



A quick 'How To' guide for X-Plane

By our technical Editor, Ben Mullett.

Last issue we reviewed the X-Plane flying simulator with photographic scenery for PC. Here's a bit more info on where to get the software and how to make it work...

What we need to do:

1. Get hold of the X-Plane software and install it
2. Download an additional aircraft (gyro, of course) and install that into X-Plane.
3. Once that is working, you can add the photo scenery.

Web sites to get A-Plane from:

The main website for X-Plane is Laminar Research at:
www.x-plane.com

Download the DEMO software (it is 154 Mbytes !!!) which allows you to fly for 6 minutes at a time from:

www.x-plane.com/demo.html

or you can buy X-Plane Version 7 for only \$25 from:

www.x-plane.com/order.html

- it's probably cheaper than a dial-up call to download it!

Web sites for Aircraft:

You can find lots of other Aircraft and Scenery links at:
www.x-plane.com/xworld.html

Here you can find aircraft to download...

www.x-plane.org

e.g. For a number of autogyros for use with X-Plane, click on 'Aircraft' then 'X-Plane 7' and then 'Gyro Copters'

You should download aircraft for the version of X-Plane that you have. It is possible to use aircraft for earlier versions, some work fine and others might do 'funny things'. e.g. the Bensen B-8M available for version 6 at: www.x-plane.org and clicking 'Aircraft' then 'X-Plane 6' then 'Gyro Copters' does work with version 7 but has annoying wiggly lines onscreen (if you want a fixed version of this, send me an email at: xplane@gyroflight.org)

Photographic scenery website:

1. go to: www.circle-software.co.uk

2. beneath the 3 pictures, click on:

"Download the Demo Version Now!"

It is 75Mbytes, so you will have to wait a while!

Remember to read the 'blurb' and remember to select an airport which is within the DEMO scenery area in X-Plane. Loading of scenery takes *forever* and uses lots of memory, it's best to have 1GB of RAM for scenery.

Example of how to load a new aircraft:

Assume you have installed X-plane version 7 in the folder:

"C:\Games\X-System 730"

1. Create a sub-folder called "Downloads"
2. Go to the website: www.x-plane.org and click on 'Aircraft' then 'X-Plane 7' and then 'Gyro Copters'
3. click on "Helithruster Gyrocopter"
4. click on Download, then Save. Save the file in:
"C:\Games\X-System 730\Downloads"
5. The file will be saved as:
"C:\Games\X-System 730\Downloads\Helithruster.zip"
6. to use this, you must have a ZIP program on your computer which can un-compress the 'Helithruster.zip' file. If you are using Windows XP, this facility is built-in, otherwise you will have to get hold of an un-zip program... You can get WinZip from www.winzip.com as a free evaluation which will work for 21 days.

7. You need to put the contents of the Helithruster.zip file in a folder where X-Plane can find it.
 - Look in "C:\Games\X-System 730\Aircraft"
 - if there isn't a "Gyroplanes" folder, create one now
 - then create a Helithruster folder in the Gyroplanes folder
 - you should now have an empty folder called:
"C:\Games\X-System 730\Aircraft
 \Gyroplanes\Helithruster"

8. Un-Zip the Helithruster file (just double-click on it) and copy all the files into your Helithruster folder. Note: some aircraft definitions have other sub-folders called 'airfoils', 'sounds' and 'weapons'; if this is the case, copy all the files and sub-folders into your new aircraft folder.

9. Read any .txt or .doc files that come with the new aircraft (there isn't any with the Helithruster)

10. run up X-Plane
 - Mouse to top of screen and click File, open Aircraft
 - Click Gyroplanes, Helithruster
 - Click the "UFORAF5.acf" file
 - To make it easier, go to the "Settings, Joystick & Equipment, 'Nullzone' screen" and move the sliders down to about 2/3 of 'realistic'.
 - You're ready to fly !

At this point you should read up on how to use X-Plane, but here's a real quick start...

