

A320 Fixed Based Simulator Procedures (Melbourne)

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Introduction

Please use the following procedures when operating the simulator. If there are any problems please call one of the contacts (See Appendix I – Contact Details)

Accessing the Simulator Premises procedures

Opening the front door

Use you key to enter the front door

Opening the simulator

The keys to simulator and computer room are held in a safe under the kitchen sink. Enter the security number you were given and the press the E button

Open the Computer Room door and the simulator door.

Then put the Computer Room and Cockpit keys back in the safe and lock it.

Check area is clean etc

Go to the toilet and check there is sufficient toilet paper and paper towels and the area is clean.

Take the hoover from the kitchen a give a quick 5 minute clean of the waiting room, foyer, outside the simulator and in the cockpit

Check there is enough water (ALSO CHECK DURING THE DAY THERE IS ENOUGH WATER!!) and plastic cups in the waiting room

Turn on the PC in the waiting room and look at the roster in Flyajetsim.com

Turn on Lights in the simulator

There is a switch inside the cockpit (just to right of the cockpit door)

If needed turn on the cockpit air conditioner (Air conditioning control/switch is located in the Kitchen. Set to On).

Starting Simulator

STEP 1 – Turn light on in computer room

Go into the computer room and turn on the lights (switch is attached to cockpit)

STEP 2 - Turn On Cockpit backlighting and Fan (that cools the projectors)

In the computer room turn on the switch marked Cockpit Lights/Fan.

STEP 3 – Turn on all the computers in the computer rack

In the computer room go to the computer rack. Turn on all the PCs in the rack starting at the top.

STEP 4 – Turn off light on in computer room

In the computer room and turn off the lights (switch is attached to cockpit) and close the computer room door.

STEP 4A – Turn on TV in waiting room and set up DVD burners

In the cockpit turn on the two DVD burners and place in each one a blank DVD. Go to the waiting room turn on the tv (remote control held under white board). Check picture of cockpit is aligned correctly if not adjust camera in the cockpit.

Set up the DVD burners so they are ready to record (i.e. initialize the disk)

STEP 5 - Turn On the Projectors

Go into the cockpit. Use the projector remote control (labelled on the back 'PROJECTORS' which is situated in the cockpit on the table.

Point it at the screen through the cockpit windows at each of the three projectors and press the on button (i.e. left window, centre window and right window).

STEP 6 - Turn on the Computer screens in the cockpit

Turn on all three LCD Displays (small round button on bottom right of the display). FYI looking left to right the first screen is shared by the three visual computers (it has a switch to go from left, centre and right), the middle screen is for the server computer and the right screen is for the instructor station.

STEP 7 – CONFIGURE SOFTWARE ON SERVER AND INSTRUCTOR STATION

Wait until all the computers have booted up and the software loaded (about 2 minutes). On the server computer (middle screen) run Microsoft Flight simulator (just double click on the FSX icon on the desktop).

Once Microsoft flight simulator is full loaded then run the Interface IT Program (by clicking on the desktop Icon). **MAKE SURE ALL THE MODULES LOAD UP CORRECTLY** (if you see Yellow questions marks then close down the program and re-run it again (see below for how to do this)

If all the modules do not load up correctly then the process must be deleted and the program re-started (Note, if INTERFACE IT is not running correctly as an application no light will be displayed on the overhead panel). To do this Press together CTRL/ALT/DEL and select task manager. On Processes click on InterfaceIt and right click and then select end process. Then re-start interface IT by double clicking from the Interace It desktop icon

Once Interface it program is running correctly Minimise it by clicking the [_] on the top right of the screen.

On the AST Instructors program. Select Systems. Click on EXT Power.

The following feature NOT YET IMPLEMENTED IN MELBOURNE SO PLEASE IGNORE If you want to hear pre-recorded ATC from Sydney Tower/Approach on the Instructions Station click on the 'ATC-SYDNEY' desktop icon. Then minimize WINAMP.

Left click the cursor on the Flight Simulator Screen (This will enable the engine noises etc).

PLEASE IGNORE NOT YET IMPLEMENTED IN MELBOURNE. To optionally run the TCAS program. Double click the TCAS Icon. Click on the TCAS program (in the bottom task bar). Select 'RA'. Minimise the program. Note, if TCAS info is not displayed on the Pilots screens then click on the TCAS program (on the bottom toolbar) and restore the program. Again select 'RA' and then minimize the program.

