

PAL Stereo 3D MOD – v5 Final

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Description: This MOD is intended to allow **Il-2 Sturmovik** users enjoy **Stereoscopic 3 Dimensional** images in game through a native technology that doesn't require any extra driver or system.

Current Version: v5 Final – New non-flickering technology



It is based on the principle usually called anaglyph. It consists on transferring two images, different for each eye, through color filters. For details about the principle and the technique, please look at:

http://en.wikipedia.org/wiki/Anaglyph_image

In this case anaglyph is implemented through the most frequent configuration of **Red** / **Cyan** filters corresponding to **Left** / **Right** eyes.

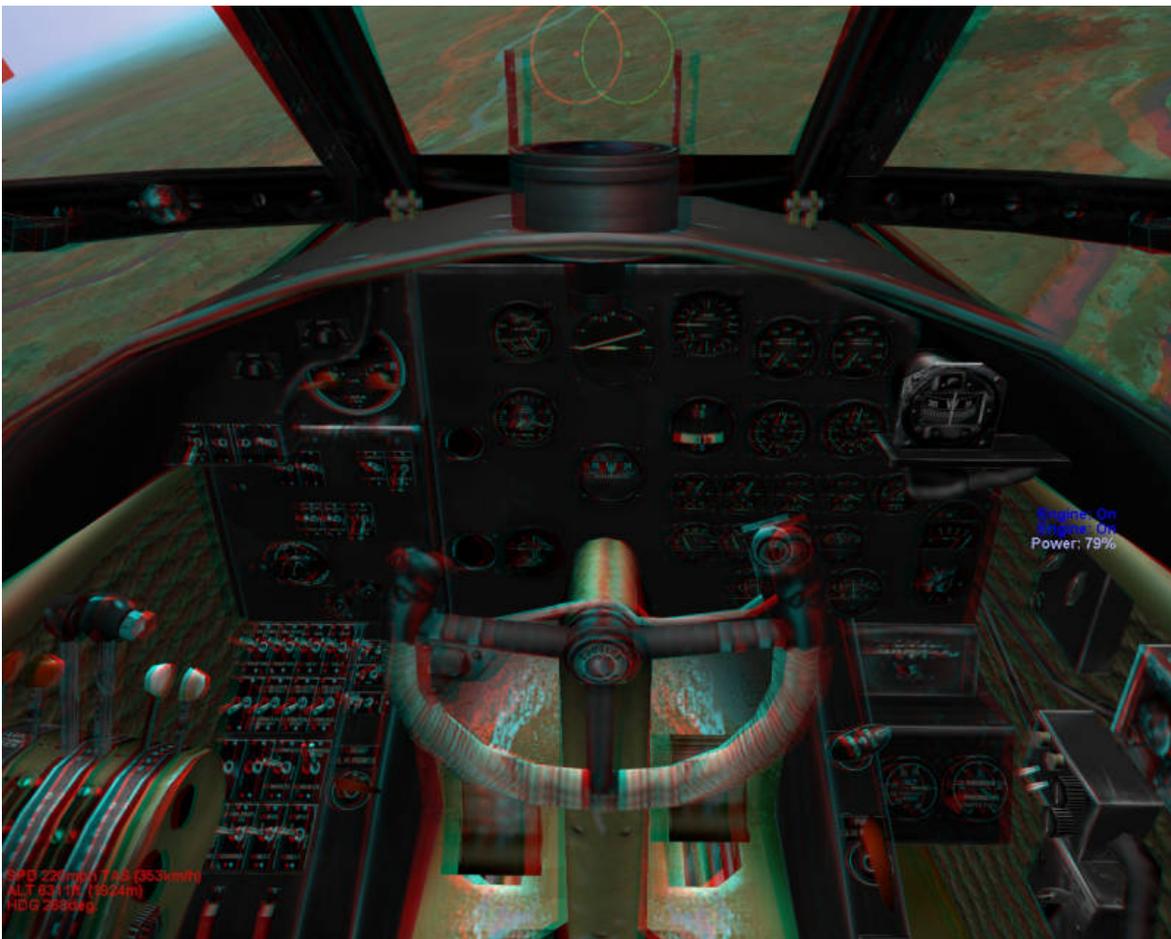
So, it means that to be able to use this MOD in game, and for any ScreenShot you see here, you need anaglyph glasses / googles.



Great on-Line DIY resource to build your own (many in internet):

<http://www.youtube.com/watch?v=CP63mKweliw>

As soon as you get ones you will be able to see this:



The MOD:

This MOD uses a couple of Java classes previously MODded by different MODs and some that were never changed in the past. So there are some possible conflicts, especially with 6DOF MODs. This one works itself as my previous **Normal 6DOF with Headshaking MOD for mouse** apart of the Stereo feature. **Since version 5 it is now fully TrackIR 6DOF compatible.** You need the corresponding MODded il2fb.exe for 6DOF and this MOD will interact with it, so you should disable your previous TrackIR 6DOF MOD (except for the MODded il2fb.exe).

