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Mind: This is for flight simulator purpose only, not for real aviation. It is a game!
Proposals for improvement are welcome – please contact me (dr.hh.krause) at the A320neo Forum.

Flying A320 neo Version 2.1 by JARDesign with X-Plane 10.25

My system:
Windows 8.1; 64-bit; X-Plane 10.25; 64-bit, launched in 64-bit mode.

Before Start

Preliminary Cockpit Preparation

Power Supply
Allow external power supply by the extra menu (at the left side of your window)
(click on GND PWR button which will turn red)

Availability of external power will be displayed at the overhead panel

Activate Battery 1 and 2

(“off” will disappeare)

Click on “EXT PWR” for using external power supply.

Check APU fire test (overhead panel)

ENG 1
AGENT2
AGENT
APU
TEST
AGENT1
GREEN
BLUE
YELLOW
RAT MAN ON
ELEC PUMP
PTU
APU
X-FEED
ENG 2 PUMP
CTR TK PUMP 1
MODE SEL
CTR TK PUMP 2
ENG 1
R TK PUMPS
BAT 1
BAT 2
AC ESS FEED
DC BUS 1
AC ESS BUS
AC BUS 1
APU GEN
BUS TIE

Activate (click) “APU MASTER SW” and “START”

Watch APU launching on the System Display (engine/warning display)

Once APU is available, switch off external power on overhead menu and say “bye” to GND PWR on external menu.

Illumination

Turn on lights:

OVHD INT LT on overhead menu, FLOOD LT on co-pilot´s and pilot´s centre pedestal

switch on stall table lights and reading lights on both sides

and OVHD INT LT

Checks:

Parking brake should be „on“

Yellow electric hydraulic pump should be „on“ (not showing „off“) (overhead panel)

Check: Flaps position „0“

Switch APU Bleed „on“

Air condition

Switch on AIR COND Pack 1 and 2 (“off” signs turn off)

Check: X-BLEED thumb position „auto“

Turn temperature to middle position (adjust as required – may be “too hot in cabin, Sir!”)

Check electric panel (GEN 1 and GEN 2 show „fault“)

Initiating the Flight Management System

Switch GNADIRS (Global Navigation Air Data Inertial Reference System) to „STS“ and „1“, set thumbwheels to „NAV“ – one after the other, after „ON BATT“ has turned off, subsequently.

After „STS ENTER PPOS“ is displayed, click „ENT“

Switch on Strobe, Beacon, Wing, Nav and Logo, RWY TAXI, LAND (2 switches) and NOSE.

Switch Emergency Exit lights to „ARM“ position

Check: Landing elevation for cabin pressure (should be „auto“)

Check fire test engine 1 and engine 2

Check: Baro reference at main panel

Switch Radio Management Panel „on“ (pedestal)

Entering Flight Plan

Enter Flight plan from INIT page on the multifunction control and display unit (MCDU):

You have the choice: Do you want to use complete flight plans or do you want to compile it manually?

For using complete preformed flight plans continue here (a); for manually compiling see passages later (b); in both cases hereafter proceed with “c”.

a) Entering complete preformed flight plans:
Enter departure airport and destination airport code into the bottom line by using the alphanumeric keys, then click 1L. (Format: XXXXYYYY)

Display has changed (airport codes are entered in the CO RTE line), and last line shows “F PLN READING OK”.

> F-PLAN reading may be not okay when there is no corresponding flight plan in the FP-folder of your A320 installation. In this case: Go to http://rfinder.asalink.net/free/ for example (or another route finder site), find a route with SIDs and STARs (as you like), copy and paste the route into an editor window and save it as a „CODECODE.txt“-file in the A320 FP-Folder (in this example it would be „EDDVEDDH.txt“.

Click „Align IRS“ (2R)

Clear last line by “CLR” (see figure above)

Enter FL (6L). Usually there will be odd FLs for eastbound flights and even FLs for westbound flights.

Enter Cost Index (in X-Plane A320neo: range 0 – 99); low for low climb rate and low cruising speed; high values for high climb rate and high cruising speed/minimum time) (5L)

Enter flight number (of your choice) (3L)

Switch to page B (with horizontal-to-right-arrow) and just click 1R and 2R for automatic fuel management.

Have a look at the last line for “extra/time”. Red numbers indicate lack of fuel. For refuelling click “GND” at the extra menu, then “FUEL”. Wait for the lorry, then increase (INC) fuel load preselection, until there is enough extra/time, indicated in the MCDU display. Click “REFUEL” to start refuelling.

For individual fuel and cargo weight management on INIT page B proceed as follows:
Enter TAXI fuel with 1L, Route Reserves (RTE RSV/%) with 3L, Final Time with 5L, Center of Gravity without fuel/zero fuel weight (ZFWCG/ZFW) with 1R, then BLOCK (with 2R). Title of page changes to “INIT FUEL PREDICTION”.

You may execute changes of fuel and cargo weight by means of X-Plane-10 settings as well (pull-down-menu “airplane/weight and fuel”).

