AVSIM Commercial FS9/FSX Review

Airbus Series1 Evolution

Product Information		
Publishers: [feelThere](#) **/** [Wilco](#)		
Description: A318, A319, A320 and A321.		
Download Size: 105 MB	**Format:** CD, Download	**Simulation Type:** FS9 / FSX
Reviewed by: [Arjun Murthy](#) **AVSIM Staff Reviewer - July 19, 2011**		

Introduction

The Feelthere/Wilco Airbus Series 1 Evolution is an updated version of their initial Airbus Series 1. It includes the A318, A319, A320 and A321, perfect for a fun filled short/medium haul trip.

These planes have great detail in them; they increase your knowledge and the entertainment aspect towards Aviation and Flight Simulation. There are numerous features in this product and you can select the simplicity or realism you want so this will suit the realism freaks and those that just want to get up and take control.

Installation and Documentation

The Installation for this product is simple as any other basic product. It requires a product key, which is issued with the purchase of the product. During installation, the key has to be entered to activate it. This means that if you're purchasing the download version, you can get straight into the cockpit without much wait.

The Documentation for this product is a hefty 99 pages. This explains all of the aspects of the aircraft, how to run it and each system to a level where you have more knowledge than you actually need to fly it. This can be especially useful to understand what each mechanism does instead of just "press this button before takeoff".

A tutorial flight is also included in the documentation (with a preset flight plan that can be opened straight from the Flight Management Systems) and so, it makes it easy for almost anybody with any level of prior knowledge to get in and go while understanding all the stages of flight.

Furthermore, the Checklists, the specifications for all aircraft individually and the specific notes for the Evolution upgrade have been included with the installation. This provides good insight of the aeroplane so a virtual pilot understands what is happening rather than just knowing what is happening which makes an immense difference when flying the aircraft.
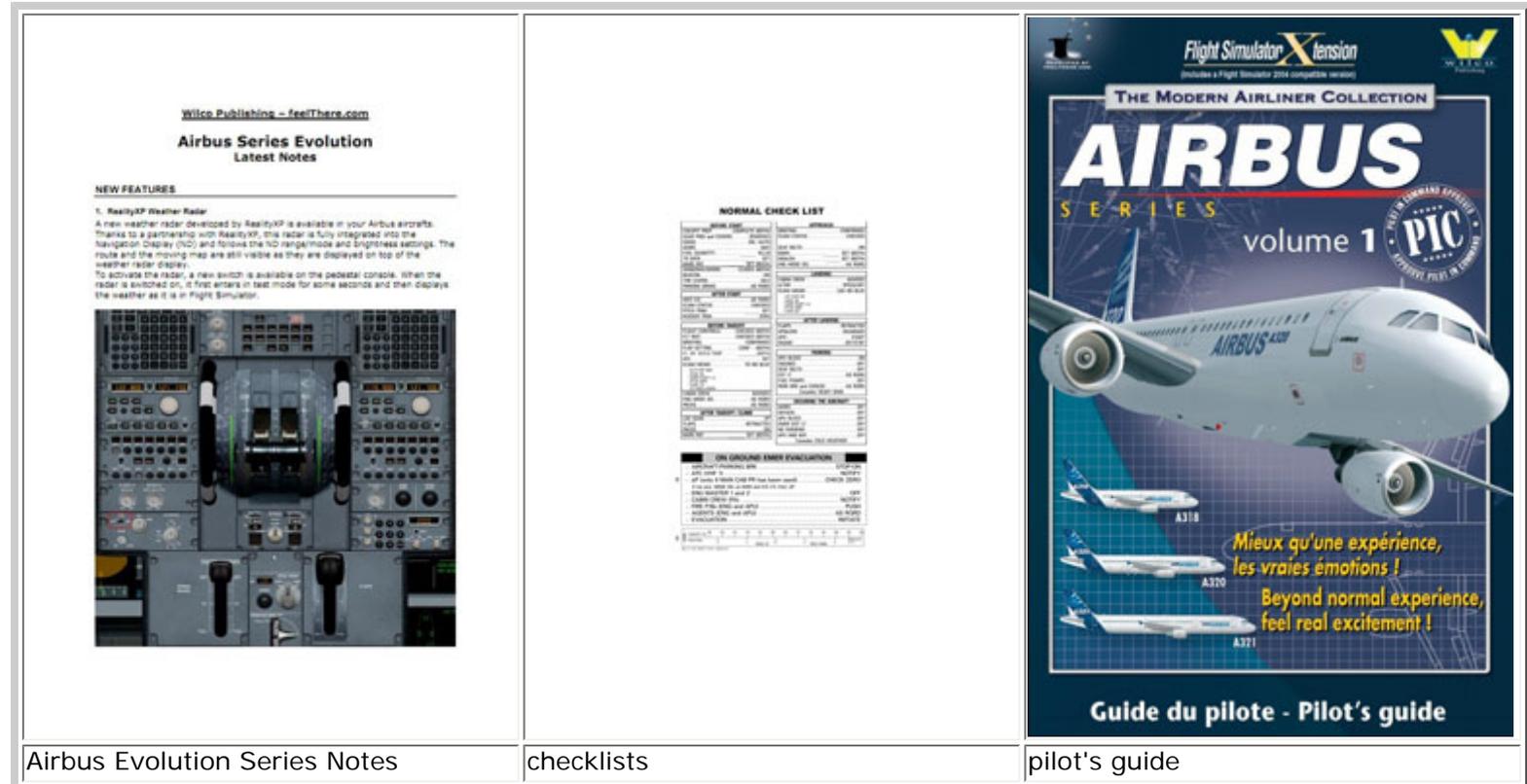
Airbus Evolution Series Notes	checklists	pilot's guide

