

FLIGHT TUTORIAL



JETSIM

A330-300

For flight simulator use only. Not intended for real world use.

Welcome to the flight tutorial for the A330-300. Today we will be flying from Perth (YPPH) to Adelaide (YPAD).

Please uncheck “Start each flight with engines running” box in the Operations and Warnings tab and reload the aircraft. Then go into Weight and Fuel and make sure you have 6 hours of fuel on board.

The cockpit in its cold and dark state should greet you. (Fig 1.)

We should now go through our pre flight checklist.

Battery 1 & 2:	ON
APU Master Switch:	ON
APU Starter Switch:	ON
Bus Tie:	ON
Galley:	ON
Commercial:	ON
APU Bat:	ON
APU Master Switch:	ON
APU Starter:	PRESSED
Transponder:	SET
QNH:	SET
No Smoking:	ON
Seatbelt:	ON



(Fig 1.)

We then need to align the IRS's. On the FMC, press the INIT button. A page like the one in (Fig 3.) should appear.



(Fig 2.)

Click CLR and enter “YPPH/YPAD” into the FROM/TO.

The scratchpad should then read out “RESET IRS TO NAV”. Do this by going into the overhead and clicking all 3 IRS knobs into the NAV position. Then go back to the FMC and hit clear. A orange arrow that says “ALIGN IRS ->” should appear under the ALTN value. Click the soft key next to it to begin the aligning process. (The time this takes is determined by how far north or south of the equator, the aircraft is.)



(Fig 3.)

While this is happening, you can enter your Flight Number, Cost Index (9.5 is recommended) your alternate airport (YMMML) and your FL (360). When entering your FL, do not put FL in front of the number. Otherwise the FMC will not understand. Simply enter 360 or 300 etc

Next, click the PERF button and you should be greeted with the Performance page (Fig 4.). Enter the Runway we will be departing (03), the flaps we will be using for departing (1) and the Flex Temp (57).

This will in turn give you V1, Vr and V2. It will also give you Flap Retraction speed, Slat Retraction speed and a clean target.

Flight Plan Preparation:

It's now time to prepare the flight plan and enter it into the Flight Management Computer. Its recommended to use a program like Plan-G to build the flight plan.

Hit the F-PLN button. Click the soft key next to YPPH and select runway 03. Then scroll down and find the departure SOLUS1. Click the soft key next to it and then hit insert.

Our Flight Plan is as follows:

VIA:	TO:
J68	WIKP
J68	BIDDY
J68	MUKIN
Q12	ESP
Q12	LUCRE
Q12	LODGE
Q12	LESON
Q12	TUNAA
Q12	LONLY

Click the soft key aligned with the next free space under the SID. Enter the Flight Plan. (Currently you have to add all the airways. This is not correct behavior and will change in v1.1). After the this happened you should see something that looks like this (Fig 5.) Click the F-PLN button to return to the flight plan page. (Currently ND only displays waypoints entered into the FMC)



(Fig 4.)



(Fig 5.)

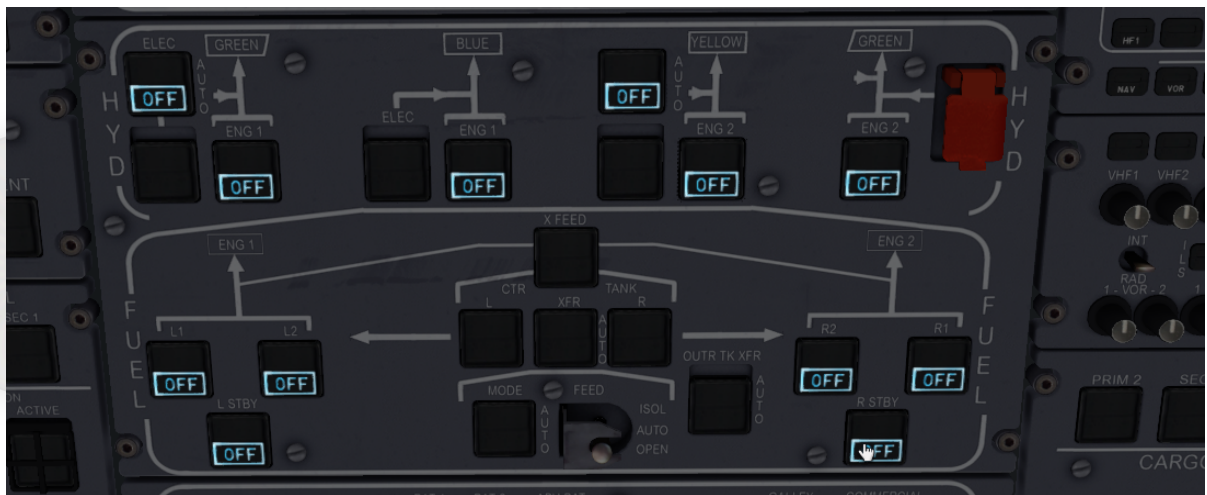
The FMC automatically assigns altitudes for the climb and cruise but you may wish to override these. This is done via the F-PLN page. Enter the speed / altitude and click on the right soft key corresponding to the altitude. W

E.g. “245/13000” (Fig 6.)

Now that our flight plan is inserted into the FMC, we now need to start our Engine Start Checklist:



(Fig 6.)



Engine Start Checklist

BEACON:	ON
NAV LOGO:	ON
STROBE:	OFF
THROTTLES:	IDLE
L1, L2, L STBY:	ON
R1, R2, R STBY:	ON
R Engine Switch:	ON
R ENG MASTER:	HOLD FOR 15 SECONDS
L Engine Switch:	ON
L ENG MASTER:	HOLD FOR 15 SECONDS

(Fig 7.)