For optimizing cruising FL switch to “PROG”, enter CRZ (1L), compare to optimum FL (“OPT”) and recommended maximum FL (“REC MAX”) and change CRZ by overwriting 1L (format: “FLXXX”) if necessary.

b) Entering flight plan manually:

Go to the INIT page

Enter departure airport and destination airport in the bottom line, using the format XXXX/YYYY, then click 1R

Enter FL, and FLT NBR as described above.

c) Completing flight plan:

Switch to flight plan page

Scroll with arrow up until departure airport is in line 1, then click on departure airport (f.e. EDDV) i. e. 1L.

It appears „Departure“.

When you click on „Departure“ you reach the RWY selection menu. Click on RWY of your choice, then choose one of the available SIDs, then on „insert“ (6R). You will be brought back to the flight plan menu and your SID is inserted.

Click on the last waypoint of your SID for reaching the “LAT REV” page. Now decide to complete your flight plan by using “airways”. Click 5R (AIRWAYS). Insert airway number using the scratch pad and click 1L. Insert last waypoint to be passed on this airway with 1R. Go back to the flight plan page (6L).

Now click left of last waypoint inserted and add both: next airway and last waypoint on it, then repeat this until your flight plan is complete.

Last waypoint inserted this way, should be first waypoint of STAR.

Alternatively you may insert waypoint by waypoint, ignoring airways.

Now click on 6L (for destination airport) and choose one of the RWYs available, then on one of the corresponding STARs, and „insert“ (6R).

Now you have FP with SID and STAR.

Check Flight Plan

After having completed your flight plan check it:
To do this, switch thumb wheel (figure) at the EFIS panel to “PLAN”

Now scroll with arrows up and down on the F-PLN page and watch the flight plan as it is displayed on the navigation monitor.

If you want to erase a waypoint not needed, click “CLR”, then button left to the waypoint to be erased. Flight plan changes will be actualized. If you want to add one, proceed as described ahead.

You may insert additional waypoints, as desired. Just enter the code (for example NIE for Nienburg) and click left button next the waypoint already in the FP. This will be the waypoint before your newly inserted one.

Constrains: to be changed as necessary

If you want to perform ILS landing mind that you will not arrive too high before entering glide slope. Have a look at your charts and adjust passing altitudes, if necessary, by clicking the right button next to the waypoint to be changed in passing altitude. Enter desired altitude (in feet) and click button next to (ALT CSTR), then „return“. New passing altitude (manually set) is displayed and will be performed by autopilot.

Flight Performance

Enter PERF-page

Click 1L, 2L and 3L for V1, VR and V2 (if you use default settings; otherwise enter your precise data)

Enter “F50” and click 4R

Enter “2/UP2.0” and click 3R.

Check/compare and, if necessary, correct transition altitude (“TRANS ALT” – 4L), Thrust Reduction (“THR RED/ACC” – 5L) and engine out (“ENG OUT ACC” – 5 R).

Starting engines

Switch on all (six) fuel pumps (“off” signs disappear)

Switch ENG MODE thumb wheel to IGN/Start

Start Eng 2; after engine 2 has started, start engine 1

After both engines have started turn thumbwheel back to „NORM“

Switch off APU Bleed and APU master switch (power supply by engines now).

Check AIR COND Pack 1 and Pack two to be switched “on” (not showing “off”).

Activate ANTI ICE for wing and engines.

Check Flight Controls

Follow the instructions reading the checklist “Flight Controls”

1. Joystick: Full up, full down, neutral, full left, full right, neutral (hold every position for sufficient time!)

2. Press pedal disconnect pushbutton (left of pilot´s joystick/right of co-pilot's joystick respectively) on nose wheel tiller

3. apply full left rudder, full right rudder and neutral.

4. Press pedal disconnect pushbutton (left of pilot´s joystick/right of co-pilot's joystick respectively) on nose wheel tiller

Prepare taxiing

Close all doors

Say bye to ground supply (cargo and stairs)

Switch on seat belts and no smoking signs.

Check baro reference again at the flight control unit (tune correct QNH from weather report with the knob indicated below); FD light is green, ILS light is off, navigation display mode should be ARC mode, adjust range as desired.

Now set initial altitude

Check clock, check nose wheel steering position „on“, weather radar „off“.

Weather radar „on“, radio „on“ (check correct frequency), set flaps to 2, ground spoilers armed, auto break „max“, park brake off

Remove gear pins and covers clicking on PARK (turning green then)

Use checklist “before start” to be sure having finished preparation so far.

If necessary call tow for pushback first by external menu.

Performing pushback parking brake will be set automatically

Ready for taxi!

Do you need a follow me car? (Not available at all airports, yet)
Click on GND at the extra menu, then FM. A pop-up-window will appear to select airports (departure/destination) from your flight plan. If available, taxiways will be offered (click them) to be inserted up to your Rwy. Follow me car speed and, if selected, markers for your taxiway will be displayed; the window is self explaining.

Lining up

Check: weather Radar “on”

Check: Ground Spoilers “ARM”

Switch AIR COND Packs 1 and 2 “off”

Set Flaps as required (usually “flaps two”)

Set Auto Brake to MAX, and BRK FAN “on” for sufficient brake cooling.