There is an issue with the FCU (Flight Control Unit) program i.e. where the heading and altitude select knobs are. Sometimes it does not load properly. Please click on and off the one of the FD (Flight Director) button on the FCU (Flight Control Unit). If turns green the program loaded correctly. If it did not then we need to kill the program and re-run it again. To do this see below.

Press Ctrl Alt Del. In task manager in the Applications tab select G3 Interface program and select end task. After this run the G3 Interface program from the Server Desktop (centre screen). Repeat this until the FD light goes green when selected.

The simulator is now ready to be used.

Soft re-boot (When simulator is already running)

If a re-boot is required (e.g. simulator freezes etc) then from the Instructors Workstation (right screen). Select the ICFG program (which is already running). Select ICONSOLE and then select Re-boot all. Then Start at STEP 7 above.

Administration

When a customer arrives please give them the customer details for and a pen and request them to write down their name, phone number and email address. Then place the filled in form in box supplied.

Flying Simulator

Basic setup for a standard Flight

Default Airport is Sydney 16R

IF CURSORS DISPLAY ON PROJECTOR DISPLAY REMOVE THEM OFF THE SCREEN

Aircraft default position is Sydney Runway 16R

Turn on the External Power (from the instructors workstation – via the Systems Option)

APU ON

Press Master Switch

Press Start Switch (if get fault repeat after turning off batteries)

ALIGN IRS

Turn 3 IRS switches to on

TURN ON FUEL PUMPS

Turn on all fuel pumps (if off)

STATE OF OVERHEAD PANEL

Ideally all switches dark except APU Master, APU Start and APU Bleed Air

ENTER DATA IN MCDU

Takeoffs always with 1 flap

Enter following

INIT

MCC1 - (Company Route – Left 1)

Click R6 (To insert it)

1/2.0DN (3 Right) – Means flaps stage 1 and trim 2 degrees down

50 (4 Right) – Flex take off

PERF

V1 = 135 (Left 1)

VR = 138 (Left 2)

V2 = 155 (Left 3)

INT – SECOND PAGE (use left arrow)

Empty Weight = /65 (Right 1)

Fuel = 9 (right 2)

Select Flight Plan

Use Plan selection on FCU (Flight control Unit) and press up arrow key to check route

Then change back to ARC

START ENGINES

Start both engines (2 followed by 1)

TURN ON FLIGHT DIRECTORS ETC

Turn on flight directors and ILS

Set Heading and Speed to managed

LEAVE ON APU

Turn off External Power (from the instructors console)

TAKE OFF

INSTRUCTOR – Jetstar 1 cleared to take off Runway 16R wind is calm

PF – Advance throttles to FLEX (2 clicks)

PNF – Says ‘100 Knots’ (PF Says ‘CHECK’)

PNF – Says at 140 Knots ‘ V1 – ROTATE’)

PF – Rotates to 12 Degrees

PF – Says ‘positive rate of climb gear up’ **(PNF – raises the gear and says ‘GEAR UP’)**

PF – At 200 Knots ‘Says flaps up’ – **(PNF raises flap and says ‘FLAPS RUNNING’)**

PF – Brings throttle to CLIMB detent

PF – Engages Autopilot and Says ‘autopilot on’ - **(PNF says ‘CHECK’)**

PF – AFTER TAKE OFF CHECK LIST

PNF – GEAR UP
FLAPS UP
SPEED BRAKE OFF AND DISARMED
AIR CONDITIONING PACKS AS REQUIRED

CRUISE

PF 1000 FT prior assigned level ‘SAYS 1000 TO GO’) – PNF – SAYS ‘CHECK’)

PF at assigned level ‘SAYS LEVEL XXX FT ALT GREEN’ - PNF – SAYS ‘CHECK’)

DESCENT

Start descent 71 NM out from Canberra on flight plan page (Tell customer multiply altitude by 3 and add a fudge factor of 5 e.g $22 \times 3 + 5$)

Activate approach (On mcdu performance page – need to press button twice)

Enter QNH = 1013 (or if set to inches 29.92)

Temperature = 12

Wind 1/1

MDA = 2130 (which is 300 ft AGL)

PNF – BRIEFING FOR APPROACH – We will be doing an ILS at Runway XX
minima is xxx ft. Missed approach turn onto heading xxx and climb to yyyyy.

