HG Safety Prep with GliderSIm – OVERVIEW v002, RJMilla, 03/23/25

Calling All Pilots!

Do you want to improve your safety by being better prepared before you arrive at a new flying area for the first time?

Do you want to:

- Learn what the area around a launch looks like
- Learn where the primary and backup LZ fields are located relative to launch
- Learn what the local area's terrain, roads, towns, etc. look like from the air
- Learn what physical features and hazards may exist in an area and what they look like from the air
- Do all of the above from the comfort of your own chair, anywhere in the world, at anytime, regardless of the current weather and wind, either on your own or with other people

If your answer to any of those questions is YES, then you may want to use
GliderSim-by-5Drealities
as part of your preparations before an event at a new-to-you location.

GliderSim is a hang gliding (and paragliding) VR (virtual reality) flight sim computer game. (https://5drealities.com/games/GliderSim.aspx)

You can either fly on your own, or in multi-player "rooms", where you can share the virtual-sky with other pilots from anywhere around the world, as long as y'all have high speed internet connections!

Currently, there are only three preset locations available to fly in ***GliderSim*** (USA: Sun Valley, Idaho; Grand Tetons; Switzerland: Walenstadt).

However, with the ***Earth-Online-Plus*** pass within ***GliderSim***, you can fly *ANYWHERE* in the world, including sites like:

- Ager, ESP
- Devil's Dyke, GBR
- Laveno-Mombello, ITA
- Torrey Pines, USA

GliderSim includes a 30-day free trial of the ***Earth-Online-Plus*** pass.
After the trial expires, additional passes may be purchased.

GliderSim is available in a Standalone Meta Quest version that runs on Meta Quest VR headsets (I have seen it run successfully on Quest2, Quest3S and Quest3 headsets – see the website for full list of supported platforms).

GliderSim is also available as a Windows PC version via Steam. The PC version can be used with or without a VR headset. To run it successfully, your PC will need to meet these minimum system requirements:

- 64-bit processor and operating system (Win10/11)
- Intel-Core-i5-4590/AMD-FX-8350
- 8Gb RAM
- NVIDIA-GTX-970/AMD-Radeon-R9-290
- DirectX ver 9.0
- 22 Gb available storage space
- optional VR headset/controllers: SteamVR/Oculus-PC/Quest

IMPORTANT NOTE: having a graphics card is only truly required if you want to use ***GliderSim*** with VR headset/controllers. If you're happy using it with a regular, old-school 2D monitor, keyboard and mouse, you do not need to have a dedicated GPU, if your CPU has enough oomph! For example, I've run it successfully on an Intel Core Ultra 7 155H with integrated graphics, no GPU, and 32Gb RAM, displaying on my regular monitor. It looks very good and runs smoothly. However, it will NOT connect to my Quest2 headset, as I don't have a GPU.

GliderSim does have limitations. It only has a single HG representation (based on a Wills Wing Falcon), and only a single PG model; the simulated flight characteristics are pretty good, but not 100% realistic; it only has a very simple vario-/alti-meter; it is not a 100%-accurate representation of how wind and thermals really behave.

In my opinion, the two biggest shortfalls in ***GliderSim*** are regarding airspace and navigation.

Airspace: there is NO depiction at all of any airspace boundaries or related information. If there is a geographic feature that coincides with an airspace feature (e.g. the corner of an airspace area is at the intersection of two major roads), you should be able to locate the geographic feature in ***GliderSim***, but you then just need to know it's relevance to the airspace definition.

Navigation: it is not currently possible for a user to enter waypoints and setup routes between them. ***GliderSim*** does have "XC challenges", which are predefined sets of waypoints and a route to fly between them. In the sim, the waypoints are indicated in sequence with "giant neon green cylinders in the sky" and you simply fly from one to the next one. If you look at the map view, you will see the waypoints, but no route line.

Despite those two shortfalls and the other considerations listed previously, in my opinion, ***GliderSim*** is remarkably good overall, and I think it is definitely good enough to help with the type of safety-oriented preparations listed at the beginning of this article.