After Start

Take off/Climb/Cruise

Throttle TO/GA or **Flex**

Chrono start

Rotation when announced (at VR)

Gear up (ca. 10 seconds hereafter auto speed brake will be turned off automatically) after establishing positive climb (will be announced).

Ground spoilers disarmed

Nose wheel lights off

AP 1 “on” at the flight control unit (later than 5 seconds) after air borne

The flight path director displays „LVR Climb“

Turn throttle to “Climb” position, when indicated in the left upper corner of the PFD (see Figure)

Flaps 1 as required

Flaps 0 as required

Clima: Packs “on” again.

Check “after start” checklist

Set throttle to “lever climb” when indicated in the flight path director´s display.

STD Baro after passing transition altitude (1013 mbar); STD in the flight path director´s display will be highlighted.

After reaching init altitude: Set cruise flight level at ALT knob and click for beginning OP CLB (open climb)

Land lights off above 10.000 ft

At cruise FL switch to “seat belts off”

A320 will reach cruising altitude. Throttle will switch to “speed”, and “ALT” will be indicated on the flight path director´s display.

Cruising

While Flying along a flight plan, ATC may recommend going “direct to ...”. In this case: Click on “DIR” at the data loader. All waypoints ahead will be displayed. Click left of the waypoint you are cleared to go direct to and then “insert” (6R). AP will fly “direct to” the selected waypoint.

If RWY at destination airport is not known when you start or will be a matter of change during your flight, you may enter destination airport RWY and corresponding STAR during flight, after you had contact with ATC, in the way described above.

Descend/Approach/Land

At about 20 nm before T/D:

Click “PERF” at the MCDU. It will show the “CLB”-page. Click “phase” three times for “APPR”-page. Enter QNH, temperature and mag wind (from weather report)

Switch seat belts signs “on”

Set descending altitude (from charts for STAR) at the ALT knob and click the ALT knob for starting descend at the T/D waypoint.

Flight path director´s display will show „THR IDLE“ and „OP DES ALT“.

After passing T/D: Go to „PERF“-page and select and confirm Approach phase.

If you are afraid not to perform sufficient descend for reaching maximum altitude entering ILS glide path click on V/S for accelerating descend. V/S setting is displayed in the flight path director´s display then.

Switch on Landing Lights passing 10.000 ft.

After having reached descending altitude, flight path display will change to „speed“ and „Alt“ again.

May be you are advised to fly a holding pattern. In this case switch to the FPLN page and click left of the corresponding waypoint, and left of HOLD on the automatically opening new page. Insert data (inbound course) and exit point or click 1R for computation and return to D-PLN clicking 6L.

Click on “ILS “(next to FD light), turning green, for displaying ILS path and glide slope in the flight path director´s display when available.

Check: Engine mode select normal

Set local QNH passing transition level

Set flaps as required

Check ILS frequency to be tuned correctly

Check “approach” checklist for being sure to have completed approach preparations.

Once glide slope and path indicators have entered your display, click „APPR“ (beneath the V/S button) to turn it green. In this flight phase you may add AP2 (standby mode).

A320 will intercept glide slope and path for selected runway.

“SPEED”, “GS” and “LOC” will be indicated on the flight path display

Perform landing as usual ….

Gear down

Nose wheel lights on

Flaps 3 as required

Flaps full as required

Auto Brake “MED” and BRAKE FAN “on”, if necessary

Check “landing” checklist for being sure to have completed landing preparations
after passing 2000 ft radio altimeter

Throttle idle position

Throttle Reverse after touch down

After Landing

Landing lights off

Spoilers off

Flaps 0

Spoilers disarmed

Engine mode selector normal

TCAS stand bye

APU Start

Weather radar off

Predicitve shear system off

Taxi to parking

Landing lights “off”, flaps 0, weather radar “off”. APU Master switch “on”. APU “start”

At gate:

Parking brake “on”

Chocks “on” (external menu) PARK turning red.

Anti ice “off”

APU Bleed “on”

Engine master switch 1 und 2 “off”

Call stairway and cargo (external menu)

External lights “off”

Seat belts signs “off”

Fuel pumps “off”

Brake fan “off”

Check: Parking checklist

Open the doors

GNADIRS: set NAV-mode selectors “off”

APU Bleed “off”

APU Master “off”

Emergency external light “off”

No smoking “off”

Batteries 1 and 2 “off”

Check: Securing aircraft checklist

ASIRS “off”

APU Bleed “off”

APU Master switch “off”

Emergency external light “off”

No smoking “off”

Check “securing aircraft” checklist to be sure ...

Online flights/ATC guided flights:

If you have to use a transponder code you can insert the data left of the co-pilot’s seat. Check squawk mode to be set “stand-by” and leave it there until you have reached holding point of your departure runway. Switch from standby to mode “Charly” right before take-off using the knob indicated below. After arrival maintain squawk mode “charly” until you have cleared runway, then return to “standby”.

If available, you will have contact with “ground”, “tower”, “approach” and “center”.

Have fun!

And again:
Proposals for improvement are welcome – please contact me (dr.hh.krause) at the A320neo Forum.

Horst-H. Krause