For the Helithruster:

- click ON for the Avionics, Battery and Generator switches
- click in the starter keyswitch to select BOTH, then click and hold to start the engine (this is a bit tricky)
- throttle up to 3000 (no more or you'll start to roll) and click Pre-Rotator ON
- when you have rotor RPM of about 150, pre-rotate OFF, brakes OFF
- you may need to straighten up with rudder, it's best to have rudder control on joystick buttons (or some pedals!)
- when you're moving straight down the runway, full throttle
- at about 70knots / 300rpm rotor, give it a bit of back stick and lots of left to counter the prop torque
- you should now be airborne, keep airspeed at about 60knots to climb. Too much back stick and you will lose airspeed and sink.
- at 800ft, throttle back to about 4,800 and fly around
- land
- done!



Once you are happy with that, you can alter the Settings back to 'fully realistic' and add some Weather (wind and turbulence is fun).

Note: this is just a 'quick-and-dirty' introduction to this X-Plane simulation. A more realistic exercise is to practice Wheel Balancing before you try and take off ;-)



Book & Simulator Reviews

By our technical Editor, Ben Mullett.



X-PLANE PHOTOGRAPHIC SCENERY (XPPS) FOR THE UK - PC & MAC!

Circle Software & Simulation Ltd
published by Horizon Simulation
www.circle-software.co.uk
www.horizonsimulation.com

The XPPS suite offers three UK scenery add-ins for the X-Plane flight simulator from Laminar Research. The striking photographic realism stems from the use of "MilleniumMap"(tm) photographic files combined with Intermap Technologies "NEXTMap Britain"(tm) elevation data - this is indeed high-tech scenery.

For the benefit of new readers, X-Plane is the best simulator that we have tried for flight accuracy, it has FAA endorsement for real-time FW ATPL training on the right hardware (the hours 'flown' count as flight hours) and the ability to model rotor performance to a high degree of precision. You can experience rotor decay in low-G, blade sail, and some interesting lag-derived instabilities, unlike some other simulators (Billy Gates please note) that fudge it with a 'fake funny wing' algorithm that is as authentic as a nine-cent piece and worth rather less.

This is the simulator of choice for Gyro flyers, and is used for ground training at the NW Gyro Club (www.nwgyroclub.com) amongst many others worldwide. Opinions vary as to which version is the best - many flyers prefer the Version 5 (5.66 was the last V5 release, 5.99 is a scenery/sims add-on) some prefer Version 6, as released on the Hofstra CD at 6.51 - final release was 6.70, and many simulated Gyro designers are torn between that version and the later, more powerful Version 7 - currently at 7.41. These scenery discs are tested to work with versions 6.5 to 7.41 (very latest and recommended by Circle), whatever some of the earlier packaging may say.

See www.X-Plane.com and www.X-Plane.org for more on their software and the thousands of free-to-download simulations available. Remember, you can try X-Plane for free - it all works, except that there is a six-minute limit on the joystick each time the program is loaded, and you are restricted in where you can fly. Mouse and keyboard control still works - for free!



As a dedicated student of rotary wing action, I use my own X-Plane software to explore the behaviour of different autogyro configurations at model scale as well as full size. We have validated our innovative X-Plane sims against models that we built & flew.

So I'm a designer, rather than a flyer, and scenery is not really , ummm..... my scene?

But... there was a special offer a while back on the web, and I sprung for a full scenery package when upgrading to V7 and never regretted it - the effect was much more rewarding than I had anticipated - especially in those parts of the US where the detailing was best. Not bad in the UK, either. So it was with nascent interest that I enquired after a copy of XPPS.

The two packages we received cover the southern UK between them - Volume 1 is "Midlands, East, & SE England", Volume 2 is "Wales, West & SW England". Each contains three CDs, each packed with a huge ZIP file that contains the data.

Volume 3 - "Northern England and N. Wales" is imminent. It should be on sale by the time you read this. The three together cover all of England and Wales.



The map is taken from the professionally-produced 28-page user manual that includes all that a novice should need to install the scenery, as well as some usefully detailed information for more advanced users.

This review nearly did not make it in time for press day, because the user manual prompted me to check my hard drives for defrag level (gruesome) and pointed out that I needed to install more RAM now that we were using Win XP. But I knew that, didn't I? That's why I'd bought some more, surely? Sadly I had not yet got around to installing the new RAM - so this was a wake-up call. D'oh!

