

Elite Dangerous HUD Mod (EDHM)

Mod created with 3Dmigoto
<https://github.com/bo3b/3Dmigoto/>

This is version 1.4, 21 Dec 2020

This mod is not compatible with Steam overlay (and associated controllers).

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**** DISCLAIMER ****

This is an experimental graphics mod.
Please see the 3Dmigoto Github link above to research if or how this mod will affect your PC.

Hundreds of CMDRs run this mod with zero issues, but it is impossible to predict how the mod will react with your particular PC configuration.

Therefore, install the mod at your own risk – we will not be held responsible for any losses incurred, including game suspensions or bans if you use the mod or 3Dmigoto inappropriately.

At the current date, and with the current mod configuration (and included shader files), this mod has been approved by FDev for players to use.

Nevertheless, it's important to understand the risks of using experimental mods.

With all that out of the way, we hope you enjoy the mod!

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**** Contact ****

If you have any questions about the mod feel free to contact me on Discord (psychicEgg#9971) or reddit (u/psychicEgg), or on the Elite forums (GeorjCostanza)

Please note, when Elite receives an official update, all mod files are automatically deleted. If you added custom hashes to Custom.ini, or added new key binds or profiles then please backup your ini files before updating Elite.

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----- Please read this WHOLE Readme, it contains important instructions, thank you -----
Sry to capitalise 'whole' :) But I get a lot of questions and the answers are in here

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1. What does the mod do?

As you know, Elite has a **default orange HUD**.

Over the years, CMDRs found a way to alter the HUD via an XML modification. However, the XML method has widespread unintended effects on many other important elements, such as the colour of ships on the radar, and pilot portraits.

EDHM enables precise colour changes to almost any element on the HUD without the annoying side-effects of the XML method.

It also functions to change the cabin lighting to any colour, or even bi-colour if you prefer. I've also dimmed some of the dashboard lights that shine directly in your face, to reduce eye fatigue.

Achieving these outcomes took a very long time. There isn't an instruction manual for any of this, so the progress has been slow. But I'm pleased with the final result and hope it will lead to some beautiful HUD designs in the future.

Videos of mod features:

V1.31: <https://youtu.be/PkybIldaNqQ>

V1.00: <https://youtu.be/s7hkfSBtHs8>

Radar: <https://youtu.be/cOhP-mPvhfE>

Intro: <https://youtu.be/n91daATHRP8>

DTEA: <https://youtu.be/dReNh9Xxdug>

2. How to install EDHM

Reset your GraphicsConfiguration.xml

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If you've altered the HUD colours in the past using the XML method, then it's very important to set the colour matrix back to the default values.

This is the default colour matrix. If you've never altered the XML then you don't need to do anything.

```
<GUIColour>
  <Default>
    <LocalisationName>Standard</LocalisationName>
    <MatrixRed> 1, 0, 0 </MatrixRed>
    <MatrixGreen> 0, 1, 0 </MatrixGreen>
    <MatrixBlue> 0, 0, 1 </MatrixBlue>
  </Default>
```

Also, if you've made other changes in the **GraphicsConfiguration.xml** (especially with the **HDRNode** and **HDRNode_Reference** settings) then it is likely the shader colours won't load as intended and may even glitch under some circumstances. It's best to experiment and see what works and what doesn't.

If you have a previous version of EDHM installed

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- If you have a previous version of EDHM installed and you manually added a set of shader hashes to your ini file (usually to fix shader loading in VR), then please ensure you backup those manual additions to a separate txt file before overwriting your ini file.
 - If you have a previous version of EDHM installed, please uninstall by double-clicking the uninstall.bat file in your elite-dangerous-64 folder.

Installing the current version of EDHM

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- Unzip the contents of the zip file into the "elite-dangerous-64" folder.

You'll need to locate your "elite-dangerous-64" folder (you can run a windows search for "elite-dangerous-64").

Make sure you extract the zip file into the "elite-dangerous-64" folder and not the "Elite Dangerous" folder.

Look for this folder:

C:\..\Elite Dangerous\Products\elite-dangerous-64

- Extracting the contents of the zip file will create the following 7 files in the "elite-dangerous-64" folder:

- d3dx.ini (the main configuration file)
- d3d11.dll
- d3dcompiler_46.dll
- nvapi64.dll
- EDHM-Readme-v1.4.txt
- EDHM-1.4-KeyBindings.pdf
- uninstall.bat

And 4 folders:

- ShaderFixes (contains all the modified shaders)
- ReplacementTextures (contains several texture / graphics replacements)
- EDHM-ini (contains extra .ini files for Key Binds and Player Profiles)
- Shader-Repair (contains instructions on how to fix a problem shader, mostly relevant to VR)

- Once you've extracted the zip, that's it, the mod is installed.