To use the MOD, activate it through **Total MODder**, **JSGME** or your **MODS**, **#DBW**, **#SAS** or **#UP#** MODding folder. For testing, and especially if you have problems to get it working, it would be important to **confirm that it loads before any other 6DOF and Ecran Wide MODs**, and at least to try, **before any other MOD**.

You don't need any special monitor or other hardware apart of the already mentioned glasses.

This should work in nVIDIA as well as in ATI video cards. Originally it was developed in ATI and in some way it's optimized for its structure of buffers. Some problems specifically related to colors and remaining flickering for some nVIDIA users, still must be addressed. **Due to the fact that I don't receive any benefit on solving the issues everybody have, I will not invest in an nVIDIA card, but some people have started donating so I can buy such a GPU to debug and optimize the MOD on that brand. If you are interested on supporting this idea, you can make your contribution through PayPal here:**

https://www.paypal.com/cgi-bin/webscr?cmd=_s-xclick&hosted_button_id=2AU4BKKU755PO

Features of V5 including the former in V4 and V3:

-The stereo image is deeper than never before. V2 in fact offered really only a "virtual stereo" perception. Here you will be able to make the tip of the wing of a plane to reach your nose. Objects can fully emerge from the screen.

-**New default method of rendering frames in stereo to the same image.** It allows **completely avoid flickering**. All the problems seen in V4 Beta (sun whiteouts, etc.) have been resolved, including an issue with some alpha textures.

-Updated: You can change the Stereo 3D rendering mode. By pressing simultaneously the **Left and Right Buttons** and scrolling the **Mouse-wheel**, you **can select between the next modes (this is the list for V5, which has changes respect to V4):**

0-**Stereo Disabled** - Stock visuals and behavior.

1-**Stereo Mode A** (the one appeared in V4, default, highly optimized, 5%-15% fps improvement, not Synchronized, no VideoCapture).

2-**Stereo Mode B** (the original v3 but now WITHOUT FLICKERING, perfectly stable. Synchronized, no fps improvement, VideoCapture mode).

3-**Stereo Mode C** (a variant of the V4 with an intermediate buffer, not Synchronized, no VideoCapture, usually slower than Mode A).

4-**Stereo Mode D** (a two combined frames version that still doesn't work very well. Based in Accumulator Buffer, not universal).

5-**Stereo Mode B-** (the original v3 flickering one, for the nostalgic people) Synchronized, only method possible to take independent Red / Cyan ScreenShots.

In case you have any kind of problem with the rendering mode you are using, even if you don't see anything in the screen, you can switch them with the mouse, until you have one of the methods quoted working, or in the worst case the Stereo Disabled mode, that for sure must be visible (because is the stock behavior). The default mode for the start of the game can be established in **Conf.ini** by:

```
[Mods]  
PAL3DStart=1
```

Being 1 the default, but all the values specified in the table above are possible (even 0).

-Updated: now Video Captures are possible (using Mode B). It was directly tested with **Fraps®** and it works OK, but there are some problems on how **Game Cam®** software works, and so in this last program the MOD doesn't generate proper video and in general, when capture is activated, shuts down the Il-2.

-Updated: We can adjust the stereo separation with the **Right Button + Mouse-wheel**. Just moving it while holding the mouse right button you will be notified in the HUD about the value. Check out what is the best one for you in cockpit, and later set it in Conf.ini (read below for those who don't know about it).

-**Updated:** Now there is independent adjustment of Internal and External Stereo Separation. This was because correctly adjusted in internal view, the stereo perception outside the plane was quite poor, so now you can have the two settings to make your experience easier.

All the settings regarding **Stereo Separation** can be established in **Conf.ini** to start with your preferred configuration. These are the default values, but change them for your own:

```
[Mods]
PAL3DSeparation=1.5
PAL3DSeparationExt=25.0
```

Since V3c as you can see, the default Internal Stereo Separation is set to 1.5. You will see that with higher values, for inside of cockpits it is too much. But in external views (which now work perfectly), you can set up a Separation of up to 40 without much trouble, and you will see your or the other planes "very very volumetric". Default value is 25.

-Since V3c Shine and Reflections problems now are basically solved. Playing with DBW default (Carsmasters lightning, etc.) doesn't produce any undesired effect.

-You have stereo in the FMB 3D view. See how much easier is placing objects with it!

-**Updated:** From V4 onwards, we have the chance of **directly capturing Anaglyph 3D Stereo snapshots**. Now if you press the **PrintScreen** or your corresponding key, if you are in **Mode A** or **Mode B**, a full two colors stereo image will be saved. If you are in **Mode B- (legacy mode)**, single Red or Cyan images are captured, and later you have to compose them. And if you are with Stereo Disabled, a traditional plane image is stored.