First jump into the flight deck

The Airbus Series 1 Evo has a very homey feeling upon first sight. Once you get in the cockpit, if you have experience in other aircraft with FMC, etc. it's somewhat easy to understand how the Airbus works, especially this Feelthere/Wilco model. It's relatively easy to get it up and running and perform a proper flight with only limited knowledge.

However, there are some limitations to the way Airbus is designed in relation to other models and Feelthere/Wilco has included a perfectly good step by step approach in their documentation. This means that the "first jump into the flight deck" will be simply yet another flight if you've already read what they have to offer.

"Look mommy, it's a plane"

The exterior model of the airplane is very well designed and is very realistic, based on the countless pictures available on the Internet. There has been a lot of careful work in creating the exterior model and most things such as pitot tubes and wing markings have been included. The dimensions are also similar to real life based on the "glimpse" factor.

What is the glimpse factor you ask? If you have a quick glimpse at an aeroplane, would you be able to identify it? If you can identify the real world one with a glimpse, you should be able to identify the Feelthere/Wilco model with a glimpse.

The control surfaces, landing gear, windows and extra features such as winglets have also been modeled really well on the Airbus Series 1. The numerous antennas on top and bottom of the fuselage are also placed in the model. These seem to be in the same location as real life. In general, the whole exterior of the Wilco Airbus Series 1 Evo aircraft

seem to contain a great amount of realism.

The exterior lights have also been modeled very well. The nose lights actually turn with the wheel turn which adds a bit of extra realism. All other lights are also functional (including Beacon, Strobe, Nav, etc.)

A318

A319

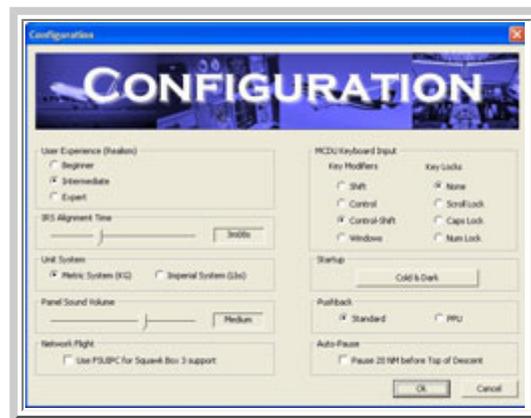| A320 |
| --- |

A321

Bill, chuck these bags on

The Airbus Series 1 Evo comes with its own Configuration panel which is considerably accurate. It has 4 options including the Configuration for loading the aircraft, Load Manager, Fuel Planner and Key Assignment.


Configuration (for Aircraft)

The configuration can also be opened up while Flight Simulator is running (under the Aircraft tab) and it includes some basic options such as Realism Settings, IRS alignment times, etc.

Load Manager

The Load Manager can be separately selected for the aircraft types individually. This means that the A318, A319, A320, A321 and ACJ (A319 Private Jet) can all be loaded in different ways. This is appropriate since all aircraft have different loading configurations and capacities and Feelthere/Wilco have accounted for this appropriately.