- Please note, if you would like to disable Supercruise Speed Lines or Space Dust in normal flight, please look inside the EDHM-ini folder and open the file Custom.ini in a text editor. Instructions can be found within the file.

Checking the mod has installed correctly

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Before you do anything else, please check the following two JPG files within the **Shader-Repair folder** (in your elite-dangerous-64 folder)

- 1-Example-of-broken-shader.jpg
- 2-Example-of-good-shader.jpg

If the mod installs correctly, you should see something like Image 2.

If the mod is missing a shader, you will see something like Image 1 (orange distributor bars). Unfortunately, there is a problem shader that is a by-product of the way Elite is coded, and we can't do anything about it. But you can permanently fix the issue, please see below.

3. Graphics Options in Elite

- It's critically important (super duper important) you set:

DISABLE GUI EFFECTS = OFF

This is the default setting. Setting this to ON will prevent the mod from loading correctly.

It must look like this for the mod to load correctly



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- For normal (2D) gameplay, please set your in-game resolution to:

1366x768
1920x1080
1920x1200
1920x1440
2048x1536
2560x1440
2560x1600
3840x2160
4096x2160

With these resolutions you can use any Quality and positive Supersampling (1 or above) setting.

You don't have to use these resolutions (THE MOD WILL WORK AT ANY RESOLUTION, EVEN WIDE-SCREEN), but beyond the list above you will likely encounter the 'broken shader' issue (please see the fix below).

Once you're in-game, please check the shaders (graphics) have loaded correctly by inspecting the two JPG files within the **Shader-Repair folder** (in your elite-dangerous-64 folder)

- 1-Example-of-broken-shader.jpg
- 2-Example-of-good-shader.jpg

If you have a broken shader please follow the instructions in **EDHM1.4-Shader-Repair-Instructions.pdf** (in the Shader-Repair folder).

VR-VR

- For VR gameplay, try loading the mod and then inspect the two JPG files within the **Shader-Repair folder** (in your elite-dangerous-64 folder)
- 1-Example-of-broken-shader.jpg
- 2-Example-of-good-shader.jpg

It is likely you will have a broken shader (as there is a problem shader that depends on different factors within Elite and within your VR settings, and we can't account for all possible variations).

If you have a broken shader please follow the instructions in **EDHM1.4-Shader-Repair-Instructions.pdf** (in the Shader-Repair folder).

Special Note: There is a bug in VR with the External Camera lighting fix. The fix turns off the coloured lighting when in external camera mode to prevent the colours from contaminating the CMDRs skin or flight suit. However, when sitting in a station the fix can also turn off the coloured lighting unexpectedly.

To disable the fix, please open **Custom.ini** (in the **EDHM-ini folder**, which is in the elite-dangerous-64 folder) with a text editor.

Comment out (insert a semi-colon ;) in front of the line `x110 = 1` so that it looks like this:

```
13 ; //////////////////////////////////////
14 ; -----
15 ; Lighting Fix for External Camera (turns off coloured lighting in External Camera mode)
16 ; -----
17 [ShaderOverride-e9ca9332890fd87a]
18   hash = e9ca9332890fd87a
19   checktextureoverride = 1b
20 [TextureOverride-1b-20873cdd]
21   hash = 20873cdd
22   ;x110 = 1
23 [ShaderOverride-01c3486d3211f924]
24   hash = 01c3486d3211f924
25   x110 = 0
26
27 ; //////////////////////////////////////
28 ; -----
```

Then save the file. That will fix the bug.

When you use the external camera, I suggest pressing SHIFT F1 to disable the mod so you can take nice selfies of your CMDR.

Please note, this only affects the VR version and does not appear to affect the pancake 2D version.

4. Mod Options

The most significant change in v1.4 are the large number of mod options.

When you first load the mod you will be greeted by the default EDHM colours (blue, purple and white).

- Press CTRL F1 to cycle through 10 preset profiles.
- Press CTRL 1 to load the camo HUD.
- Press CTRL 2 to load the Christmas HUD.

When you are familiar with EDHM you will be able to create your own profiles.

You can learn about the various mod options in the document **EDHM-1.4-KeyBindings.pdf**, located in the elite-dangerous-64 folder.

