

AVSIM Commercial Aircraft Review

FSD International

Pilatus PC-6 Porter V2.0



Product Information

Publisher: [FSD International](#)

Description: Updated add-on.

Download Size:
25 MB

Format:
Download

Simulation Type:
FS2004

Reviewed by: [David Swindle](#) AVSIM Staff Reviewer - November 27, 2006

Introduction

The Pilatus PC-6, better known as the Porter, may be one of the ugliest and most versatile aircraft ever created. With a fuselage, tail and wing that seem to consist only of straight lines, an absurdly long nose, and big landing gear designed to absorb huge shocks, the Porter looks both bizarre and extremely functional at the same time.

The Porter first saw the light of day in 1959 powered by a piston engine, but in 1961, the Porter was fitted with a turboprop engine (becoming the Turbo Porter in the process), and in 1963 Pilatus fitted with Porter with a

Pratt&Whitney PT6-A flat rated to 550HP, which the Porter still uses today.

The Porter was designed to do just about anything, and has been used for carrying almost any kind of cargo, hauling skydivers, carrying passengers, firefighting, glider towing, search and rescue, medical evacuations, crop dusting, and as a platform for cameras and other scientific instruments. To make the Porter even more versatile, the aircraft can be operated from wheels, wheel-skis, and straight or amphibious floats to allow operations from almost anywhere.

Attesting to the usefulness of the Porter is the fact that the aircraft is in use in over 50 countries worldwide and operates in almost any conditions imaginable, from the jungles of South America to the high-altitude peaks of Nepal, where a Porter once made a landing at an altitude of almost 19,000 ft.

Although the versatility of the Porter is impressive, the most important and impressive asset of the Porter are its amazing takeoff and landing distances.

Thanks to a blend of a powerful engine, a big wing with huge flaps, and an almost unbreakable undercarriage, the Porter can take off within 640ft. and land within 400 ft., all while carrying a payload of almost 2,000 lbs. At lower weights and using other piloting techniques (such as engaging reverse thrust just before touchdown), the Porter is capable of improving on those already impressive numbers.

Installation, Documentation and Load Manager

The FSD Porters (there are three models; wheel, amphibious, and wheel-ski) are available as downloads or on CD from the FSD website. For new owners of the Porter, each version is \$27.95 as a separate download, or \$32.95 (plus \$6.50 shipping) as a CD. If you buy one of the new models, the other two cost \$18.50 each for a download or \$23.00 for a CD. For those who want all three models, all three will cost you \$59.95 as a download or \$65.00 for a CD.

For owners of the previous version of the Porter, the wheel and amphibious models are available at \$9.00 each, and the ski model can be purchased for an extra \$18.50. Each installer is about 25MB in size.



After purchase, you will be sent an E-mail with the download links and license information needed to install the aircraft, so make sure you have spam blockers disabled when you buy the Porter.

Test System

Asus M2N-SLI Deluxe
Motherboard
AMD Athlon 64 X2 5000+
Nvidia Geforce 7900GT
2GB RAM
300GB HDD
Microsoft Sidewinder 2
CH ProPedals
Windows XP

Flying Time:
11 hours

The installers themselves are pretty straightforward, but the online license-checking system can be a bit problematic, so firewalls and anti-virus software should be disabled when downloading and installing the Porter.

The documentation consists of an HTML manual that covers the operation of the aircraft, and a PDF that covers the operation of the included load manager. In addition, each version of the Porter has its own checklist and reference pages accessible from the kneeboard within FS, which makes flying the Porter far easier than other payware aircraft that require the user to print off a set of performance charts and checklists.

For some time now, FSD has used a load manager software to allow the user to add liveries, change payloads, select visual model and other settings, and change engine damage and system failure options. For the most part, the load managers have been very useful and intuitive to use, but for some reason, the load manager on the new Porter models simply doesn't perform most of the operations that it is supposed to.

From the load manager, it should be possible to select whether a specific livery has external fuel pods or not, and to change the payload that the Porter carries within FS. For some reason however, regardless of what is selected in the load manager, the fuel & payload screen within FS always shows the exact same payload and gross weight conditions for all of the Porter models. In addition, although the load manager does seem to be able to add and remove the external fuel pods (although the settings apply to every livery for the given version, not just the one selected) from the visual models, the fuel window within FS shows that the two 64 gallon aux tanks are always present and full, despite what the load manager shows.

Although it is possible to edit the payload and remove the fuel from the aux tanks from within FS, the fact that the load manager still has not been patched several months after the release of the aircraft is puzzling.

2D Panel

With the recent release of FSX, the 2D panel becomes less and less important to many people, but the Porter still has a 2D panel, and a very good one at that.



The Porter has a very spartan, utilitarian panel compared to most single engine turboprops, and FSD has captured this very well, even managing to make the 2D panel look recessed behind the glareshield.