PF – Says ‘Confirmed

PF – Says ‘1000 ft to go’ - (PNF says ‘CHECK’)

PF – Says ‘xxxx ft alt green’ - (PNF says ‘CHECK’)

APPROACH

Turn on localizer then approach (confirm correct ils frequency entered)

PNF – says ‘1000 FT to go’ - (PNF says ‘CHECK’)

PNF – Says ‘Minima’ – (PF – says ‘Visual landing)

LANDING

PNF – says '70 knots' – (PF reduces reverse thrust to idle).

Shutting down Simulator

Step 1 – On the cockpit. Make sure gear is down throttles are at idle, fuel is off, fuel pumps are off, ADIRS switches are off, Flaps are up, speed brake is off and not armed

Step 2- Turn off the three projectors (using the remote control). One single press will usually suffice.

Step 3 – From the Instructor screen right one) run the ICFG program and select Iconsole and then the the close down all option.

Step 4 – Not used

Step 5 – Turn off three LCD displays (bottom right button)

Step 6 – Turn off two DVD burners

Step 7 – Turn off all lights in the cockpit (switch inside close to the cockpit door)

Step 8 - In the computer room make sure all computers are off. If one is hung (i.e. stuck on) then hold down the start button for 10 seconds this will force it to shutdown

Step 9 – Wait 5 minutes from when you turned of the projectors to give them time to cool down and then turn of the cockpit lighting switch (also turns off the fan that cools the projector)

Step 10 – Turn off computer room light

Locking up the Simulator Centre

Step 1 - Make sure three simulator doors are locked (Computer room, Cockpit and side entrance).

Step 2 – If Peter or one of his employees are still in the premises then there is no need to lock up the building just let them know you are leaving. If however, there no body working in the office then proceed with the following steps.

Step 2 A – Turn off computer(s) in the waiting room

Step 3 – Place simulator cockpit/computer room keys in safe

Step 4 - Turn off Air conditioner (Control/Switch located in kitchen)

Step 5 – Turn off all lights (in whole office)

Step 6 – Have an another look around and make sure all doors locked, Air Conditioning off and lights are off.

Step 7 – Lock main door

Appendix A – Troubleshooting

If there is problem with the simulator re-boot from the ICFG program (right screen)

Appendix B – Some Frequencies of Aids Etc

Aid	Freq
SYD 34 L ILS	110.1
SYD VOR/DME	112.1
CANBERRA VOR/DME	116.7
CANBERRA 35 ILS	109.5

Appendix C - Re-setting to another Airport

This is done via Microsoft flight simulator program on the flight model pc.

Appendix D – Setting Failures

Set via Instructions console (not FSX). E.g. Engine Failures etc

Appendix E- Simple IFR Flight

Sydney 34 L to Nowra
Nowra to Sydney 34L

Appendix F – Flying A320 as per typical airline procedures

NOT YET DONE

Appendix I – Contact Details

If there are any problems with the simulator please call:

Name	Phone Number	Comments
Michael Collins	0419972305	Simulator Operator. If he does not answer call leave SMS

Appendix J – Close Down Check list

Just prior turning out the lights/Setting the alarm and locking the front doors please double check:

- 1) All the three projectors have been turned off
- 2) PC in cockpit is turned off
- 3) LCD screens in cockpit are turned off
- 4) Air Conditioner in the office is turned off
- 5) All computers in the rack have been turned off
- 6) Cockpit power has been turned off
- 7) Computer in waiting room has been turned off
- 8) All simulator doors (Computer room, Cockpit and side entrance) are locked
- 9) Cockpit/Computer Keys are in the safe
- 10) Light in computer room has been turned off

Appendix K – Speeds for a typical flight

Speeds will vary with the weight of the aircraft but here are some guideline speeds:

Where	Speed
Rotate	140 kts
Initial Climb out	155 kts
Climb speed to 10,000 ft	250 kts
Climb to cruise altitude	310 kts
Cruise	310 kts
Descent to 10,000 ft	320 kts
Descent from 10,000 ft to level off	250 Kts
Speed for first stage flaps (Slats)	210 Kts
Speed for second stage flaps	180 kts
Speed for third stage flaps	160 kts
Final speed with full flaps	135 knots

Try to get aircraft in level flight to slow down to flap speed.