Some useful commands:

- **F1 is a panel opacity booster.** Sometimes when a bright light is shining behind a side panel it's hard to read. Just hit F1 and the text should be clear
- **SHIFT F1** temporarily disables the mod
- **F5** dims the HUD
- **F6** dims the cabin/cockpit lighting

But there are many other options described in **EDHM-1.4-KeyBindings.pdf**

Creating a profile

As you cycle through the colours of the various elements you may find you have a favourite colour for your shield, or distributor, etc. In the file **Profiles.ini** (in the EDHM-ini folder, open with a text editor), you can set the starting values / colours of each element that will load with the game.

Also in Profiles.ini is a Preset Profiles section where you can create your own profiles in two ways.

Firstly, you can add to the default 10 profiles that come with EDHM v1.4. Just add a comma to the end of each line, then add the colour value of your elements.

Probably a better way of creating a profile is using the 'hotkey' method that is illustrated in the Hotkey Profiles section of Profiles.ini

Two examples are provided – you can edit these examples to your own preferences, or create a new hotkey profile. Just follow the template in the examples. If you have trouble feel free to contact me and I'll help you create a profile.

If these F keys conflict with other software you can change the key designations in the KeyBinds.ini file (in the EDHM-ini folder).

For example, you can change F5 to something else, and you can also use modifier keys such as CTRL, ALT and SHIFT.

This link lists valid key descriptions:

<https://docs.microsoft.com/en-us/windows/win32/inputdev/virtual-key-codes>

5. Uninstalling the mod

- An uninstall.bat file is included that deletes all mod files.
Double click **uninstall.bat** to uninstall the mod, or remove the files listed above manually.
- Also, in the Elite launcher, if you go into the Options menu and select 'Validate Game Files', all mod files will be deleted.
- Please note, when Elite receives an official update, all mod files are automatically deleted. If you added custom hashes to Custom.ini, or added new key binds or profiles then please backup your ini files before updating Elite.

6. Known Issues

- The modding software *3Dmigoto* is not compatible with Steam overlay (and associated controllers). Therefore, many Steam functions such as screenshots and the music player may not function correctly. I didn't create 3Dmigoto so I have no control over compatibility with other software.
- Both ReShade and ED FX can work with EDHM according to some CMDRs. However, I don't run either software and cannot provide advice on how to get them to work together. Please post on reddit or the Elite forums if you need further information.
- If you're in VR and you look behind the pilot's seat you may notice the coloured cabin lighting glitching at the back of the cabin (usually only in large ships). This is because we need to set a distance limit on the lighting otherwise it affects the lights in the stations.
- When using Holo-me, the coloured cabin lighting will contaminate the colour of the CMDR's skin and flight suit. Press SHIFT F1 to disable the mod while in Holo-me.
- In some high-res modes, the text that pops up in the INFO panel has about 1/3 of its shading in white (instead of yellow). I'm having difficulty identifying the cause of this bug as the text appears so quickly, but will fix in a future update.
- The Orange J bug. Sometimes Elite will decide to colour all the j's orange when running the game in high resolution. Only Raxxla knows why it does this. A fix is available but it reduces FPS by a significant amount so isn't packaged with the mod. You'll be able to download the fix separately from the EDHM Github.
- Similarly, in previous versions I offered 'red warning light suppression' to assist miners to turn off the annoying flashing lights when in close proximity to asteroids. This technique can also reduce FPS and will be available for separate download from the EDHM Github.

7. Troubleshooting

i. The Broken Shader (orange distributor)

By far the most common issue reported is the problem shader (orange distributor bars).

And by far the most common reason is the GUI setting in graphics options.

**Please ensure you set
DISABLE GUI EFFECTS = OFF**

It should look like this



If this setting is already OFF, then please follow the instructions in **EDHM1.4-Shader-Repair-Instructions.pdf** (in the Shader-Repair folder).

ii. FPS reduction

For many CMDRs this is the first game they have modded, and there are a few basic principles that need to be explained.

When we add a complex graphics layer to a game, consisting of about 40 extra on-screen elements, the FPS will drop. There's nothing we can do about that.

Therefore, it's necessary to reduce your graphics quality settings if you wish to maintain your unmodded FPS.

I recommend you start with the following quality settings, then increase the quality until your FPS drops below an acceptable level (Press CTRL-F in-game to display your FPS, CTRL-F again to turn it off).