The panel background bitmap is excellent, and uses subtle shading effects to make the "shelf" that the power levers sit on, as well as the glareshield, cockpit sidewalls, and the engine instruments look like they stand out from the panel. In addition, FSD even added holes into the panel, complete with wiring bundles, where there could be extra instruments fitted to the panel.

The instruments and gages all work like they should, and clicking on the primary flight instruments will bring up a bigger version of them. At night, the panel looks stunning, with a very realistic floodlight effect, as well as some nice gauge lighting effects.

In addition to the standard panel, there is also an IFR panel available which is basically a "zoomed in" view of the standard panel that focuses on the flight instruments and engine instruments. Several sub panels are available, encompassing the avionics, switch panel, environmental controls, and throttle quadrant, as well as the stock FS9 GPS.

VC

The original FS2002 Porter had one of the best VC's available when it was released, and the upgraded Porter keeps the tradition very much alive.

Although the gauges on the Fs2002 version looked very good, they suffered from a slow refresh rate, which was not helped by the fact that the VC had a big impact on framerates. With the 2.0 Porter however, all of the gauges move smoothly, and the VC is optimized for much better performance.



FSD did an excellent job of modeling the VC, with almost every imaginable switch being clickable and functional, and there are even a pair of fuzzy dice that move with the aircraft and can be added or removed with a click of the mouse. The VC also has a "lived in" look, thanks to some soda cans, a magazine, and a sectional that are present in the VC.

One of the most interesting switches in the VC is a knob that allows the user to change what appears in the cabin of the Porter without needing multiple aircraft models.. The setups include seats for passengers, seats for skydivers, and of course a full load of boxes and crates. Although the knob doesn't affect the weight and balance of the aircraft, the loads do appear in both the VC cabin as well as being visible through the windows of the external model.

All of the expected animations are included, as well as some nice touches like the moving fuzzy dice and the animation for the landing gear suspension is so well done that I have found myself bouncing the Porter along the runway just to watch the struts extend and compress from the VC. The textures are also superb, with little details (such as placards and even the lettering on the tires) abounding.



Although there is a lot of detail present in the VC, I was very impressed to see that the framerates in the VC were significantly higher than on the old Porter, with framerates staying locked at 30FPS.

External Model and Textures

FSD have always produced excellent visual models, and the Porters continue the tradition in an impressive manner.

The models themselves are extremely well rendered with all of the standard animated parts being present and moving as they should. Small details are also present in abundance, such as the rope holding the oars to the floats on the amphibian model. FSD has also added an animated pilot, which is a very nice touch, although the figure lacks some of the more sophisticated animations present in other add-on aircraft.

Although the models themselves are very impressive, what really makes the Porters look good are the textures. Due to their boxy, slab-sided fuselages, Porters in the real world are often festooned with some of the most colorful and outlandish paint schemes in the air, and the full range of colors worn by Porters are present in the FS version.



Each model comes with only one texture set (to cut down the file size), but many additional texture sets are available and can easily be added to any or all of the Porter models. The additional textures are very well done and range from standard military paint schemes to the outlandish, colorful paint seen on Porters used for skydiving. All of the textures show weathering to one degree or another, with exhaust and fuel stains that make the aircraft look used without looking beat up. Most of the textures have some degree of reflectivity in them, and although the effect works well, it looks better on the bare metal textures than on the darker, painted ones.

Much like the VC, the 2.0 version of the Porter delivers excellent frame rates on the external model.

Flight Dynamics

Now that I've described the visuals on the Porter, it's time to talk about the flight dynamics.

While testing the Porter for this review, I was continually impressed by how lifelike FSD has made the aircraft feel in FS. The amazing STOL performance of the Porter stems from a combination of a simple wing with big flaps and a powerful engine swinging a big four bladed propeller. This combination of factors make the Porter very easy to fly, while allowing it to perform feats that are impossible for most aircraft.

Because the Porter is a taildragger with a long nose, taxiing can be somewhat interesting as the cowling tends to block the view forward (this is not an issue with the amphibian), but once you get used to making gentle S-turns, the Porter is simple to taxi.

On the takeoff roll, the Porter begins to show why it is known for short takeoffs. With 20 degrees of flaps and full power, the Porter almost leaps off of the ground, and if the takeoff is made with the stick held all the way back, the Porter will actually rotate on its tail wheel on takeoff.

Thanks to its generous wing area and powerful engine, the Porter can climb at 1500-2000FPM, even at maximum gross weight. Because the PC-6 is unpressurized, it usually operates at under 10,000 feet, but if a higher altitude is required, the Porter can operate at up to 25,000 feet and can reach close to 30,000 feet at lighter weights. This high altitude capability also has some entertainment value. If one can find strong winds aloft, it is possible to add flaps and hover the Porter, or even fly backwards by flying in slow flight into the wind.