The Settings that can be changed for each aircraft includes Business class and Economy class capacities, Forward Cargo and Aft Cargo and the conversion between Metric and Imperial weight measuring systems. Unfortunately, there is no "Random" button that sets the Load for you to a random amount. The Load Manager also automatically sets the load on Flight Simulator so next time the aircraft is started up; it loads with the selected Load.


Confirmation that load has been set (right panel)
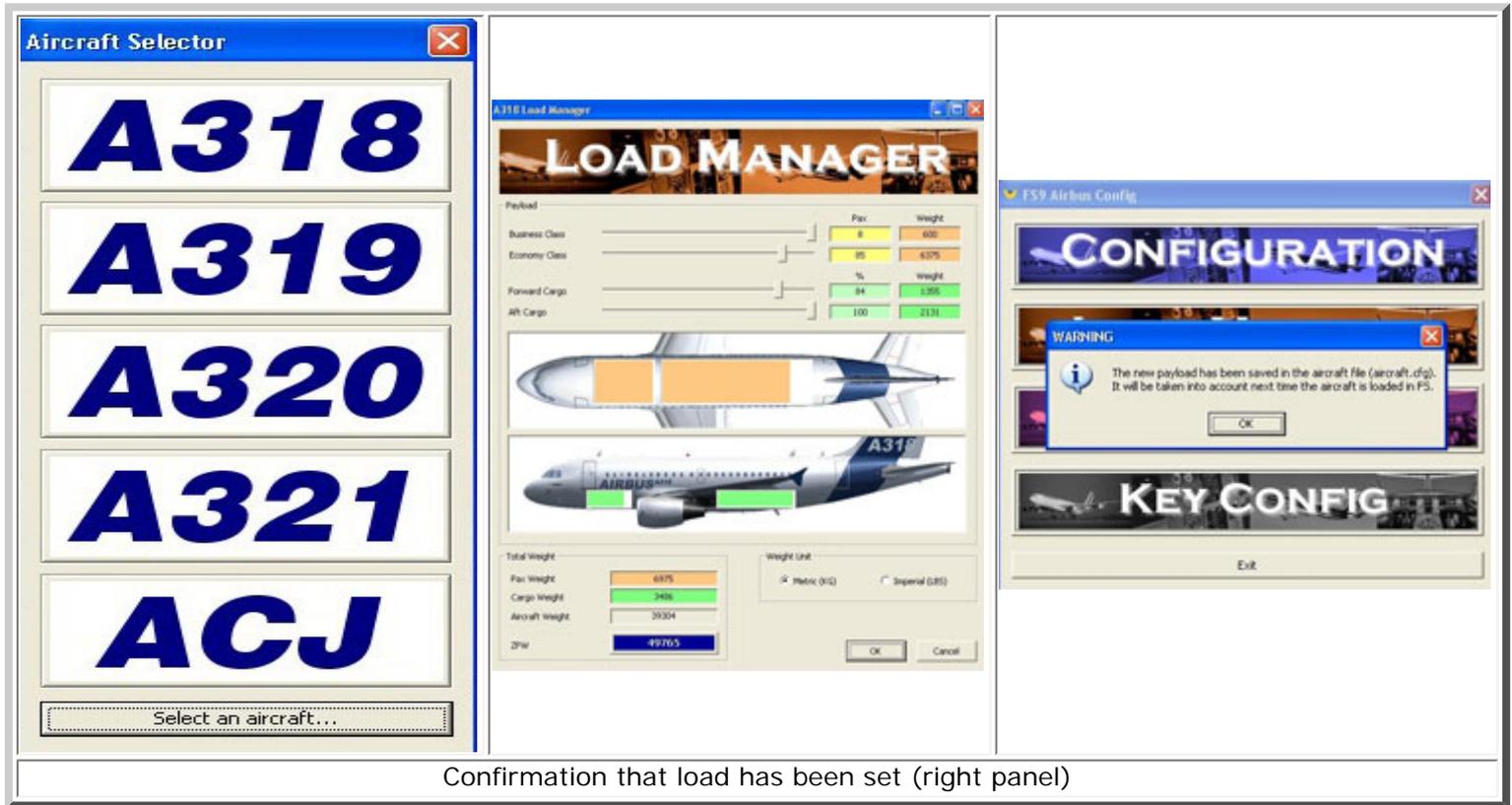
Fuel Planner

The Fuel Planner, similar to the Load Manager, has an option for different aircraft. If the Load Manager was set first, the Zero Fuel Weight (ZFW) automatically transfers to the Fuel Planner. Then, the pilot puts in all the required values for distances, cruise altitude, etc. and once validated, the Configurator displays the required fuel for each tank that can be selected on Flight Simulator.