[Please see over page]

Please note: The FPS drops appear to be relative .. therefore if you start higher with an unlocked maximum it won't drop down as far:

To increase maximum FPS:

Vertical Sync OFF
Frame Rate Limit OFF

Recommended initial quality settings:

Shadow Quality OFF
Bloom OFF
Anti-Aliasing FXAA (off for 4K)
Supersampling 1.0
Ambient Occlusion LOW
FX Quality OFF
Material Quality MEDIUM
Volumetric Effects HIGH

These settings will maximise your FPS. Shadows, Ambient Occlusion and Supersampling have a huge impact on FPS, so increase them slowly.

Prior to v1.32 (FPS update) I received 1 to 5 messages per day with "Dude, my FPS dropped with your mod, what's up with that?". And so I asked, "What quality settings did you reduce to compensate for the mod?", and the answer was nearly always "None".

The mod will reduce your FPS, and you need to adjust your quality settings to bring the FPS back up again. However, the FPS drop with the mod should only be around 10%.

iii. Stuttering or large FPS drops

If you experience stuttering that is more frequent than the usual Elite stuttering (for example, when an NPC drops into your instance) then it means you probably have a system conflict with the modding software, 3Dmigoto.

In versions of EDHM prior to 1.32 there were several shaders that caused stuttering for some CMDRs, but these were removed several months ago. All current shaders have undergone extensive, sequential FPS testing in a variety of situations by a team of CMDRs.

To reduce the possibility of a software conflict with 3Dmigoto then it is highly recommended you disable:

- Overlays of any type (Steam, GeForce Experience, Discord, etc)
- Any unnecessary software that isn't required to run Elite. Load Task Manager and check if there are any unnecessary processes running in the background. 3Dmigoto is very sensitive to conflicts, so best to shut down anything you're not using while playing Elite (in the past I had an issue with adware interfering with the mod).
- Set your anti-virus to exclude the elite-dangerous-64 folder (AVs often have a 'game mode' where certain folders can be excluded from scanning).

8. Changing the HUD colours yourself

In v1.4 I have built in a user customisation option for each element. However, we don't have a GUI / colour-picker yet, and probably won't have one until after the Odyssey update.

In the meantime, I will create an online spreadsheet and specify all the locations within the shader files where you can alter the Red, Green and Blue values to create your own colours. Unfortunately this process is not so simple as Elite uses its own colour channel rules – we can't just input RGB or hex values like the XML method, but requires a lot of time and experimentation from the modder.

I will explain the process in more detail when I start to add specifications to the spreadsheet, and will hopefully make a step-by-step video when I get some free time.

9. Credits

There are several people to whom I wish to express my deepest gratitude.

CMDR Xiba2k4, we stayed up many late nights in June 2020 in the midst of the virus lockdown, communicating from one side of the globe to the other. And very very slowly we learnt about modding and the basics of HLSL coding. Cheers buddy!

CMDR Paulina Smith, the best (mod) bug hunter this side of Colonia! The mod would not be in the current state without Paulina's careful attention to detail, and dedication to making the mod the best it can be.

DarkStarSword, the creator of 3Dmigoto. A fellow Aussie and one of the most knowledgeable coders I've ever encountered. DSS if you're reading this, thank you for 3Dmigoto, and I hope you will return to keep it updated as it's absolutely brilliant software.

There are also many others who have contributed to EDHM, so this project is well and truly a group effort. A huge thankyou in no particular order:

CMDR BlueMystic (EDHM UI dev)
CMDR Franc Kaos
CMDR [XtC]MrSly
u/Hudiny
u/Loopios7
u/The_Gump_AU

CMDR Overcon
CMDR Old Duck
CMDR 5miley
CMDR alterNERDtive
CMDR Thiamine

CMDR Dragonfyre
CMDR Nilt
u/haxborn
CMDR DeadlyPliers
CMDR BlueBrr

I'd also like to thank CMDR Exigeous for liaising with FDev to verify mod approval.
You can view Exigeous' YouTube channel here:
https://www.youtube.com/channel/UC0Rwxz4318EEQGH_z58nVA

Thank you also to Down To Earth Astronomy for sharing the mod with the community:
<https://www.youtube.com/channel/UCg3QI9rHzPgvR7KTKSctPHg>

10. Epilogue

Thank you to the brilliant staff at Frontier for making the best space simulation I have ever experienced.

If any of the software devs at Frontier read this, I hope you like what you see in EDHM. Maybe I could work for you as a HUD designer? 😊 I've put over 1000 hours into developing the mod and I sincerely hope you will allow it to continue past the Odyssey update.

Although I've really enjoyed learning to mod, I need to take a break for a few months to write a thesis. I'm happy to fix any major bugs but will save further development work for Odyssey.

To all CMDRs, I really hope you enjoy the mod,

psychicEgg / CMDR GeorjCostanza

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