Added to this capability, now you can select the next in **Conf.ini**:

```
[Mods]
PAL3DScrShtDir=MyScreenShots/
PAL3DScrShtExt=jpg
```

So if you prefer, you can specify a different default folder to save the ScreenShots. The default one is the used by DBW, remember always to place the last "/" to define the directory. You can select through **PAL3DScrShtExt** the type of file used for the image. For the while jpg and tga are the chances. The .tgas are heavy and ugly but they are captured very fast. Any type will record stereo images.

-Updated - Fully configurable **Total 6DOF included**: since v5 the MOD, which works with the classes of the game which control the 6DOF feature, fully integrates all the 6DOF methods up to date. There are two new settings for these, with these default values:

[Mods]

PAL3D6DOF=1

PAL3D6DOFAutoReset=0

Controls and details:

PAL3D6DOF=0 Mouse 6DOF Disabled (only responds to TrackIR if you have the corresponding il2fb.exe MODded for 6DOF)

PAL3D6DOF=1

NormalMouse version:

- Roll TrackIR axis enabled (3DOF TrackIR).
- Mouse move controls normal look around.
- Hold Left button and drag emulates X,Y TrackIR axis.
- Hold Right button and drag over the Y mouse axis emulates Z TrackIR axis.
- **Middle mouse button resets the view.**

PAL3D6DOF=2

XYMouse version:

- Roll TrackIR axis enabled (3DOF TrackIR).
- Mouse move emulates X,Y TrackIR axis.
- Hold Left button and drag controls normal look around.
- Hold Right button and drag over the Y mouse axis emulates Z TrackIR axis.
- **Middle mouse button resets the view.**

PAL3D6DOFAutoReset=0

If this value is 1 when you left the pilot cockpit to an external view or another position, when you come back, the Shifted view of the 6DOF is lost (it resets to the center). The same setting in 0 means no reset until you press the Middle-Button of the mouse.

Some users have reported issues with the internal 6DOF of this MOD (in spite that most of them seemed to be problems of configuration). **Just in case I'm including the original TrackIR 6DOF only with the changes necessary to operate in 3D Stereo, it is kind of a "legacy" TrackIR 6DOF support**, not recommended, but possible if you don't get anything better. In case you need it extract contents from the included file "PureTrackIR6DOF-3DAdapted.rar".

-Updated **WideScreen MOD included (EcranWide MOD replacement)**: due to the fact that this MOD was not compatible with previous EcranWide, it was necessary to include the

features of it in the Stereo MOD to allow Wide Screen monitor owners to normally use the game. It is controlled by this setting:

[Mods]
PAL3DEcranWide=0

That default value means 4:3 relation monitor. If you want to activate EcranWide support then change that value to 1 and it will activate the embedded modifications to support 16:9 (wide) monitors.

For WideScreen monitor users, in the .rar there is an additional package called “Extras For EcranWide.rar” containing the items needed to have the typical fonts and other stuff the EcranWide users were accustomed to. Copy them if you need those contents.

Highlights of what is wonderful with the MOD, recommended tests:

- Fly close to ground, to see that trees, everything, gets a new dimension.
- Try to land into a carrier: much easier, now you can perceive distances!!!
- Fly through the clouds: now you are really flying.
- Fly with a hunter through a formation of bombers: wonderful experience.

Summary of settings used by this MOD and their respective default values:

[Mods]
PAL3DStart=1

PAL3DSeparation=1.5
PAL3DSeparationExt=25.0

PAL3DScrShtDir=MyScreenShots/
PAL3DScrShtExt=jpg

PAL3D6DOF=1
PAL3D6DOFAutoReset=0

PAL3DEcranWide=0

Issues and Recommended Video Configuration:

- The MOD is highly stable and comfortable in **Mode A** and since v5 in the new synchronized **Mode B**. It will work quite well even with low fps count.
- With this new version, VSync is not required, only if you prefer it. It should work basically in any mode with or without vertical monitor refresh synchronization.
- Some users, more nVIDIA focused, still have some weird and hard to reproduce problems as 3D image but dark, flickering image, etc. I don't have all the different hardware as to debug diverse configurations. As I stated above, if through donations I reach the value of an nVIDIA card I will buy one to check in depth how they could be optimized with the MOD. Think about making a donation if you consider that fair.

Regards,

Pablo

Credits:

This Stereo 3D MOD, by requirement of many users was adapted to support **TrackIR 6DOF** and **EcranWide**. Nonetheless I have implemented these two functions in a different way, I would credit for the inspiration these MODders:

- sHr** for the mouse 6DOF (I use my previous reworked MOD of Mouse Headshaking 6DOF).
- Josse** and **CirX** for the settings for Wide Monitor support.
- Kegetys** for TrackIR 6DOF (and different changes made by others as far as I know).