Unfortunately, the Fuel cannot be automatically set on Flight Simulator while opening however the fuel prediction provided by the Airbus Config is accurate. The Pilot just needs to be careful of headwinds as the Fuel Planner does not account for that.
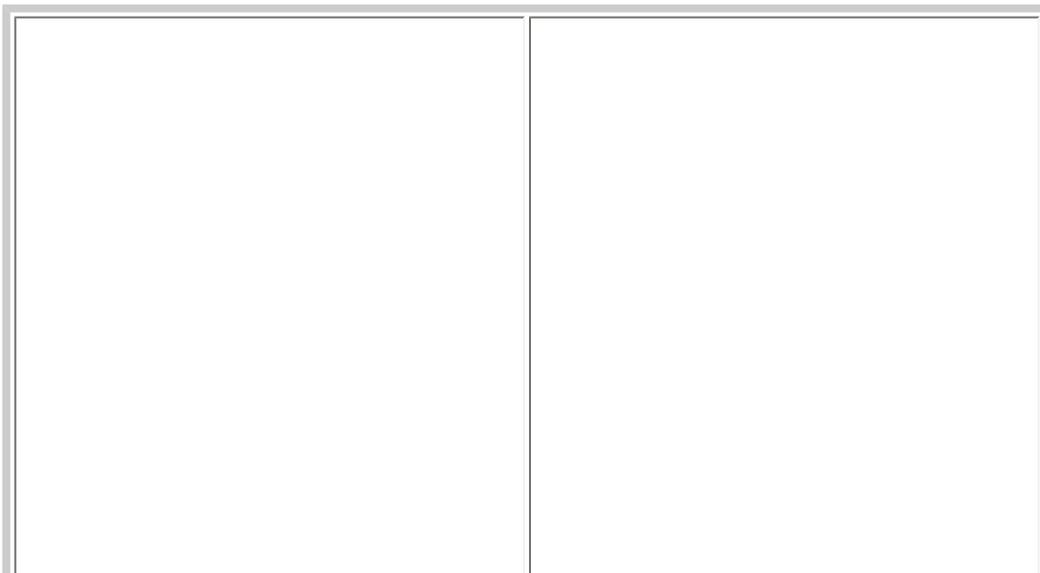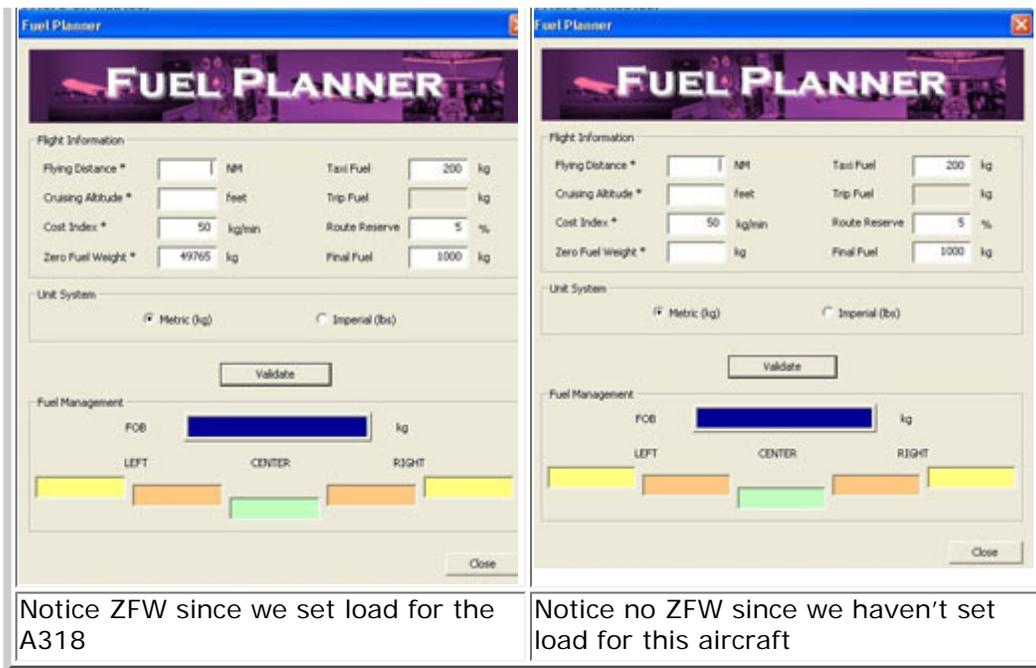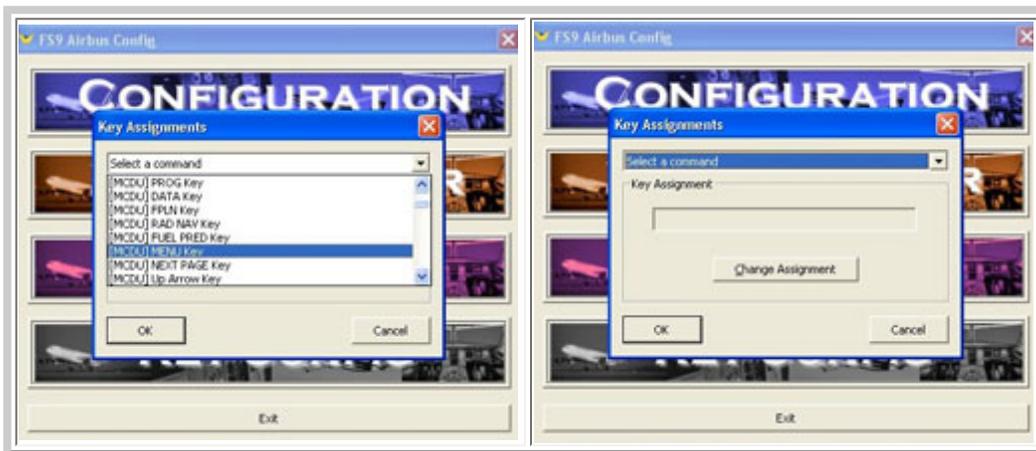
Notice ZFW since we set load for the A318	Notice no ZFW since we haven't set load for this aircraft