After making sure that both engines are running. Go through the After Engine Start Checklist to turn on Generators and Hydraulics.

After Engine Start Checklist

GEN 1, GEN 2:	ON
GREEN ELEC PUMP:	ON
GREEN ENG 1 PUMP:	ON
BLUE ENG 1 PUMP:	ON
YELLOW ELEC PUMP:	ON
YELLOW ENG 1 PUMP:	ON
GREEN ENG 2 PUMP:	ON
ENGINE BLEED:	ON
HOT AIR:	ON
APU BLEED:	ON

The aircraft is now started and ready to fly. You may start the Taxi Checklist:

Taxi Checklist

PARKING BRAKE:	OFF
FLAPS:	SET
SPEEDBRAKE:	ARMED
TAXI LIGHT:	TAXI
FLIGHT DIRECTORS:	ON
STROBE:	ON

You can arm the speedbrake by grabbing the lever and dragging it upwards. When it's fully up, the speedbrake is armed. Change the selected altitude to 10000 and change the vertical speed to +4500.

Taxi to runway 03 and line up. Then pull both ALT and VS knobs out and push the HDG knob in. When ready to depart, click the click spot next to FLX MCT, push the FD, push the A/THR button and then pull the IAS knob out.



Once airborne and the aircraft is aligned to the autopilot attitude, click on the AP1 button and the VS knob and slowly return the joystick to the center. Then click the throttles into the CLB gate. The pilot can choose to push the altitude knob in which will make the aircraft fly to the waypoints at the altitude selected in the FMC. This will also enable stall protection and not allow a climb that will loose speed.

Raise flaps at pilot's discretion.

After 10,000 ft, we can turn off taxi lights and landing lights. We can also turn off the APU by hitting the APU MASTER button. Also turn off the APU GEN and APU BLEED



With the autopilot in NAV mode, the aircraft will fly automatically from waypoint to waypoint. No pilot interaction if the flight plan is entered correctly.

See the Flight Manual for explanation on autopilot.

As we pass TUNAA, contact ATC to ask for a expected runway. For this tutorial, we will assume that we will use runway 23.

To add a STAR into the FMC flight plan, click the left soft key next to the arrival ICAO code. Then click 23, choose RIKAB8 and then hit insert.



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We now want to enter the ILS frequency into the FMC. The frequency for runway 23 is 109.70. We enter "10970" into the scratchpad and add it into the VOR. (Fig 7.)

To begin our decent, we can either add the speed and altitudes manually into the FMC or and put the autopilot into managed vertical mode (altitude knob pushed in).

We can also just adjust the altitude in the autopilot window and select our VS. As we are not on any network, descend at pilot's discretion.

When descending through 10,000 ft, turn on the landing lights and turn the seatbelt sign on.

(Fig 7.)

Lower flaps to the 3rd detent at pilot's discretion. Use of the spoilers is permitted to slow the aircraft.

As we fly over RIKAB, dial 140 into the airspeed autopilot window and pull the airspeed knob out (selected mode).

When we approach GLOBE, we will manually change the heading. Click the HDG knob so it returns to its neutral position. Turn the heading to 150 and then pull the knob out. The aircraft should start to bank towards 150 degree's.

Hit the LOC button. A grey LOC should appear on the PFD showing that it's armed. As you intercept the runway bearing, LOC mode will become active. As you intercept the runway.

Then hit the APPR button. A magenta diamond will show the vertical position of the glideslope on the right side of the PFD. If the diamond is high, the aircraft is below the glideslope. If the diamond is low, the aircraft is above the glideslope. To capture the glideslope, the aircraft must be less than 200 ft vertically from the glide slope. Adjust your altitude to "000" and select your vertical speed to capture the glideslope. Then pull both the altitude and VS knob out.

Once captured, arm your spoilers by pull the lever up. Engage the autobrake by hitting the MED or MAX button.



When over the runway threshold, the plane should begin to flare out. The autopilot will then cut out as the plane touches the ground. X-Plane is only capable of CAT II ILS procedure.

To slow the aircraft down, apply brakes by hitting the 'b' key, or use reverse thrust at pilot's discretion.

Reverse thrust can be engaged by clicking on the reverse thrust levers and then using your key board short cut to advance the throttles. When you wish to disengage reverse thrust, pull the reverse thrust to idle and then click the reverse thrust levers. This will put the engines back into the normal thrust mode. Then run through the after landing checklist.

AFTER LANDING CHECKLIST

FLAPS:	UP
SPOILERS:	RETRACTED
TAXI LIGHT:	ON
LANDING LIGHT:	OFF
STROBE:	OFF



Taxi to the ramp and begin the engines shut down process.

ENGINE SHUTDOWN CHECKLIST

L Engine Switch:	OFF
R Engine Switch:	OFF
L1, L2, L STBY:	OFF
R1, R2, R STBY:	OFF
L GEN:	OFF
R GEN:	OFF
ANTI ICE:	OFF
Seatbelt Sign:	OFF

Once the engines and generators are off, power will be draining from the batteries. When AVAIL is illuminated on the EXT A and EXT B buttons. This will hook up ground power and allow pilots to carry on with in-cockpit procedures (unloading passengers etc).

AIRCRAFT SHUTDOWN CHECKLIST

GREEN ELEC PUMP:	OFF
GREEN ENG 1 PUMP:	OFF
BLUE ENG 1 PUMP:	OFF
YELLOW ELEC PUMP:	OFF
YELLOW ENG 1 PUMP:	OFF
GREEN ENG 2 PUMP:	OFF
ENGINES BLEED:	OFF
HOT AIR:	OFF
APU BLEED:	OFF
EXT B, EXT A:	OFF
BAT 1, BAT 2:	OFF



Thank you for flying the JetSim A330-300. Blue Skies!

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