As with many tools, there is a learning curve to climb before you really benefit from using ***GliderSim***. However, it's not that much in the grand scheme of things. After a few sessions, you'll start to get the hang of it!

Alternatively, if you don't want to fly around in ***GliderSim*** on an HG or PG, but you do want to look around at the terrain, etc. you can do just that by moving the Spectator-Cam around the virtual world - it is extremely intuitive and straight-forward to use.

The regular price for ***GliderSim*** is US$ 29.99 + tax.

Earth-Online-Plus passes may be purchased within the game for 30/90/180/365 days (US$ 2.99/6.99/11.99/16.99 plus tax, respectively).

Please, please, please, **DO NOT** use **GliderSim** as your only method of preparation. As always, when flying at a new-to-you location, ask for advice and guidance from the local flying community. Think critically about safety risks and potential mitigations. Always seek out information about any local airspace restrictions. Be current on your glider and equipment. Make sure your equipment is well maintained and prepared for flight. Make sure you are fit, healthy and well rested before you fly.

For anyone who is interested in using ***GliderSim*** as part of your prep work, more info, tips and ideas (and this document!) can be found at the following Telegram group:

https://t.me/+DN_oubcgDhg1NGFh

("HG Safety Prep using GliderSim")

You can also post in that group with questions and discussion about the contents of the PDF files pinned in that group.

Please be aware, ***GliderSim*** is not the only option out there for simulating HG or PG flying with a VR headet.

FreeFlightExperience (https://freeflightexperience.com) is another very good hang gliding VR flight sim program.

FreeFlightExperience only runs on a PC, and it is explicitly intended for use with VR headset/controllers (although it can also be used with a simple monitor, keyboard and mouse/joystick setup). It has more demanding minimum system requirements than ***GliderSim***:

- i7 4 core processor or equivalent, ≥ 3.8 GHz
- NVidia GeForce 1080Ti with 8Gb memory
- 16Gb RAM
- 10 Mb/s internet connection

(see the website for more details).

It has a range of HG models (based on Wills Wing T3, U2, Falcon4), highly detailed modelling at 51 preset locations from across the world, less detailed modelling everywhere else, and very high fidelity glider characteristics (including VG action) and wind/thermal behavior, a simple vario and an Android phone app flight computer (e.g. XCsoar), which can be run with the screen definitions off your very own instrument!
It also includes other computer-controlled HGs flying around with you, as well as birds, and dust devils.
It does not yet support multiplayers but that feature is currently in work.
Currently, it only provides highly detailed modelling for the preset list of locations.

I have found the learning curve with ***FreeFlightExperience*** is quite a bit steeper than with ***GliderSim***.

FreeFlightExperience costs US$ 69.95 + tax

Due to the multiplayer and ***Earth-Online-Plus*** aspects of ***GliderSim***, I think that the safety-related objectives I listed at the start are better met today with ***GliderSim.*** As current developments for ***FreeFlightExperience*** are deployed, my opinion may change.

For hang glider pilots that are interested in using these VR tools to help with their flying currency and proficiency (including with instruments), rather than the safety-related objective I listed at the start, I think ***FreeFlightExperience*** provides a better option.
I think the glider and weather modelling are a higher fidelity than ***GliderSim***'s; and I think that being able to practice with your own instrument screens is much better.
However, recall that ***FreeFlightExperience*** does not yet do multiplayer or fully detailed modelling worldwide, unlike ***GliderSim***. Also, ***FreeFlightExperience*** costs more and requires a higher-spec computer, as well as needing a VR headset, whereas ***GliderSim*** can be run just using a VR headset.

And finally, in case anyone's wondering why I'm sending this out…

- I am **NOT** receiving any form of benefit/payment from sending out this notice or from anyone buying ***GliderSim*** or ***Earth-Online-Plus*** passes, or ***FreeFlightExperience***
- I just want to share what I have learnt about ***GliderSim*** and ***FreeFlightExperience***
- I think ***GliderSim*** can help us be better prepared, and therefore be safer, as pilots.
- My personal goal is to be as safe a pilot as I can reasonably be in order to reduce my risk of accidents or incidents
- That is my aspiration for everyone else too
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Best wishes to y'all for safe and fun flying!

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