Key Assignments

The Key Assignment feature can set an individual key for each option on the Airbus. This will be specifically useful in the case of someone building a home cockpit wanting to assign each button to a separate function.

Cockpit Jewellery

The panels and gauges in the aircraft are mostly functional and are realistic. All the aircraft from the Airbus Series 1 Evo have a functioning Flight Management Guidance Computer (FMGC). Other aircraft also contain a Flight Management Computer (FMC) or Flight Management Systems (FMS) which is very similar to the Airbus's FMGC. A Nav Data is also upgradeable meaning you will be able to fly with the latest data. Feelthere/Wilco provides a fully functional 2D and 3D/Virtual Cockpit (VC) on all the planes in the Airbus Series 1. All buttons that work on the 2D panel work in the VC.

2D cockpit

3D (Virtual) Cockpit
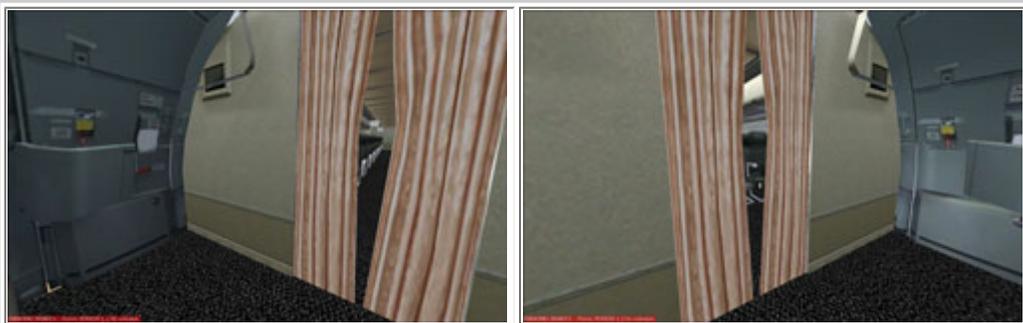
NOTE: Cabin can be viewed to a degree using FS VC movement option

Gauges:

Most of the gauges in a real life Airbus aircraft are used on the Feelthere/Wilco model. This includes a Primary Flight Display (PFD), Navigation Display (ND), Engine/Warning Display (EWD) and the System Display in the form of glass instruments. There is also an backup Artificial horizon and Digital Distance and Radio Magnetic Indicators (DDRMI) included.

The gauges are set up in a typical glass cockpit style with most displays being electronic displays.

The PFD includes all the required elements in a PFD such as Air Speed Indicator, Altimeter, Autopilot settings, etc.