So Defrag ran for several hours, and then we set about loading the new scenery, which has a password, but is otherwise straightforward Zip file extraction.

Now I was not expecting too much - one cannot store very detailed photos of even a smallish nation such as ours on a domestic desktop PC, and there is no point in expecting X-Plane to process your neighbour's garbage cans and garden gnomes every time you fly overhead. Apart from the disc space, the processing overhead would slow things down to snailspeed if every blade of grass or garden ornament was stored and faithfully replayed. Scenery detail is inevitably a compromise.

But having said all that..... This really works!

The detail does (of course) become coarser at lower altitudes, but the performance baselines have been moved - a new goal created for others to shoot for.

This image quality works in at least two ways - the feel of the simulation is vastly improved - it's dramatic in it's effect - and at the same time the photo-realistic accuracy of the sim makes it valid for VFR run-throughs and flight exercises to a level never previously possible. Excellent!

Even final approach is markedly easier because it is so much more realistic - there are real landmarks to aim for and recognisable places to turn - circuit practice

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becomes practical at last. Not so beautiful at low level because of the limitations of real storage and representation on a PC, but much more useful than standard CG scenery.



Screenshot of RAF2000 on approach to Marham at 1,000ft agl.

My expectation was a cosmetic enhancement - it does that, and brings an atmosphere all its own, but the real benefit to hard-nosed sim users is the reality it brings to a flight or an exercise. Well worth the investment if you are looking for results.



Screenshot of Cierva C4 over Henstridge at 5,400ft

The downside? Well, it will take longer to load the scenery initially than the standard stuff at low-res, and changes of location/airport that require a reload will be longer too. If you can afford this, and your PC has the necessary specification, this is a highly recommended addition to X-Plane. At under £30 it represents good value when the sheer amount of carefully integrated photographic data is considered. Well worth putting on your Wish List - just look at the screen shots of Henstridge!

Our aging desktop (spec below) managed a consistent 55 to 60 frames per second at max res and highest colour resolution, even before we installed any extra RAM. That is more than enough - one can go down to 15 FPS and still get adequate sim precision.

So PC performance is not an issue, even with a middle-of-the-road desktop. If yours does not meet

the minimum spec, never fear. X-Plane resolution is tunable to suit your machine, and (admittedly at medium res) we initially used an 800MHz Duron with a 32M graphics card for all our simulation and sim designs - it would get slow with full detail, but it would still simulate accurately with the eye-candy turned down.



Eye-candy: an outside view of the Pitcairn PCA-2

XPPS goes beyond eye-candy, although it is packed with scenic detail that delights the eye - the sea shore is a particular favourite of mine, but there are so many to choose from. This new level of accuracy is both enticing and informative, of great benefit to the pilot-in-training, the dedicated pilot/navigator or the sim enthusiast.

Ben Mullett, Technical Editor

Minimum PC specification for X-Plane & XPPS under Win 98/ME:

Multimedia PC with 1 GHz Athlon or 1.13 GHz Pentium, 512 MB RAM, 1GB Virtual Mem (Swap File), AGP 4X Graphics, 64MB VRAM, 3D hardware acceleration - OpenGL 1.2, about 2GB free HDD space per install, SVGA with 16-bit colour.

Minimum PC specification for X-Plane with XPPS under Win 2k/XP:

Multimedia PC with 1600+ Athlon or 1.7 GHz Pentium 768 MB RAM, 1.5GB Virtual Mem (Swap File), AGP 4X Graphics, 64MB VRAM, 3D hardware acceleration - OpenGL 1.2, about 2GB free HDD space per installation, SVGA with 16-bit colour.

Higher res displays may need more VRAM and CPU power if enabled. More CPU power, more RAM & VRAM, better graphics will all help!

The test PC:

Our desktop has a 2.53GHz Pentium 4, due to be upgraded from 512MB to 1024MB RAM. It has 64MB VRAM MX460 graphics and a freshly defragged HDD partition on the Maxtor 4G120J6 with 18GB free. We set the display on X-Plane to 1024 by 768 which feels good on a 19" NEC CRT.

All trademarks are recognised and acknowledged.

Contacts:

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Circle Software: www.circle-sopftware.co.uk

Laminar Research: www.x-plane.com