Once in the air, the Porter is a delight to fly, possessing a mixture of stability and agility that make the Porter a good airplane for cross country flying as well as agile enough to squeeze in and out of tricky mountain airstrips. This stability also makes the Porter easy to fly in turbulence as well as a very good aircraft for flying instrument approaches.

Two things that many FS aircraft seem to lack are a sense of mass as well as realistic low speed handling, but the Porter does a superb job in these two areas. In turns, the Porter stays in a bank, without requiring the constant aileron inputs that many other FS aircraft require to prevent them from rolling out of the turn.

Once slowed down, the Porter reacts very realistically with the controls becoming progressively "mushier" when approaching the stall, and once stalled, recovery is simply a matter of lowering the nose and adding a bit of power to recover.



Although the Porter's big wing and massive landing gear provide amazing STOL performance, they also mean that the Porter's quite slow compared to most single engine turboprops. Normal cruise in the Porter is between 110 and 120 KTS indicated, and the power settings listed in the documentation produce very similar numbers for airspeed, fuel flow and range in FS. Using internal fuel, the Porter has a range of about 500NM, but adding two external tanks (for a total of 128 gallons of extra fuel) increases the range to around 870NM. The fact that the Porter can operate at such a range of speeds (level flight at 55KTS is fairly simple with full flaps), makes it both a good cross country aircraft as well as a great way to just check out scenery.

Even though the Porter is a delight to fly, it is on decent and landing that the STOL capabilities of the Porter become apparent. From level flight, all one has to do to initiate a truly impressive decent is to slow below 88KTS, bring the power to idle, extend full flaps, and point the nose straight down. With full flaps, the Porter will descend at about 70KTS with a sinus destroying descent rate of well over 5,000FPM. Once low enough to land, simply bring the nose up, and the Porter will rapidly decelerate.

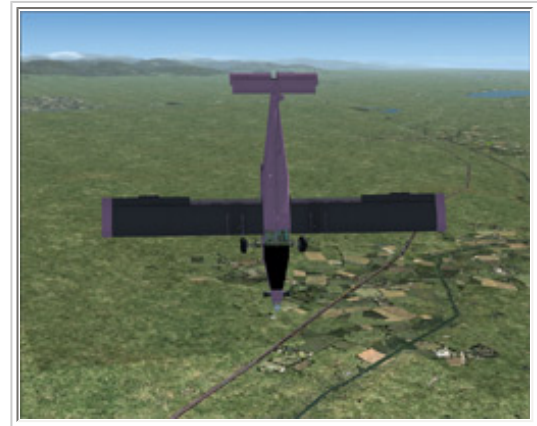
Touchdown happens somewhere below 45KTS, and with minimal braking, an impressively short rollout can be achieved. But with full brakes and full reverse thrust, it is possible to stop in well under 500 ft. Performance for the amphibious Porter is similar to that of its landlocked brethren, but cruise speeds are reduced by several knots thanks to the added drag of the floats.

With a little practice, I was able to fly over an airport at about 10,000ft, do an almost vertical decent onto about a ½ mile final, and then level out and land, and stop within the first 500 feet of runway, which really shows what an amazing aircraft the PC-6 is.

Sounds

Sounds are a critical part of the immersion factor for FS aircraft, and FSD certainly delivers the goods in the audio department.

Inside, most of the sound comes from the engine up front as well as the slipstream and propeller blast passing the cockpit. The engine sounds are suitably muted, but the flap sounds are very loud, which isn't terribly realistic, but does make it possible to tell how much the flaps are moving without having to look at the flap indicator. Also present are sounds for the climate control system, which include a pretty impressive sound for the blower when it is activated.



Externally the sounds are what one would expect from a high powered turboprop, and do an excellent job of capturing the growling whine of the Pratt & Whitney engine.

Conclusion

Overall, I think the FSD Porter V2.0 is an excellent addition to FS9.

The new Porter delivers an excellent mixture of realism and fun while also finding an almost perfect balance between detail and performance on mid-end PC's.

Even though there are some unpatched issues with the load manager, the Porter is still an excellent upgrade for owners of the previous version or a worthwhile investment for those who don't own the earlier version.

Reviewers note:

During the writing of this review, FSX was released. Although the Porter is listed as working with FS9 or FSX, the installers for FSX hadn't been released at the time of this writing, so I was unable to test the Porter within FSX. From what I have seen however, I believe the Porter will be just as impressive in FSX as it is in FS9.

What I Like About the Pilatus Porter V2

- Comprehensive documentation.
- Excellent visuals, sound and flight dynamics.
- Wide range of additional textures available to download.

What I Don't Like About Pilatus Porter V2

- Online licensing system can be problematic.
- Load manager issues have not been addressed months after release.

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