The ND has various options between ILS, VOR, NAV, ARC and PLAN modes which are used for navigating a flight plan or Departure/Approach procedure. All of these options work as described in the manual. The distance on the ND can also be set between 10nm and 320nm. There's also an option to include CSTR (constraints), WPT (waypoint), VOR/DME, NDB and AIRPORTS in the ND for information to be visually available during flight.

The EWD has 2 different types of setup which are slightly different to each other. These are explained in the manual and are supposedly the same as real life due to the change in aircraft design. The EWD also includes information such as slat/flap settings, Fuel on Board, etc.

The System Display has various buttons to change between modes like the real world Airbus. This includes ENG, BLEED, FCTL, etc. All of these pages work as expected with significant accuracy, but unfortunately, the "ALL" button doesn't work. The ALL button is supposed to cycle through all the pages but in this model, it hasn't been included.

There is however a small bug in the System Display. During the pushback to take off phase of the flight (slightly varies from time to time), the buttons on the Centre Console can be clicked to display the appropriate page on the System Display but within a few seconds, a glitch causes the page to "unclick" itself causing it to switch back to the original page. This happens for almost all pages but the error does vary. Sometimes it works while taxiing, sometimes it works during pushback but not while taxiing, etc.

A zoomed in view of PFD, ND and EWD
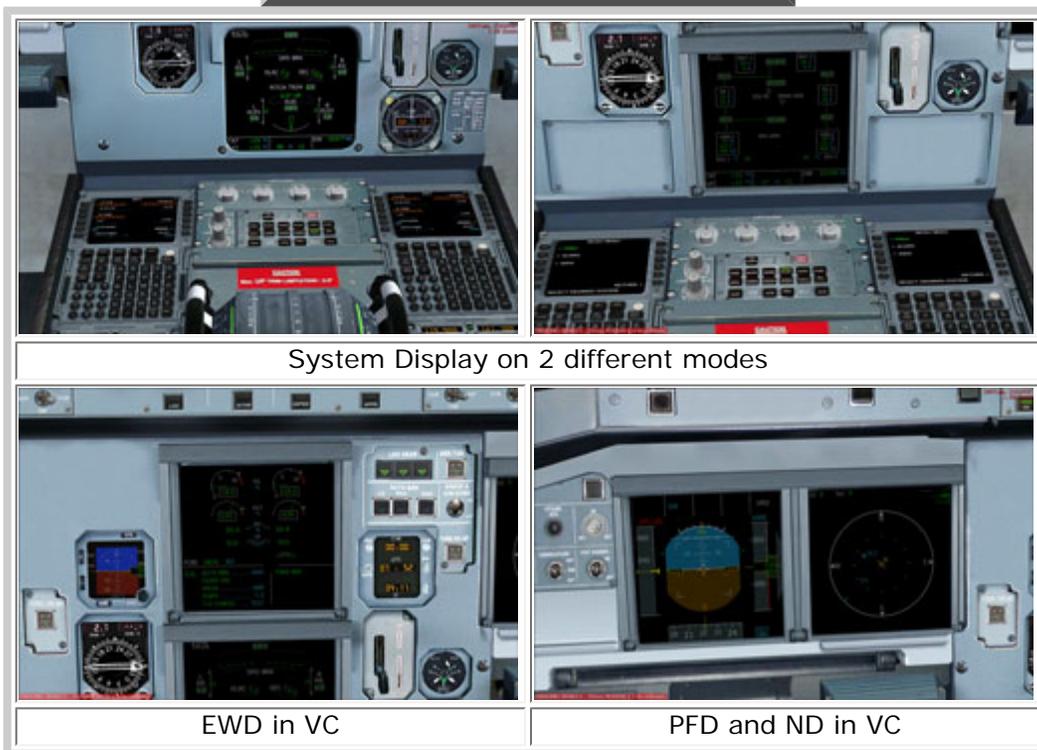
System Display on 2 different modes

EWD in VC

PFD and ND in VC

FMGC:

The FMGC has significant detail in the Airbus Series 1 Evo. Most features in the FMGC work as per real life however some buttons such as "SEC F-PLN" do not work. This is however a Flight Simulator limitation and not a constriction placed by Feelthere/Wilco. However, a Lateral Offset feature has not been placed in the FMGC regardless of sources claiming to have an offset feature on the real airbus FMGC.

