



Switch off passenger signs, activate groudn supply as necessary, open left fromt door and hatches.

Unloading the plane by GENERAL/OPERATIONS/GROUND



O. Shutdown

After unloading:

Switch off fuel poumps

Switch off red anticollission

Switch on Isolation

Switch off Flight Director

Unlock cockpit door

Switch IRS to OFF

Open Emergency Light switch

Switch off Emergency Light

Switch off window heat

Switch PACK Control Selectors OFF.

Switch APU OFF

Switch Standby Power Selector OFF

Switch Battery OFF

Auto-Goaround: https://www.youtube.com/watch?v=uYd5n2oSvYU&list=PLpNS2WzxM5y32A-ywMTuGBRhNPq5wWaf8&index=22 ab Min. 2

2. 12. 2019 Kr.