The route that is entered in the "F-PLAN" section of the FMGC is displayed in the ND accurately. The Deceleration points, Top of Climb and Top of Descent points are automatically inserted into the flight plan. Various sources claimed that the Decel and Top of Descent points in the FMGC would often not line up with the track from previous versions, however, with the Evolution model of the Airbus Series 1, this has been fixed.

The error described was when a STAR/Runway was inserted into the flight plan approaching Top of Descent or when

the runway was changed after it was selected. With the Evolution model, this works seamlessly and the Decel and Top of Descent points are re-calculated each time causing no errors. This has worked correctly every time there has been an attempt to reproduce the error.

Most of the FMGC is also operational as normal, including selection of Dep/Dest aerodromes, Cost Index, Cruise Level, Optimum Cruise levels, Take off and Landing data settings, etc. Note, there are more pages and features available on the Airbus Series 1 FMGC than the pictures from below.

FMGC from the VC

Initial Page

Flight Plan page

Progress Page

Fuel Page	Departure Procedures Page	Take off Data (PERFormance) page

Autopilot:

The Autopilot systems on the Airbus Series 1 Evo work with almost no hassles. The Auto-Pilot has a "push/pull" feature in each knob similar to real airbuses for Managed or Selected modes. The Auto Pilot also works positively with the FMGC using the LAT track mode for the aircraft to follow the planned path. The knobs can also be changed by increments with a factor of 1 on a left click and a factor of 10 on a right click. The scroll wheel also works to turn the knobs. The left click and right click are also used to simulate a push and pull.

autopilot on the VC

Overhead Panel:

The Overhead Panel has been very well designed. All the important elements to flight on Flight Simulator have been functionally included such as electrics, fuel, lights, FCTL, etc. However, some minor specific details have been missed such as Cargo Smoke, Ventilation, Manual Engine Start, Oxygen and Emergency Power.

Although these do not aid much in the form of simulation, the functionality of the button would've made the aircraft just that little bit more realistic. However, these are only for those that feel like exploring and are normally not used in general when flying the aircraft on passenger runs.
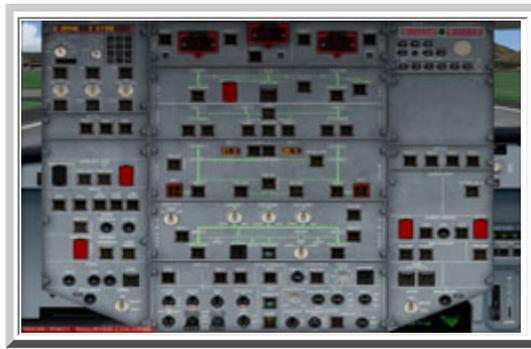
Radio/Throttle Panel:

The Radio/Throttle Panel includes most of the instruments in the middle console. The Radio, buttons to control the System Display, Throttle, Trim, Flaps Fuel Flow, Ignition, Spoilers, etc. are in this panel. An additional feature that has been added includes the weather radar.

Although not uniquely configurable, the On/Off switch of the Weather Radar is operational and is displayed appropriately on the ND. Further operating capacities (such as Tilt, map mode, etc.) would've been good but, again, it isn't a feature that you will ponder over throughout the flight and is only a guide while flying. A numeric display of an operational rudder trim is also in this panel.

HUD View:

The Evolution update also comes with a new HUD placement. The HUD works great and can be activated by pressing "W" twice from the 2D cockpit. It has all the information you need for flying the aircraft and has been simulated well. There are many "indications" on the HUD that will not be understood without reading the manual to know what all the icons on the ND mean. A disadvantage of the HUD is that it's only available individually via the 2D cockpit, but isn't viewable in general on the 2D or the 3D cockpit.

You may also notice that the cockpit of all the aircraft look almost exactly the same. This isn't an error; it's actually the real world Airbus that has designed similar cockpits for ease of pilot use.

One man's noise, another man's music

The sounds in the Airbus Series 1 Evo are unique as a group. Within the group, the A320 and the A320 IAE have different types of sounds. The A318, A319 and A321 have sound files linked back to the A320 or A320 IAE sound files (depending on engine type). Bottom line, they all use the A320 sounds although they are differentiated according to engines. This change isn't very noticeable. Although difficult to compare with real life, it is probably a negligible difference.

On Flight Simulator, the sounds are great. It's one of the few aircraft with a working APU sound. The sounds work like clockwork with the different phases of flight and the "Rev" on the engines can be clearly heard. The audible warnings and GPWS callouts are also realistic to the videos of similar aircraft on the Internet.

A really nice feature is when the reversers are active, the sound of a metal plane clunking down the runway almost feels like you're at the pointy end of the real deal.

Fly By Wire/Flight Envelope Protection

Fly By Wire is one of the most important aspects of an Airbus aircraft. For those unfamiliar with Fly By Wire, to put it short, it's a mechanism where the pilot's inputs to the control stick turns into electrical signals and passed to a computer, then travels via electrical wires to the control surfaces before an actuator moves the control surface. Basically, the control inputs are sent as electricity rather than a physical connection.

Test System
Computer Specs
Intel Core2 DUO E8400 @ 3.0 Ghz 2.00 GB Ram Nvidia Geoforce 9800GTX/9800 GTX + Windows XP Professional Service Pack3
Flight Test Time:
35 hours

The Flight Envelope protection system is a specially designed feature on the Airbus that restricts the pilots from banking/pitching more than a certain angle to either extreme. A mechanism also holds the attitude of the aeroplane in relation to the horizon. You will notice that in other aircraft, when you input a control, the aircraft might tend to drop or rise when the controls are released. The Fly By Wire system should prevent this on an Airbus. All Airbus aircraft in the Airbus Series 1 Evo have Fly By Wire.

The Feelthere/Wilco Airbus has replicated the Fly By Wire and Flight Envelope Protection system to a satisfactory standard. The functionality has been implemented although there are some minute errors.

The Flight Envelope Protection system is nearly flawless. When the aircraft is banked, the computer holds it within the bank limits and similar for pitch. The computer also brings it back to a "safe" limit if it's overbanked, i.e. The bank limit is around 67 degrees. The safe limit is 30 degrees. If an aircraft is overbanked to 45 degrees, and the pilot lets go of the stick, the plane slowly tends back to the highest safe limit of 30 degrees (NOTE: Values may be different in the actual aircraft).

The Fly By Wire system however has a few limitations. The attitude holding properties aren't always complied with. This is probably because of the way Feelthere/Wilco have programmed the holding properties. Out of personal observation, it was deduced that the computer notices the change in pitch when the stick has been released and it changes the trim to hold it steady. This can cause a bit of a delay in the aircraft responding and can make you confused in the important stage of flight (i.e. short finals).

One major phase of flight where this is obviously noticeable is the takeoff. After taking off, if the stick is released at about 5 degrees pitch up, the aircraft's pitch keeps increasing until the computer realizes this and the FBW might stop a bit over the line. Sometimes, depending on trim setting, it may stop almost as soon as the stick is released, but at times it may go beyond when you released the stick before coming back down.

This also happens while flying manually during a turn. After a turn is initiated, the aircraft's nose tends to drop and constant stick input is required. Once the stick is released, there is a drop in pitch before the FBW takes over and brings the attitude back up a bit. If you're flying with a certain configuration, this can easily put you off glide path.

Unfortunately, I am not fully aware of how the pitch system works in real life and can only make assumptions based on videos, but this was a noticeable difference and a potential error to the way it's really done. However, after understanding the limitations, you can counteract for the drop and thus a smoother flight.

Summary / Closing Remarks

At the end of the day, the aircraft of the Airbus Series 1 Evo are great to fly, with a good range of Short to Long Range aircraft. They have significant realism and once the minute errors are identified and understood, you can overcome them and fly the aircraft without even knowing they exist.

If you're a person that thinks take off and landing are the most fun parts of the flight, the short range aircraft will suit you very well but if you like cruise procrastination, the long range aircraft would work very well.

These aircraft will definitely not rust in my hangar as they will spend many hours in the air, working happily for my entertainment, day and night.

What I Like About The Feelthere/Wilco Airbus Series Vol 1 Evo

- Newbie friendly (if documentation read)
- Easy installation
- Detailed documentation
- Detailed additional documents (Checklists, specifications, etc.)
- Well simulated exterior model
- Deceleration points and TOD points fixed (evo update)
- Flight Envelope protection simulated properly
- Fly By Wire simulated properly (to a degree)

What I Don't Like About The Feelthere/Wilco Airbus Series Vol 1 Evo

- HUD not available in 3D cockpit or panel 2D cockpit
- Fly By Wire potential error
- System Display buttons not fully functional at various stages on the ground
- Some buttons that don't work

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Feelthere/Wilco Airbus Series Vol 1 Evo

(adobe acrobat required)

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